

**SUPPORTING STATEMENT FOR
THE STANDARD ON THE CONTROL OF HAZARDOUS ENERGY
(LOCKOUT/TAGOUT) (29 CFR 1910.147)¹
OFFICE OF MANAGEMENT AND BUDGET (OMB)
CONTROL NO. 1218-0150 (July 2014)**

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 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 1910.147 a safety standard for general industry titled “Control of Hazardous Energy (Lockout/Tagout)” (i.e., “the LO/TO Standard” or “the Standard”). The Standard regulates control of hazardous-energy sources using lockout or tagout

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

procedures while workers service, maintain, or repair machines or equipment when activation, start up, or release of energy from an energy source is possible. Items 2 and 12 below describe in detail the specific information collection requirements of the Standard.

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

The Standard specifies several paperwork requirements. The following sections describe who uses the information collected under each requirement, as well as how they use it. The purpose of these requirements is to control the release of hazardous-energy sources while workers service, maintain, or repair machines or equipment when activation, start up, or release of energy from an energy source is possible; proper control of hazardous-energy sources prevent death or serious injury among these workers.

Energy-Control Procedure (paragraph (c)(4)(i)). With limited exception, employers must document the procedures used to isolate from its energy source and render inoperative, any machine or equipment prior to servicing, maintenance, or repair by workers. These procedures are necessary when activation, start up, or release of stored energy from the energy source is possible, and such release could cause injury to the workers.

Paragraph (c)(4)(ii) states that the required documentation must clearly and specifically outline the scope, purpose, authorization, rules, and techniques workers are to use to control hazardous energy, and the means to enforce compliance. The document must include at least the following elements:

- A) A specific statement regarding the use of the procedure;
- B) Detailed procedural steps for shutting down, isolating, blocking, and securing machines or equipment to control hazardous energy,
- C) Detailed procedural steps for placing, removing, and transferring lockout or tagout devices, including the responsibility for doing so; and,
- D) Requirements for testing a machine or equipment to determine and verify the effectiveness of lockout or tagout devices, as well as other energy-control measures.

The employer uses the information in this document as the basis for informing and training workers about the purpose and function of the energy-control procedures, and the safe application, use, and removal of energy controls. In addition, this information enables employers to effectively identify operations and processes in the workplace that require energy-control procedures.

Protective Materials and Hardware (paragraph (c)(5)(ii)(D) and paragraph (c)(5)(iii)).

Paragraph (C)(5)(ii)(D) requires that lockout and tagout devices indicate the identity of the employee applying it. Paragraph (c)(5)(iii) requires that tags warn against hazardous conditions if the machine or equipment is energized. In addition, the tag must include a legend such as one of the following: Do Not Start; Do Not Open; Do Not Close; Do Not Energize; Do Not Operate.

These provisions provide a safe work practice to authorized workers applying the lockout/tagout devices by giving the identity of the person applying it and warning against hazards that might exist.

Periodic Inspection Certification Records (paragraph (c)(6)(ii)). Under paragraph (c)(6)(i), employers are to conduct inspections of energy-control procedures at least annually. An authorized worker other than an authorized worker using the energy-control procedure that is the subject of the inspection is to conduct the inspection and correct any deviations or inadequacies identified. For procedures involving either lockout or tagout, the inspection must include a review, between the inspector and each authorized worker, of that worker's responsibilities under the procedure; for procedures using tagout systems, the review also involves affected workers, and includes an assessment of the workers' knowledge of the training elements required for these systems. Paragraph (c)(6)(ii) requires employers to certify the inspection by documenting the date of the inspection and identifying the machine or equipment inspected, the workers included in the inspection, and the worker who performed the inspection.

Training Certification Records (paragraph (c)(7)(iv)).

Upon further consideration, the requirements that employers provide training to workers under paragraph (c)(7)(i),(ii) and (iii) are not considered to be a collection of information. OSHA is not taking burden for this activity under Item 12 of this Supporting Statement.

Under paragraph (c)(7)(iv), employers are to certify that workers have completed the required training, and that this training is up-to-date. The certification is to contain each worker's name and the training date. Written certification of the training assures the employer that workers receive the training specified by the Standard.

Disclosure of Inspection and Training Certification Records (paragraphs (c)(6)(ii) and (c)(7)(iv)). Under these provisions, employers subject to an OSHA inspection are required to disclose inspection and training certification records to the OSHA compliance officer. The inspection records provide employers with assurance that workers can safely and effectively service, maintain, and repair machines and equipment covered by the Standard. These records also provide the most efficient means for an OSHA compliance officer to determine that an employer is complying with the Standard, and that the machines and equipment are safe for servicing, maintenance, and repair. The training records provide the most efficient means for an OSHA compliance officer to determine whether an employer has performed the required training.

Notification of Employees (paragraph (c)(9)). This provision requires the employer or authorized worker to notify affected workers prior to applying, and after removing, a lockout or tagout device from a machine or equipment. Such notification informs workers of the impending interruption of the normal production operation, and serves as a reminder of the restrictions imposed on them by the energy-control program. In addition, this requirement ensures that workers do not attempt to reactivate a machine or piece of equipment after an authorized worker isolates its energy source and renders it inoperative. Notifying workers after removing an energy-control device alerts them that the machines and equipment are no longer safe for servicing, maintenance, and repair.²

²Paragraph (e)(2) requires similar notification; because of this similarity, the Agency is taking no burden hours or cost for this provision.

