

Small Business Economic Impact Statement for Crane Rule (Phase 2)

**Washington State Department of Labor and Industries
June, 2011**

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The Division of Occupational Safety and Health (DOSH) of the Washington State Department of Labor & Industries (L&I) is proposing new provisions under chapter 296-155 WAC, Part L, regarding the regulation of crane and derrick operations for construction work in the state of Washington.

The following Small Business Economic Impact Statement (SBEIS) was prepared in compliance with the Regulatory Fairness Act (RFA), RCW 19.85.040, and it provided an analysis comparing the average costs imposed on small businesses and large businesses associated with implementation of WAC 296-155-53302 through WAC 296-155-56435. In particular, the following provisions of the proposed rule, which have been identified as the components likely imposing increased compliance costs¹ on the affected businesses, were analyzed in this report:

WAC 296-155-53302: Signal Persons Qualification

WAC 296-155-53306: Riggers Qualification.

WAC 296-155-54100: Self-Erecting Tower Cranes – General

1. INTRODUCTION TO THE COST SURVEY

1.1 Survey methodology

To estimate the economic impacts of the proposed phase 2 crane rule on the affected businesses, L&I developed a survey in April 2011. L&I designed this survey in collaboration with the DOSH crane technical team, Assistant Attorney General for DOSH, L&I internal survey review committee and other relevant parties. The survey was used to gauge all the probable new compliance costs that businesses would incur if the proposed portion of the crane rule was adopted and to determine whether there exists a disproportionate cost impact on affected small businesses.

¹ The department does not consider the requirements that are already addressed in OSHA's new crane rule or in most recent ASME/ANSI standards increased requirements. Therefore, these provisions are excluded from this analysis. In addition, the department does not include the proposed provisions that will only impose minimal or minor costs on the businesses.

1.1.1 Sampling frame

The proposed crane rule applies to all construction and general businesses that own or use cranes and derricks for construction activities. The development of the sampling strategy for the cost survey for the proposed rule requires the identification of the set of businesses that will most likely be affected by the proposed rule changes. To sample the establishments that best represent the underlying population, L&I first obtained a list of crane owners from its crane certification database.

Next, L&I identified 24 industrial subsectors² that most likely would lease cranes from rental companies to perform construction work. Based on these 6-digit NAICS codes, the department extracted the most recent business information data from its administrative data warehouse. By doing this, L&I obtained the population of crane lessees in the construction industry. Together, these two lists constitute the targeted business population that would likely be affected by the proposed rule.

1.1.2 Sample size

In determining the appropriate sample size that was needed to obtain valid cost estimates related to the compliance with the proposed phase 2 crane and derrick rule, several factors including the desired confidence level, uncertainty in the cost estimates, and the expected response rate were considered.

First, the conventional level of 95% confidence and $\pm 5\%$ uncertainty were chosen in order to ensure rigorous and statistically valid estimates. Next, approximately 22,000 unique business accounts were pulled from the crane owner list and the crane lessee list as described in 1.1.1 and these businesses comprise the entire population. L&I also weighed in the fact that past rulemaking-related surveys often had a low response rate.

The final determination of the sample size for this survey was based on the following factors: (1) the population is approximately 22,000 active employers who will most likely be affected by the proposed rule changes, (2) the desirable confidence level is 95% (with $\pm 5\%$ sampling error), and (3) the response rate for a similar survey has been relatively low. The

² To control the survey cost, we only consider crane lessees that are in the construction industry. In reality, there may be some businesses in the general industry that would also use cranes to perform construction work.

department finally chose a sample size of 3,639 to sufficiently yield statistically significant cost estimates, assuming a 10% response rate and conventional levels for statistical validity.