Offsite Personnel (Contractors, etc.) (paragraph (f)(2)(i)). When the onsite employer uses an offsite employer (e.g., a contractor) to perform the activities covered by the scope and application of the Standard, the two employers must inform each other regarding their respective lockout or tagout procedures. This provision ensures that each employer knows about the unique energy-control procedures used by the other employer; this knowledge prevents any misunderstanding regarding the implementation of lockout or tagout procedures, and the use of lockout or tagout devices for a particular application.

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

Employers may use automated, electronic, mechanical, or other technological information-collection techniques, or other forms of information technology (e.g., electronic submission of responses), when establishing and maintaining 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 record the data).

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 2 above.

The requirements to collect and maintain information are specific to each employer and worker involved, and no other source or agency duplicates these requirements or can make the required information available to OSHA (i.e., the required information is available only from employers).

5. If the collection of information impacts small businesses or other small entities, describe the methods used to minimize burden.

The information collection requirements specified by the Standard do not have a significant impact on a substantial number of small entities. The Agency has published *OSHA Instruction, Directive Number CPL 02-00-147, The Control of Hazardous Energy – Enforcement Policy and Inspections Procedures, February 11, 2008*. Although this directive establishes OSHA’s enforcement policy for the standards addressing the control of hazardous energy, the Agency has made the directive available to the public to assist them in complying and understanding the requirements of the LO/TO Standard.

6. Describe the consequences 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 necessary to effectively regulate hazardous-energy sources, 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 by the Act at 29 U.S.C. 651. Accordingly, when employers do not perform the required information collections, or delay in providing this information, workers may not use energy-control procedures effectively and safely, thereby increasing their probability of death and serious injury caused by uncontrolled release of hazardous energy.

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 confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or
- Requiring respondents to submit proprietary trade secret, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.

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

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

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 three years -- even if the collection of information activity is the same as in prior periods. There may be circumstances that mitigate against consultation in a specific situation. These circumstances should be explained.

As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3506(c)(2)(A)), OSHA published a *Federal Register* notice (79 FR 18583) on April 2, 2014, soliciting public comments on its proposal to extend the Office of Management and Budget's (OMB) approval of the information collection requirements specified in the Standard on the Control of Hazardous Energy (Lockout/Tagout)(29 CFR 1910.147). This notice is part of a preclearance consultation program that provides interested parties with an opportunity to comment on OSHA's requests for extensions of previous approvals of information collection requirements. The Agency received two comments in response to the April 2, 2014 notice.

One comment was filed by Ms. Heather Marena from the University of Alabama at Birmingham. What follows are excerpts of the text of Ms. Marena's comments and OSHA's responses to those comments:

A. While in operational roles of Environmental, Health and Safety leadership, Lockout/Tagout was always an integral portion of my role. Today in my role as essentially a safety consultant, I find that one of items that most of my clients do not process is a comprehensive Control of Hazardous Energy program. When asked if they have a procedure to isolate or control a source of energy, many employers answer they do. When asking employees if they know where the procedures are, they typically respond, they have never seen them. They have not been trained on them, and they do not annually have a review or audit process in place. If the company does have a program in place, it likely does not include the four elements of the *Energy Control Procedure* (c)(4)(i) as outlined in paragraph (c)(4)(ii):

- (A) A specific statement regarding the use of the procedure;
- (B) Detailed procedural steps for shutting down, isolating, blocking, and securing machines or equipment to control hazardous energy.
- (C) Detailed procedural steps for placing, removing, and transferring lockout or tagout devices, including the responsibility for doing so; and,
- (D) Requirements for testing a machine or equipment to determine and verify the effectiveness of lockout or tagout devices, as well as other energy control measures.

All four of the above items can be developed and shared with authorized employees. Typically this is shared in training. Effective training is something that in many years of conducting training has been a source of varied definition.

OSHA Response to Ms. Marendia, Part A:

In response, OSHA notes that employers must develop, implement and enforce an energy control procedure program as specified in (c)(4)(i) and (c)(4)(ii) and use the information in this document as the basis for informing and training workers about the purpose and function of the energy-control procedures, and the safe application, use, and removal of energy controls. Employers that do not comply with these provisions are violating the Standard.

The training requirements of the Standard are in paragraph (c)(7). Paragraph (c)(7)(i) specifies that the training program must enable workers to understand the purpose and function of the energy control procedures and provide them with the knowledge and skills necessary for the safe application, use and removal of energy controls. Under paragraph (c)(7)(iii), employers must retrain authorized and affected workers when a change occurs in: their job assignments; the machines, equipment, or processes such that a new hazard is present; or the energy-control procedures. Employers also must provide retraining when they have reason to believe, or periodic inspection required under paragraph (c)(6) indicates, that there are deviations from or inadequacies in a worker's knowledge or use of energy-control procedures. The retraining must reestablish worker proficiency and, if necessary, introduce new or revised energy-control procedures. Employers that do not comply with these provisions are violating the Standard.

As noted in Item 2 of the ICR, the provision of training required by paragraph (c)(7) is no longer considered to be a collection of information for purposes of the ICR; however, the training provisions of the Standard remain in effect.

B. Training Certification Records (c)(7)(iv) are required by employers; however what those records entail is not the information the instructor shared, it is the names of the employees who attended, as well as the date. While I would condone tests after the training, having an outline, or a hands on demonstration by employees may be an additional way to ensure that employees understand the content. As an adult educator, I have trained adults who have fallen asleep, taken calls and return towards the end of the course. In addition, most trainings I have attended, do not include training on specific procedures they may be responsible for, or training on the internal program. Typically these courses are conducted concurrently for authorized, affected and other employees all at the same time. In some cases contract employees, and hired contractors are all trained at the same time as regular full time employees. Many safety managers state trainings do not occur due to production schedules, work loads, not having enough employees, training is too costly if done before or after a shift for hourly employees. Training is often an after thought. The need for it is known, the desire to conduct and complete the training is there, the cooperation with our site leadership is not always there.

OSHA Response to Ms. Marenda, Part B:

OSHA agrees that (c)(7)(iv) requires training certification records and that those records must contain the names of the employees who attended, as well as the dates of, the training; the certification records need not describe the content of the training.

The commenter suggests that tests after the training, having an outline, or a hands-on demonstration by employees are additional ways to ensure that employees understand the content of training. While the Agency agrees that these types of practices can be helpful, the Standard is written in performance-oriented language that allows each employer to determine the best means to ensure its employees are properly trained.

The commenter indicates that participants may be distracted during or miss parts of training sessions, and that most training sessions do not include specific procedures for specific workers' responsibilities. Also, she indicates that sometimes training is not provided or is an afterthought for the employer.

OSHA's response to Part A describes the training requirements of the Standard at paragraph (c)(7). Employers that do not comply with these provisions are violating the Standard.

C. While I understand and can appreciate the desire by OSHA to reduce the potential burden and associated costs, I would argue that while training, new equipment, such as locks, tags or machine specific tools require expense, both internally generated and externally generated; the cost of an employee nonfatal injury as it pertains to electrical contact can result in days or weeks away from work, long-term burn treatments and lose of productivity. Liberty Mutual Research Institute for Safety conducted a research project based on the 2002 electrical related occupational injuries. Within the research conducted, 1283 nonfatal injuries were analyzed by activity, industry and sex of employee. The findings surprised the lead researchers and many others. The leading source of nonfatal injury was contact with an appliance/office equipment or machine, 24% of injuries were recorded. The leading industry sectors were:

Industry	Percentage of	Female	Male
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	nonfatal injuries		
Services	33.4%	50.5%	26.5%
Manufacturing	24.7%	13.7%	29.1%
Retail trades	17.3%	24.9%	14.1%

(Safety, 2010)

Women sustained more than ¼ of all nonfatal injuries. Traditionally, the control of hazardous energy has been focused on manufacturing facilities, and therefore, the majority of those employees are men.

OSHA Response to Ms. Marenda, Part C:

The estimated decrease in costs is based solely on the latest U.S. Census County Business Pattern data which shows a decrease in estimated establishments in NAICs codes affected by the Standard since the last ICR. OSHA is not making or proposing to make any changes to the requirements of the Standard. If the CBP data had shown an increase in estimated establishments, then OSHA would have projected increased costs under the Standard. While economic benefits associated with prevented injuries, fatalities and lost work days are considered during rulemaking, these benefits are outside the scope of cost estimates required by the Paperwork Reduction Act and, therefore, are outside the scope of this ICR. The affected establishments and employees described in the ICR parallel the Final Rule estimates and include manufacturing and some service and retail industries.

D. In addition to this data, many workplaces employee multi-lingual or non-reading employees, data on the injuries to this sector of employees was difficult to find. I would suggest that a written test does not demonstrate knowledge. As we are a global workforce, OSHA is implementing globalization practices, for example, the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), that has been included in 29 CFR 1910.1200. The increased use of pictograms is widely evident in this regulation, as well as the American National Standards Institute (ANSI) use of pictograms in workplace signage and the pictograms found on various equipment. The control of hazardous energy can be implemented with visual cues, and photos of the equipment, the energy sources and the tools to effectively control an energy source.

OSHA Response to Ms. Marenda, Part D.

In terms of non-English speaking workers, OSHA notes that paragraph (c)(7)(i) specifies that the training program must enable workers to understand the purpose and function of the energy control procedures and provide them with the knowledge and skills necessary for the safe application, use and removal of energy controls. Training that does not lead to such results – for any reason—does not meet the Standard. OSHA agrees with the commenter that pictograms can be useful. However, any changes to the Standard to require the use of pictograms would be a matter for consideration during a rulemaking and falls outside the scope of this ICR.

E. We as safety leaders must continue to ensure all employees understand the workplace hazards an employee may have exposure to, as well as ensure that employees are properly trained, and can effectively demonstrate their knowledge. If an employee is unable to demonstrate, it is our

responsibility to modify their training to ensure the training is effective, and can be put into practice. I would encourage the members of this committee to continue to require proper documentation; training and on going re-training or reviews to ensure our employees have a safe workplace.

OSHA Response to Ms. Marenda, Part E.