1.1.3 Sampling method

In order to obtain reliable estimates of compliance costs on the affected businesses, an appropriate sampling method needs to be developed. L&I adopted proportionate stratified random sampling by subsectors for crane lessees and crane owners that don't rent cranes as their main revenue. This method allows the department to create strata at the subsector level that pattern the underlying population, thereby helping to reduce sampling variability. To implement this method, L&I determined the sample size needed for each 6-digit NAICS code by multiplying its proportion of the sampling frame by the overall desired sample size (See Table A2 in the Appendix). L&I also randomly selected a certain number of samples from the crane owner list. The final mailing list was obtained by combining the selected samples from the above steps and removing the duplicate records.

1.1.4 Survey development and response rate

The survey was first designed by the regulatory economist in March 2011. The draft was then reviewed by the crane technical team and the AAG from DOSH. Per L&I internal policy, the survey was also submitted to the survey committee for their review. The survey was updated and finalized based on feedbacks from all the parties involved in April 2011, and it was sent out on May 6, 2011. The survey respondents were required to complete the survey and return it to L&I by the end of May 2011.

Between May 6 and May 31, 2011, L&I received 788 completed surveys from the businesses out of the 3,639 surveys sent. Hence, the response rate for those presumed to have been contacted was 21.7%. Six hundred and thirty five respondents reported that they did not have employees performing as riggers or signal persons, nor did they use any self-erecting tower crane. The remaining 153 employers indicated that at least one section applied to them. There may have been some unsuccessful deliveries due to possible errors in the preparation or the delivery process, so the actual response rate is likely to be higher. Given the short timeframe available to conduct the survey and the fact that no follow-up contacts were made, the response rate is higher than expected.

1.2 Survey contents

The majority of this proposed crane rule is intended to clarify the most current OSHA crane standard or national industrial consensus standard and is not considered as increased requirements to the businesses involved. These components of the rule are not addressed by the survey questions. After comparing the proposed rule with the existing standards and discussing the findings with the AAG and technical team, L&I identified three major requirements that are above current standards and which will probably impose more than minor compliance costs on the businesses involved.

The survey was organized as follows: the first section of the survey was designed to obtain the background information of each employer including the number of employees, the primary business operations, and the work activities involved; the second through the last sections were designed to estimate the probable new compliance costs relating to each increased requirement. Specifically, the survey plans for the three major estimates required were as follows:

(1) Estimate the compliance costs relating to riggers qualification requirements

The survey will first ask the respondents if they hire any employees to perform the tasks that would require qualified riggers under the proposed rule and if yes, how many of these employees they employ and how many of them are already qualified. The survey next asks them to estimate the costs of providing necessary training, mandatory written and practical tests, along with the evaluation services from a qualified evaluator. The estimated total costs from each respondent will be used to derive the aggregated annual costs of this provision on the affected businesses as a whole.

(2) Estimate the compliance costs relating to crane signal persons qualification requirements

The survey will first ask the respondents if they hire any workers designated as signal persons and if yes, how many of these employees they employ and how many of them are already qualified. The survey then ask them to estimate the costs of providing necessary training, mandatory oral or written test and practical test, along with the evaluation services from a qualified evaluator. The estimated total costs from each respondent will be used to derive the aggregated annual compliance costs of this provision on the entire affected businesses.

(3) Estimate the costs of new requirements employers should comply with when they use self-erecting tower cranes to perform construction work

The survey will first ask the respondents if they use any self-erecting tower cranes to perform construction work. If yes, it will next ask them approximately how many crane jobs they complete with the use of the self-erecting tower cranes in a typical year. Finally, it will ask them whether they are already in compliance with these two requirements and if not, how much the estimated cost would be for each requirement respectively. The total costs from each respondent the question applies to will be used to derive the aggregated annual costs of this provision on the entire affected businesses.

2. ASSESSING ECONOMIC IMPACT BY EMPLOYMENT SIZE

The Regulatory Fairness Act, RCW 19.85.040(1) requires the department to determine whether a proposed rule will have a disproportionate cost impact on small businesses. The act directs the department to compare “the cost of compliance for small businesses with the cost of compliance for the ten percent of businesses that are the largest businesses required to comply with the proposed rule”. A convenient and easy way to make this comparison is to compare the compliance cost per employee for these two groups. For each rule component described in the survey, the unit cost for the small businesses will be compared to the unit cost for the largest 10% of all businesses in the affected group.

This Small Business Economic Impact Statement (SBEIS) compares the average cost per affected worker for each component that represents increased requirements. The purpose here is to best estimate the extent to which the disproportionate impact, if any, is on small businesses rather than to estimate the total costs to the affected businesses as a whole.

2.1 Cost per worker associated with riggers qualification requirements

Section 2 in the survey asked respondents whether they have employees performing the tasks that require qualified riggers and if yes, how much the total cost would be if the proposed new qualification requirements were adopted. One hundred and forty two respondents provided their responses indicating they were subject to this requirement (“YES” to question 2a). Of these

142 respondents, 75 businesses are small businesses and the remaining are those with more than 50 employees.

Table 1 shows the costs estimated by each category. For small businesses, the average total cost is \$913 for the training fee and additional 8 hours of travel time³, \$747 for the testing and additional 8 hours of travel time, and \$577 for the evaluation service from a qualified evaluator. In contrast, the costs are \$830, \$513 and \$280 respectively for the top 10% of the largest businesses. Since the proposed rule requires that a rigger qualification cannot exceed a five-year period and at a minimum, the renewal must include a documented written exam, a rigger needs to be qualified initially after the rule takes effect and this qualification needs to be renewed twice over an 11-year time span. If we assume that 20% of riggers need to be retrained before retaking the written exam, each renewal would cost \$1,134 for small businesses and \$703 for the selected large businesses. In total, the annual average cost per rigger is \$341 and \$233 for these two categories in an 11-year time span. In light of this, the cost per rigger for small businesses is estimated to be approximately 1.46 times the cost for the 10% of the largest businesses.

³ We use \$24.73 as the average hourly wage for riggers. This value was derived from the average weekly wage for all construction workers released by Washington Employment Security Department Quarterly Census of Employment and Wages, 3rd quarter report, 2010.

Table 1. Unit cost relating to riggers qualification requirements

Cost Item /Business Size	Small business	10% of largest business
Training hours	16.8 hrs	13.5 hrs
Total training cost (including 8 additional hours for travel time) ⁴	\$913	\$830
Exam fee	\$550	\$315
Total cost for exams (including 8 additional hours for travel time)	\$747	\$513
Evaluation fee	\$577	\$280
Total cost for initial qualification	\$2,237	\$1,623
Total cost for the first renewal in the 6 th year ⁵	\$1,134	\$703
Total cost for the second renewal in the 11 th year	\$1,134	\$703
Annual cost in 11-year period⁶	\$341	\$233

2.2 Cost per worker associated with signal persons qualification requirements

Section 3 in the survey asked respondents whether they have employees performing the tasks that require qualified signal persons and if yes, how much the total cost would be if the proposed new qualification requirements were adopted. One hundred and thirty two respondents provided their responses indicating they were subject to this requirement (“YES” to question 3a). Of these 132 respondents, 75 businesses are small businesses and the remaining are those with more than 50 employees.

Table 2 summarizes the costs estimated by each category. For small businesses, the average total cost is \$815 for the training fee and additional 8 hours of travel time, \$658 for the testing and additional 8 hours of travel time, and \$503 for the evaluation service from a qualified

⁴ The average training class cost from all these providers is \$299 and we use this value as the fixed training fee.

⁵ This cost is the sum of the evaluation fee, half of total cost for exams and 20% of total training cost.

⁶ We use 5% as the discount rate to annualize the costs.

evaluator. In contrast, the costs are \$597, \$408 and \$153 respectively for the top 10% of the largest businesses. Since OSHA’s new crane rule already requires signal persons to be qualified, the only requirement in this proposed rule beyond federal standard is that it requires a signal person’s qualification to be renewed every five years. Therefore, the new compliance cost attributed to this rule is the renewal cost. As a signal person’s qualification needs to be renewed twice over an 11-year time span, the annual average cost per signaler is \$120 and \$58 for these two categories in an 11-year time span. In light of this, the cost per signaler for small businesses is estimated to be approximately 2.1 times the cost for the 10% of the largest businesses.