OSHA agrees with the commenter that safety professionals and employers must continue to ensure that employees understand workplace hazards and ensure that employees are properly trained and can effectively demonstrate their knowledge. If an employee is unable to demonstrate proficiency, it is the responsibility of the employer to modify the training to ensure it is effective and can be put into practice. The commenter states, “I encourage the members of this committee to continue to require proper documentation; training and on going[sic] re-training or reviews to ensure our employees have a safe workplace.” In response, OSHA reiterates that this paperwork action simply seeks an extension of OMB approval for the information collection requirements in the Standard in accordance with the Paperwork Reduction Act. In doing so, OSHA is not modifying or eliminating, or proposing to modify or eliminate, any of the Standard’s requirements.

The second comment was filed by Mr. Michael Formoso, a private citizen. He commented: The collection of information is still vital and does prompt the employer to assess the procedure when the issue of compliance is raised. If there were not a standard to ensure compliance such as documentation, the process may go unchecked. This action could lead to the atrophy of the in house protocols to the point that they are dangerously out dated or not used at all. Electronic media is great for the storage of large amounts of data, but may fail, or become compromised. I would suggest that an autonomous storage device or service become part of the standard to prevent loss or compromise of the data. Originals of documents that contain signatures or log in times should be kept. Training materials, such as; Power points, handouts, videos presented during training, and other materials used should be stored and available for inspection. This would help to ensure that the correct information is presented, and to prevent official training from unapproved or hazardous methods.

OSHA Response to Mr. Formoso: In response, OSHA notes that the Standard does not require employers to store records in any particular manner. Revision of the Standard to require particular storage methods is a matter that would need to be addressed in rulemaking outside the scope of this paperwork action.

As stated above and in the Supporting Statement for this ICR, the provision of training as required by paragraph (c)(7) is no longer considered to be a collection of information for purposes of the ICR; however, the training provisions of the Standard remain in effect. Under paragraph (c)(7)(iv), employers must certify employee training. Training certification records may be requested by an OSHA compliance officer during an inspection. The training records permit OSHA compliance officers to determine whether employees have received the required training. OSHA can also evaluate the effectiveness of an employer’s training program by interviewing employees to verify that they have been properly trained.

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 paperwork requirements specified by the Standard do not involve confidential information.

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

None of the provisions 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.
- Provide estimates of annualized costs to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included in Item 13.

Burden-Hour and Cost Determinations

For this Information Collection Request (ICR), OSHA used an industry-classification scheme from the Regulatory Impact Analysis (RIA) performed on the final Standard.³ This scheme classifies industries covered by the Standard into the following three groups: high-impact, low-impact, and zero- or negligible-impact. The high-impact group consists of all manufacturing industries (i.e., North American Industrial Classification System (NAICS) Codes 31-33 and others corresponding to 1987 SIC Codes 20-39), while the low-impact group includes industries in the following sectors: transportation⁴, communications⁵, utilities (i.e., electrical-generation establishments, but

³*Regulatory Impact and Regulatory Flexibility Analysis of 29 CFR 1910.147 (The Control of Hazardous Energy Sources—Lockout/Tagout)*, U.S. Department of Labor, OSHA, Office of Regulatory Analysis, August, 1989. The source of these data was a contract report titled, *Industry Profile Study of a Standard for Control of Hazardous Energy Sources Including Lockout/Tagout Procedures*, Eastern Research Group, May 1985.

⁴This sector is comprised of industries in the following NAICS codes: 481, 484, 485, 4861, 4869, 4871, 4879, 488, 492, 532411, 561510, 561520, 5621, 621910, and 713930.

⁵This sector is comprised of industries in NAICS code 517. Due to incongruence between SIC and NAICS codes, some industries in NAICS 485310 are included in both the transportation and communications sectors; these industries have been accounted for in the transportation sector and are excluded here to avoid double-counting of data.

not power-distribution establishments)⁶, wholesale-trade⁷, retail-food⁸, and several industries in the service sector (i.e., personal services, business services, automotive repair, miscellaneous repair, and amusement services.⁹ Included in the zero- or negligible-impact group are industries found to have little potential for an accident involving hazardous-energy release. These industries include retail trade, finance, insurance, real estate, service, and public-administration industries not classified as high- or low-impact groups.

In deriving establishment and employment figures for the three impact groups, the Agency updated the total number of establishments from the previous ICR using data from the 2011 County Business Patterns.¹⁰ The Agency applied percentages obtained from the RIA to these updated figures to estimate the number of high- and low-impact establishments having authorized workers, as well as the number of authorized and affected workers at these establishments (see Tables 1 and 2).

Regarding the time estimates for performing the wide variety of information collections required by the Standard, OSHA is using the estimates from the previous ICR. These estimates appear to be reasonable because the Agency based them on data from the RIA which was available for public review and comment when it was published in the final Standard. In addition, most of the establishments engaged in performing these information collections have many years of experiences in doing so; therefore, these times probably are upper-bound estimates.

In determining the wage rates for the various occupations that perform the paperwork requirements, OSHA used the most recent data from *Occupational Employment Statistics*, Bureau of Labor Statistics (BLS), U.S. Department of Labor (DOL), May 2012. The specific wage rate for each occupation, which includes a fringe-benefit rate of 33 percent of total compensation¹¹, is provided as follows:

⁶This sector is comprised of industries in the following NAICS codes: 221210, 221310, 221320, 221330, 486210, 562211, 562212, 562213, 562219, and 562920. Additionally, this sector excludes industries in NAICS codes 488119, 488490, 561710, 561790, 562910, and 562998; in translating between SIC and NAICS codes, small portions of these industries were included in the utilities sector. As only small portions of these industries are included, they are difficult to quantify and are excluded from this analysis.