Table 2. Unit cost relating to signal persons qualification requirements

Cost Item /Business Size	Small business	10% of largest business
Training hours	13.8 hrs	5.1 hrs
Total training cost (including 8 additional hours for travel time) ⁷	\$815	\$597
Exam fee	\$460	\$210
Total cost for exams (including 8 additional hours for travel time)	\$658	\$408
Evaluation fee	\$503	\$153
Total cost for the first renewal in the 6 th year	\$995	\$476
Total cost for the second renewal in the 11 th year	\$995	\$476
Annual cost in 11-year period	\$120	\$58

2.3 Cost per worker associated with general requirements for self-erecting tower cranes

As of February 2011, there were a total of 24 certified tower cranes in Washington State⁸. A breakdown statistics by crane owners indicated that only 4 of them were certified self-erecting tower cranes. The population of this type of cranes is likely still very small even including those

⁷ The average training class cost from all these providers is \$275 and we use this value as the fixed training fee.

⁸ Crane certification database, Washington Department of Labor and Industries. 2011.

that have not yet certified with the department. On the survey sent to employers, Question 4d through 4f asked respondents how much the costs would be each year if the proposed increased requirements for the use of self-erecting tower cranes were adopted. Only 9 respondents said they use self-erecting tower cranes to perform construction work (“YES” to question 4a), among which there was only one small business. Therefore, the department did not think it would make much sense to compare the unit cost for businesses with different size based solely on survey data and decided not to do so.

3. ACTIONS TAKEN TO REDUCE THE IMPACT OF THE PROPOSED RULES ON SMALL BUSINESS

The above analysis indicates that small businesses are likely to bear a moderately disproportionate share of regulatory burden from the proposed rule. The law requires L&I to mitigate the cost for small business if it is legal and feasible to do so. In response to this requirement, L&I believes the following rules and practices will help to reduce the disproportionate impact of the proposed crane rule on small businesses.

3.1 Reduce fines for small businesses

RCW 49.17.180 (7) requires the department give consideration in the penalty assessment to factors including the size of the employer’s business. Table 5 in the section of WAC 296-900-14015 spells out the specific process for penalty adjustments including employment size. Based on these standards, employers with 25 or fewer employees can request up to a 60% reduction in penalties issued against them.

3.2 Enhance training and education opportunities for small businesses

The department has made a concerted effort to focus its training and education campaign on small businesses. This includes providing employers with materials that will help develop their crane safety plan, free training courses, train-the-trainer meetings and other related services.

3.3 Prioritize consultation services for small businesses

The department has developed a variety of on-site and off-site consultation services primarily for smaller employers and has prioritized establishments by size when receiving requests for these services. For example, the highest scheduled priority of consultation services

will be given to employers who employ less than 25 employees at the worksite. Most of these services are provided at no cost to the employer through state and federal funds. These services can include, but are not limited to, opening and closing conferences, a walk-through of employer worksites, identification of hazards, correction assistance, follow-up visits to verify correction of serious hazards, assistance in the development or improvement of the employer's occupational safety and health management system, technical assistance by telephone or letter and client visits to a department office. No penalties will be proposed or citations issued for any safety and health problems identified by the consultants. Hence, these consultation services greatly benefit small businesses in establishing and maintaining a safe and healthful workplace.

3.4 Exempt recordkeeping and reporting requirements for small businesses

According to WAC 296-27-00103, establishments with 10 or fewer employees are not required to keep injury or illness records. Based on the survey results, about one-quarter of the total affected businesses would fall into this category, and therefore are exempt from this recordkeeping requirement.

4. SMALL BUSINESS INVOLVEMENT IN THE RULEMAKING PROCESS

The department has made a considerable effort to involve small businesses and their representatives at various points in the rulemaking process. These efforts include:

(1) Since August 12, 2008, the department has held 20 stakeholder meetings in Tumwater and Tukwila to hear from the business community, including many small businesses. There was also a stakeholder comment period after each series of meetings. The representatives of small businesses, along with all the other attendees, have made a significant contribution to the development of the new crane rule.