⁷This sector is comprised of industries in the following NAICS codes: 423, 424, and 425.

⁸This sector is comprised of industries in the following NAICS codes: 311811, 4451, 4452, 446191, 447110, and 452910.

⁹This sector is comprised of industries in the following NAICS codes: 326212, 334611, 511199, 512110, 512240, 512290, 517919, 518210, 519110, 5321, 532220, 53229, 5323, 5324, 541213, 541340, 541350, 5414, 5415, 5418, 541921, 541922, 541930, 541990, 5613, 5614, 56159, 5616, 561710, 561720, 561740, 561790, 5619, 562991, 611511, 611620, 711, 713, 81111, 81112, 811198, 8112, 8113, 8114, 8121, 812210, 8123, 81292, 812990.

¹⁰2011 County Business Patterns, U.S. Census Bureau, 2011.

¹¹This fringe-benefit rate comes from the total benefits percentage for goods-producing industries from *Employer Costs for Employee Compensation*, September 2013, U.S. Department of Labor, Bureau of Labor Statistics, Table 9.

- Supervisory manufacturing worker (supervisor)¹²: \$41.32
- Non-supervisory manufacturing worker¹³: \$24.77
- Secretary¹⁴: \$24.09

The following sections summarize the methodology used to estimate the number of burden hours and the costs resulting from the information collection requirements of the Standard.

(A) Energy-Control Procedure (paragraph (c)(4)(i))

OSHA estimates that 25,593 high-impact establishments develop new procedures annually. The time to perform this activity ranges from 2 to 80 hours. In addition, 43,506 low-impact establishments will develop new procedures. The time for low-impact establishments to develop procedures is estimated at 2 hours. (See Table 3 for specific number of establishments in each size category for both high- and low-impact establishments; the burden hour for each size establishment; and details as to how OSHA arrived at the number of establishments.)

The Agency also estimates that, on a yearly basis, a supervisor takes from 30 minutes (.50 hour) to 20 hours to update procedures in the 255,922 high-impact establishments and 30 minutes to update procedures in the 435,063 low-impact establishments affected. (See Table 3 for specific number of establishments in each size category for both high- and low-impact establishments; the burden hour for each size establishment; and details as to how OSHA arrived at the number of establishments.)

Burden Hours: 25,593 high-impact establishments (new procedures) x range of 2 to 80 hours = **179,092 hours** (See Table 3 for specific number of establishments in each size category for both high- and low-impact establishments; the burden hour for each size establishment; and details as to how OSHA arrived at the number of establishments.)

43,506 low-impact establishments (new procedures) x 2 hours = **87,012 hours** (See Table 3 for specific number of establishments in each size category for both high- and low-impact establishments; the burden hour for each size establishment; and details as to how OSHA arrived at the number of establishments.)

255,922 high-impact establishments (updating) x range of 0.5 to 20 hours = **520,153 hours** (See Table 3 for specific number of

¹²This mean hourly wage rate corresponds to SOC code 51-1011 “First-Line Supervisors/Managers of Production and Operating Workers.” (Source: *May 2012 National Occupational Employment and Wage Estimates, United States*, U.S. Department of Labor, Bureau of Labor Statistics.)

¹³This mean hourly wage rate corresponds to SOC code 51-0000 “Production Occupations.” (Source: *May 2012 National Occupational Employment and Wage Estimates, United States*, U.S. Department of Labor, Bureau of Labor Statistics.)

¹⁴This mean hourly wage rate corresponds to SOC code 43-6014 “Secretaries, Except Legal, Medical, and Executive.” (Source: *May 2012 National Occupational Employment and Wage Estimates, United States*, U.S. Department of Labor, Bureau of Labor Statistics.)

establishments in each size category for both high- and low-impact establishments; the burden hour for each size establishment; and details as to how OSHA arrived at the number of establishments.)

435,063 low-impact establishments x 0.5 hour = **217,532 hours** (See Table 3 for specific number of establishments in each size category for both high- and low-impact establishments; the burden hour for each size establishment; and details as to how OSHA arrived at the number of establishments.)

Total Burden Hours for (A): 179,092 + 87,012 + 520,153 + 217,532 =
1,003,789

Cost: 1,003,789 burden hours x \$41.32 = **\$41,476,561**

(B) Periodic Inspection (Paragraph (c)(6)(ii))

OSHA assumes that a supervisor takes 20 minutes (.33 hour) to inspect an establishment's energy-control procedure once a year, and to prepare and maintain the inspection certificate. Therefore, the estimated total yearly burden hours and cost resulting from this paperwork requirement are:

Burden Hours: (295,643 high-impact establishments + 435,063 low-impact establishments) x .33 hour = **241,133 hours**

Cost: 241,133 burden hours x \$41.32 = **\$9,963,616**

(C) Training Certification Records (Paragraph (c)(7)(iv))

The Agency estimates that 6.23 million workers (i.e., 6,227,774) covered by the Standard require training each year (i.e., the total number of authorized and affected workers in high- and low-impact establishments listed in Tables 1 and 2). This provision specifies that employers must prepare, maintain and disclose training records. The Agency assumes that, each year, employers have to prepare and maintain training records for 23 percent (i.e., 1,432,388) of these workers (i.e., new workers and workers who require training), as well as maintain training records for the remaining 4,795,386 workers. In this regard, OSHA believes that a secretary spends 3 minutes (.05 hour) preparing and maintaining the record for the 23 percent of workers who are new or require retraining; and, another 1 minute (.02 hour) maintaining the already prepared record for the remaining workers (77 percent). Accordingly, the annual burden hour and cost estimates for the paperwork requirements associated with this training requirement are:

Burden Hours: (1,432,388 new/retrained workers x .05 hour) + (4,795,386 remaining workers x .02 hour) = **167,527 hours**

Cost: 167,527 burden hours x \$24.09 = **\$4,035,725**

(D) Notification of Employees (Paragraph (c)(9))

OSHA has determined that the average number of lockout or tagout events that occur annually vary by the size of the establishment and whether the establishment is in a high-impact or low-impact industry. OSHA estimates that there are approximately 93,694 authorized workers¹⁵ in very

¹⁵To calculate burden hours and cost, OSHA assumes that every authorized worker will notify the affected

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small, high-impact establishments who would have to notify affected workers of the application and removal of lockout/tagout devices (since this practice was not customary and normal in these facilities prior to the promulgation of the standard) (see Table 1). OSHA estimates that, on average, there are 75 maintenance or servicing operations conducted annually in each very small, high-impact establishment. For other high-impact establishments, it is estimated that there are approximately 283,728 authorized workers in establishments who would have to notify affected workers of the application and removal of lockout/tagout devices (see Table 1). It is estimated that, on average, there will be 150 such maintenance or services operations conducted annually in each of these establishments. Additionally, there are 762,394 authorized workers in low-impact establishments who would have to notify affected workers of the application and removal of lockout/tagout devices (see Table 2). These workers are estimated to perform, on average, 12 maintenance or servicing operations annually for each low-impact establishment.

OSHA estimates that a total of 58,734,978 lockout or tagout events occur annually where notification (not customarily performed) is needed. OSHA assumes that an authorized worker is a non-supervisory manufacturing worker who requires 15 seconds (.004 hour) to provide the required notification (i.e., 10 seconds for applying a lockout/tagout device, and five seconds for removing the device). Accordingly, the total annual burden hour and cost estimates for this notification are:

High-impact, very small establishments:

93,694 authorized workers x 75 operations/year = 7,027,050 events/year

High-impact, other than very small establishments:

283,728 authorized workers x 150 operations/year = 42,559,200 events/year

Low-impact establishments:

762,394 authorized workers x 12 operations/year = 9,148,728 events/year

Burden Hours: 58,734,978 notifications x .004 hour = **234,940 hours**

Cost: 234,940 burden hours x \$24.77 = **\$5,819,464**

(E) Outside Personnel (Contractors, etc.) (Paragraph (f)(2)(i))

Paragraph (f)(2)(i) requires onsite and outside (contractor) employers to notify each other of their respective LO/TO procedures. Notification of respective LO/TO procedures takes 5 minutes (.08 hour) for the onsite and outside contractor to meet and discuss respective LO/TO procedures. As both the onsite employer and outside contractor attend the five-minute meeting, the Agency assumes a total of 10 minutes (.17 hour) for this requirement.

A supervisor/manager, at a wage rate of \$41.32 per hour will perform the notifications. Further, OSHA believes that contractors are involved in 10 percent of all lockout/tagout events. As determined above, there are **58,734,978** lockout/tagout events annually that require workers to be

workers. The Standard requires only that one of the authorized workers (or an employer representative) notify the affected workers. Thus, OSHA likely overestimates the burden hours and cost associated with this requirement.

notified ($58,734,978 \times 10\% = 5,873,498$ notifications)

Burden Hours: 5,873,498 LO/TO notifications x .17 hour = **998,495 hours**
Cost: 998,495 hours x \$41.32 = **\$41,257,813**

(F) Disclosure of Inspection and Training Certification Records (Paragraphs (c)(6)(ii) and (c)(7)(iv))

OSHA believes that approximately 10,230 establishments covered by the Standard¹⁶ will be subject to an OSHA inspection and required to disclose inspection and training certification records annually. OSHA estimates that it will take a supervisor 5 minutes (.08 hour) to gather and disclose the requested information.

Burden Hours: 10,230 inspections x .08 hour = **818 hours**
Cost: 818 burden hours x \$41.32 = **\$33,800**

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 services 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 on 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 part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (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.

Paragraph (c)(5)(ii)(D) requires that each lock and tag indicate the identity of the authorized worker applying it. Paragraph (c)(5)(iii) requires that tags warn against hazardous conditions that could arise if the machine, equipment, or system is energized. In addition, the tag must include a legend such as one of the following: Do Not Start; Do Not Open; Do Not Close; Do Not Energize; Do Not Operate.

OSHA estimates that a total of 58,734,978 lockout or tagout events occur annually where notification is needed. The Agency is estimating the cost of a tag is \$1.00 at an average use of 7

¹⁶ OSHA estimated the number of inspections by multiplying OSHA's inspection rate (1.4%) by the number of establishments covered by this ICR (i.e., 730,706 establishments x 1.4% = 10,230 inspections).

times per tag. The cost for each tag and tie is 0.17 cents. Therefore, OSHA estimates that employers will incur a cost for tags of \$1,426,421.