(2) Representatives of many business and trade associations such as Associated General Contractors (AGC) of Washington, Independent Business Association (IBA), Associated Builders and Contractors of Western Washington (ABC), and International Brotherhood of Electrical Workers (IBEW) were invited and heavily involved in the entire rulemaking process. Many members of these associations are small businesses and their involvement with this rulemaking activity has been reflected by engagement of these associations and their representatives.

(3) The department developed the draft rule in February 2011 with the consideration of all the comments and concerns from the interested stakeholders across the state, including the small business community.

(4) The department has also scheduled three public hearings for these proposed provisions in Spokane, Seattle and Tumwater in late August 2011. These hearings are held for all the stakeholders, including small businesses, to provide their comments about the proposed rule and the preliminary economic analysis reports. The department will then make any necessary amendments to the rule and/or the supporting reports based on the comments collected from these hearings.

5. INDUSTRIES LIKELY TO BE REQUIRED TO COMPLY WITH THE RULE

All the industries included in the sampling frame for the cost survey are listed in Table A1 in the Appendix of this report⁹. A vast proportion of these businesses are small businesses with 50 or fewer employees. The actual compliance cost varies among different businesses. In some cases, employers even indicated there was no cost for them because they have already been in compliance with the proposed requirements, or the union has provided the services for free to their workers.

6. NUMBER OF JOBS CREATED OR LOST

The department does not anticipate that a significant number of jobs would be created or lost as a result of compliance with these proposed crane rule changes. Normally these requirements are such that employers will be able to meet them using existing staff and without the need for new hires. Similarly, there is no solid reason to expect that employers would need to dismiss a significant number of employees as a result of the draft proposed rule changes. Nevertheless, there may be a possibility that employers would hire more workers as internal evaluators to assess and ensure the qualifications of riggers and signal persons, since this could be a more cost-effective option compared to the use of third-party evaluators for some employers. The

⁹ Due to data availability and resource limitation, the affected businesses from general industry other than real estate and rental and leasing industry are excluded from this analysis.

department does not know the extent to which this proposed provision would impact employment in the construction industry.

7. CONCLUSIONS

As we have analyzed above, the proposed phase 2 crane rule is likely to impose moderately disproportionate compliance costs on small businesses. The extent of the disproportion varies among different rule components and the majority of this cost differential can be attributed to the cost relating to the use of a qualified evaluator to assess and document the qualifications. The primary reason for this difference is that large businesses likely have their own evaluators available for use, which is the lower-cost option allowed by the proposed rule, while most small businesses do not have this internal resource and therefore have to rely on a third-party qualified evaluator. From the benefit perspective, current research findings indicate that small businesses usually suffer significantly higher rates of injuries and fatalities than large businesses (Kaskutas, et al., 2009; Mendeloff, 2006; Ringen, 1995; Marsh, 1994; Toscano and Windau, 1994). Therefore, small businesses may benefit more in terms of the reduction in injuries and deaths if the proposed rule is adopted.

8. LIMITATIONS

Due to time and resource constraints, there are some limitations in this analysis, which can be summarized into the following categories.

8.1 Exclusion of construction activities in general industry

While we included the majority of affected businesses in our analysis, we did not take the cases in which cranes are used by general industry to perform construction work into our consideration. This would affect our estimates on the total costs and average costs associated with the proposed provisions, but the effect is supposed to be limited. The limitation of the resources available to the department and the urgency of adopting this rule prevented us from conducting a more extensive analysis that includes both construction industry and general industry.

8.2 Non-response bias

Although the number of completed surveys is larger than needed to ensure statistical validity, the number of respondents who are related to each survey section varies and it is likely there is some non-response bias, especially for the survey questions with low response rate. That is, some employers may be more inclined not to respond than others. For example, it is almost always the case that those with strong opinions about the survey topic or with more interest in the outcome are more likely to respond. In this survey, small businesses have more serious non-response bias than relatively larger businesses. This is evident in that the proportion of small businesses out of total businesses that have completed the survey is much smaller than their proportion in the population of entire affected businesses.