Cost: 58,734,978 (notifications)/ 7 (average use of tag) x .17 cents = **\$1,426,421**

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

OSHA estimates that a compliance officer (GS-12, step 5), with an hourly wage rate of \$37.74¹⁷, spends about 30 minutes (.50 hour) during an inspection reviewing the documents required by the Standard. The Agency determines that its compliance officers will inspect about 10,230 employers (see footnote 14) who have lockout/tagout programs regulated by the Standard during each year covered by this ICR. 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 paperwork requirements to the Federal government is:

Cost: 10,230 inspections x .50 hour x \$37.74 = \$193,040

15. Explain the reasons for any program changes or adjustments.

OSHA is requesting an adjustment decrease of 342,719 burden hours (from 2,989,421 hours to 2,646,702 hours). This decrease is a result of updated data showing a decrease in the number of affected high impact establishments.

In addition, OSHA is requesting an adjustment decrease of \$216,410 in operation and maintenance costs (from \$1,642,831 to \$1,426,421) associated with the purchase of tags and ties by employers. This decrease is a result of updated data showing a decrease in the number of affected high impact establishments.

Upon further consideration, the requirements that employers provide training to workers under paragraph (c)(7)(i),(ii) and (iii) are not considered to be a collection of information. OSHA is not taking burden for this activity under Item 12 of this Supporting Statement.

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 appropriate.

OSHA lists current valid control numbers in §§1910.8, 1915.8, 1917.4, 1918.4, and 1926.5 and publishes the expiration date in the Federal Register notice announcing OMB approval of the

¹⁷ Source: U.S. Office of Personnel Management, *General Schedule and Locality Tables, Salary Table 2014-RUS*, http://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2014/RUS_h.pdf.

information-collection requirement. (See 5 CFR 1320.3(f)(3).) OSHA believes that this is the most appropriate and accurate mechanism to inform interested parties of these expiration dates

18. Explain each exception to the certification statement.

OSHA is not seeking an exception to the certification statement.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

This Supporting Statement does not contain any collection of information requirements that employ statistical methods.

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Table 1: Establishments and Employment in Manufacturing High-Impact Industries

					Number of Authorized Workers			Number of Additional Workers Covered		
Size Category	Employment Size	Total Number of Establishments	Number of Establishments Employing Authorized Workers	Total Number of Workers	Total	In Establishments with Compliant Lockout/ Tagout Programs When Standard Published	In Establishments without Lockout/ Tagout Programs When Standard Published	Total	In Establishments with Compliant Lockout/Tagout Programs When Standard Published	In Establishments without Lockout /Tagout Programs When Standard Published
Very Small	<20	208,530	208,530	1,171,170	117,117	23,423	93,694	117,117	23,423	93,694
Small	20-99	63,866	63,866	2,804,015	280,402	126,181	154,221	560,803	252,361	308,442
Medium	100-249	15,575	15,575	2,376,636	237,664	154,482	83,182	475,327	308,963	166,364
Large	250+	7,672	7,672	4,632,540	463,254	416,929	46,325	926,508	833,857	92,651
Total		295,643	295,643	10,984,361	1,098,437	721,015	377,422	2,079,755	1,418,604	661,151

Source: 2011 County Business Patterns Survey. U.S. Census Bureau, 2011.

Table 2: Establishments and Employment in Low-Impact Industries

				Number of Authorized Workers			Number of Additional Workers Covered		
Industry	Total Number of Establishments	Number of Establishments Employing Authorized Workers	Total Number of Workers	Total	In Establishments with Compliant Lockout / Tagout Programs When Standard Published	In Establishments without Lockout / Tagout Programs When Standard Published	Total	In Establishments with Compliant Lockout / Tagout Programs When Standard Published	In Establishments without Lockout / Tagout Programs When Standard Published
Transportation	229,285	229,285	3,851,530	206,357	103,179	103,178	206,357	103,179	103,178
Communications	50,882	50,882	1,108,757	620,760	310,380	310,380	620,760	310,380	310,380
Utilities	13,312	13,312	221,881	65,229	32,615	32,614	65,229	32,615	32,614
Wholesale Trade	411,930	35,838	5,626,328	197,109	98,555	98,554	197,109	98,555	98,554
Food Stores	231,092	15,483	4,802,330	20,128	10,064	10,064	20,128	10,064	10,064
Services	1,049,565	90,263	15,109,730	415,208	207,604	207,604	415,208	207,604	207,604
Total	1,986,066	435,063	30,720,556	1,524,791	762,397	762,394	1,524,791	762,397	762,394

Source: 2011 County Business Patterns Survey. U.S. Census Bureau, 2011.

Table 3: Written Procedures Assuming Half of the Original "Percent of Establishments in Compliance When the Rule is Published"

Establishment Calculations -- High Impact Establishments									
Establishment Size	Number of Establishments	Percent of Establishments in Compliance when Rule Published	Existing Establishments Lacking LOTO Program	Existing Establishments with LOTO Procedures when Rule Published	Percent of Establishments with Procedures but without Written Plans	Existing Establishments with Procedures but without Written Plans	Total Existing Establishments Requiring Revision	Annual Firm Turnover	New Establishments Requiring Revision
Very Small	208,530	10%	187,677	20,853	10%	2,085	189,762	10%	18,976
Small	63,866	23%	49,177	14,689	10%	1,469	50,646	10%	5,065
Medium	15,575	33%	10,435	5,140	10%	514	10,949	10%	1,095
Large	7,672	45%	4,220	3,452	10%	345	4,565	10%	457
Total	295,643		251,509	44,134		4,413	255,922		25,593

Calculation of Hours for New Establishments (No Existing Program) -- High-Impact Establishments			
Establishment Size	Number of Establishments	First Year Hours	Total Hours First Year
Very Small	18,976	2	37,952
Small	5,065	12	60,780
Medium	1,095	40	43,800
Large	457	80	36,560
Total	25,593		179,092

Calculation of Hours for Recurring Burden in Existing Establishments -- High-Impact Establishments				
Establishment Size	Number of Establishments	Hours	Existing Establishment Hours	Total Hours High Impact
Very Small	189,762	0.5	94,881	132,833
Small	50,646	4	202,584	263,364
Medium	10,949	12	131,388	175,188
Large	4,565	20	91,300	127,860
Total	255,922		520,153	699,245

Calculation of Hours for New Establishments (No Existing Program) -- Low-Impact Establishments			
	Number of Establishments	First Year Hours	Total Hours First Year
Transportation	22,929	2	45,858
Communications	5,088	2	10,176
Utilities	1,331	2	2,662
Wholesale Trade	3,584	2	7,168
Food Stores	1,548	2	3,096
Services	9,026	2	18,052
Total	43,506		87,012

Calculation of Hours for Recurring Burden in Existing Establishments -- Low-Impact Establishments				
	Number of Establishments	Hours	Existing Establishment Hours	Total Hours Low Impact
Transportation	229,285	0.5	114,643	160,501
Communications	50,882	0.5	25,441	35,617
Utilities	13,312	0.5	6,656	9,318
Wholesale Trade	35,838	0.5	17,919	25,087
Food Stores	15,483	0.5	7,742	10,838
Services	90,263	0.5	45,131	63,183
Total ¹⁸	435,063		217,532	304,544

Grand Totals	
	Total Hours
High-Impact Establishments	699,245
Low-Impact Establishments	304,544
Grand Total Hours:	1,003,789

¹⁸ As a result of viewing whole numbers in spreadsheets, small differences in totals may occur.

Table 4: Requested Burden-Hour Adjustments

Information Collection Requirement		Current Burden Hours	Requested Burden Hours	Adjustment to Hours	Cost Under Item 12	Responses	Explanation of Adjustment
(A) Energy-Control Procedure (paragraph (c)(4)(i))							
	High-impact establishments developing new procedures	207,830	179,092	-28,738	\$7,400,081	25,593	The estimated number of high-impact establishments developing new procedures decreased from 28,142 to 25,593 based on new data derived from the 2011 County Business Patterns.
	Low-impact establishments developing new procedures	89,484	87,012	-2,472	\$3,595,336	43,506	The estimated number of low-impact establishments developing new procedures increased slightly from 44,742 to 43,506 based on new data derived from the 2011 County Business Patterns.
	High-impact establishments updating procedures	604,425	520,153	-84,272	\$21,492,722	255,922	The estimated number of high-impact establishments updating existing procedures decreased from 281,429 to 255,922 based on new data derived from the 2011 County Business Patterns.
	Low-impact establishments updating procedures	223,708	217,532	-6,176	\$8,988,422	435,063	The estimated number of low-impact establishments updating existing procedures increased slightly from 447,416 to 435,063 based on new data derived from the 2011 County Business Patterns.

Information Collection Requirement	Current Burden Hours	Requested Burden Hours	Adjustment to Hours	Cost Under Item 12	Responses	Explanation of Adjustment
(B) Periodic Inspection Certification Records (paragraph (c)(6)(ii))	255,299	241,133	-14,166	\$9,963,616	730,706	The estimated number of high-impact establishments being inspected annually decreased from 326,216 to 295,643 and the number of low-impact establishments being inspected annually also decreased slightly from 447,416 to 435,063 based on new data derived from the 2011 County Business Patterns.
(C) Training Certification Records (paragraph (c)(7)(iv))	187,242	167,527	-19,715	\$4,035,725	6,227,774	Based on new data, the number of employees covered by the Standard who require training annually decreased from 6.96 million to 6.23 million.
(D) Notification of Workers (paragraph (c)(9))	270,584	234,940	-35,644	\$5,819,464	58,734,978	There was a decrease in the number of employee notifications from 67,646,001 to 58,735,978.
(E) Offsite Personnel (Contractors, etc.) (paragraph (f)(2)(i))	1,149,982	998,495	-151,487	\$41,257,813	5,873,498	Lockout/Tagout notifications decreased from 6,764,600 to 5,873,498.
(F) Disclosure of Inspection and Training Certification Records (under paragraphs (c)(6)(ii) and (c)(7))	867	818	-49	\$33,800	10,230	Because the number of establishments decreased from 773,632 to 730,706 there is a decreased number of estimated inspections and disclosures by employers.
TOTALS	2,989,421	2,646,702	-342,719	\$102,586,979	72,337,270	