8.3 Inclination to overestimate costs

In a similar manner, respondents naturally have an incentive to inflate their cost estimates, which may undermine the quality of the cost data we gathered. This incentive stems from the discontent that prevails among construction businesses with the safety regulations, especially in tough economic times like those we are currently experiencing.

8.4 Missing or infeasible data

A small number of respondents indicated that a certain question applied to them, but they didn't provide numerical values of the costs. A few of them simply did not answer the question when they were asked to estimate the costs. Others described the costs as "a lot", "huge", "don't know", etc. These missing or infeasible data reduced the total number of "quantitatively useable" surveys on which this analysis is based.

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10. APPENDIX

Table A1. Industries likely to be affected by this proposed rule

NAICS Code	Description	Total # of Businesses	Total paid employees	# of Small Businesses
236115	New single-family general contractors	2,874	10,236	2,862
236116	New multifamily housing construction (except operative builders)	112	1,617	104
236117	New housing operative builders	1,093	6,726	1,070
236118	Residential remodelers	3,369	12,465	3,346
236210	Industrial building construction	80	2,556	71
236220	Commercial and institutional building construction	1,020	17,826	952
237110	Water and sewer line and related structures construction	394	5,750	373
237120	Oil and gas pipeline and related structures construction	30	1,857	27
237130	Power and communication line and related structures construction	138	2,337	130
237210	Land subdivision	346	1,472	344
237310	Highway, street, and bridge construction	335	9,318	289
237990	Other heavy and civil engineering construction	144	2,373	132
238110	Poured concrete foundation and structure contractors	892	6,707	871
238120	Structural steel and precast concrete contractors	89	2,387	73
238130	Framing contractors	867	5,380	845
238140	Masonry contractors	537	3,588	524
238150	Glass and glazing contractors	135	1,691	126
238160	Roofing contractors	708	6,559	689
238170	Siding contractors	449	2,579	440
238190	Other foundation, structure, and building exterior contractors	132	1,007	126
238210	Electrical contractors and other wiring installation contractors	2,086	21,935	2,013
238220	Plumbing, heating, and air-conditioning contractors	1,995	23,124	1,922
238290	Other building equipment contractors	138	1,934	127
238310	Drywall and insulation contractors	859	12,828	803
238320	Painting and wall covering contractors	1,594	8,598	1,574
238330	Flooring contractors	681	2,671	677
238340	Tile and terrazzo contractors	419	1,547	418
238350	Finish carpentry contractors	1,134	4,942	1,128
238390	Other building finishing contractors	161	1,037	160
238910	Site preparation contractors	1,383	10,469	1,361
238990	All other specialty trade contractors	805	5,043	791
532412	Construction & Mining & forest machine & equipment	125	1,319	124

Data source: 2008 County Business Patterns for Washington State, released by U.S. Census Bureau.

This table excludes the affected businesses in general industry other than those from real estate and rental and leasing industry.

Table A2. Stratified random samples of crane lessees and owners that don't rent cranes as their main revenue

NAICS Code	Total businesses	Affected businesses	Percent of total affected bus.	Proportionate sample size
236115	2,874	1437	27.59%	828
236116	112	56	1.08%	32
236117	1,093	547	10.49%	315
236118	3,369	337	6.47%	194
236210	80	80	1.54%	46
236220	1020	1020	19.59%	588
237110	394	394	7.57%	227
237120	30	30	0.58%	17
237130	138	69	1.32%	40
237310	335	34	0.64%	19
237990	144	72	1.38%	41
238110	892	45	0.86%	26
238120	89	89	1.71%	51
238130	867	650	12.49%	375
238140	537	27	0.52%	15
238150	135	14	0.26%	8
238160	708	71	1.36%	41
238170	449	22	0.43%	13
238190	132	7	0.13%	4
238210	2,086	21	0.40%	12
238220	1,995	20	0.38%	11
238290	138	14	0.26%	8
238320	1,594	16	0.31%	9
238910	1,383	138	2.66%	80
Subtotal	20,594	5208	100%	3000

Table A3. Key survey response information

Sampling frame	22,000
Sample size	3,639
Returned total	798
Incomplete total	10
Completed total	788
Related to one or more sections in the survey	153

Survey Instrument



2011 Crane Rulemaking (Phase 2) Survey

Responses to this survey are anonymous and confidential

May 3, 2011

Dear Business Owner/Safety Manager:

The purpose of this survey is to determine any new costs your business may incur due to the increased requirements in the proposed crane rule (Phase 2). Your answers will also help us determine how the proposed rule could impact businesses of different types and sizes.

- Each section will ask you questions that will help us determine how these rules might affect your business.
- You may not need to fill out all sections. For example, if your company uses cranes but you do not employ employees as riggers, you can skip Section 2.
- The department specifically asked the labor organizations and the business associations in the state to select representatives to participate and attend meetings to assist the department with developing this proposal. To read the draft rules on the L&I website go to: www.Lni.wa.gov/Safety/Rules/WhatsNew/Proposed/ and click on Construction, Safety Standards for Chapter 296-155 WAC Cranes (Phase 2).

Completing the survey

There are four sections in this survey:

Section 1: General questions about your business as a whole

Section 2: Questions to answer if your business employs employees as riggers

Section 3: Questions to answer if your business employs employees as crane signal persons

Section 4: Questions to answer if your business owns or uses self-erecting tower cranes

Please answer the questions the best you can. If you do not have the exact information, use your best estimate, or leave the response blank. In order for your cost data to be included in the economic analysis of this rule, the survey must be filled out and returned in the included postage-paid envelope by **May 31, 2011**.

If you have any questions about the proposed rule, please contact Cindy Ireland.

If you have any questions about the survey, please contact Alex (Yuanlong) Ge.

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2011 Crane Rulemaking (Phase 2) Survey

SECTION 1: GENERAL QUESTIONS ABOUT YOUR BUSINESS

1a. During 2010, what was the maximum number of full-time workers your business employed?

_____ full-time workers (if none, enter 0)

1b. During 2010, how many total hours did your part-time and/or seasonal employees work?

_____ hours (if none, or if you don't employ part-time or seasonal workers, enter 0)

1c. Please check the **one** industry description that most closely identifies your business. If more than one of these descriptions fits your business, select the one that represents the largest part of your business:

<u>Construction</u>
<input type="checkbox"/> New Single-Family Housing Construction
<input type="checkbox"/> New Multifamily Housing Construction
<input type="checkbox"/> New Housing Operative Builders
<input type="checkbox"/> Residential Remodelers
<input type="checkbox"/> Industrial Building Construction
<input type="checkbox"/> Commercial and Institutional Building Construction
<input type="checkbox"/> Water and Sewer Line and Related Structures Construction
<input type="checkbox"/> Oil and Gas Pipeline and Related Structures Construction
<input type="checkbox"/> Power and Communication Line and Related Construction
<input type="checkbox"/> Highway, Street, and Bridge Construction
<input type="checkbox"/> Other Heavy and Civil Engineering Construction
<input type="checkbox"/> Poured Concrete Foundation and Structure Contractors
<input type="checkbox"/> Structural Steel and Precast Concrete Contractors
<input type="checkbox"/> Framing Contractors
<input type="checkbox"/> Masonry Contractors
<input type="checkbox"/> Other Building Equipment Contractors
<input type="checkbox"/> Roofing Contractors
<input type="checkbox"/> Electrical and Other Wiring Installation Contractors
<input type="checkbox"/> Plumbing, Heating, and Air-Conditioning Contractors
<input type="checkbox"/> Other Building Equipment Contractors
<input type="checkbox"/> Site Preparation Contractors
<input type="checkbox"/> All Other Specialty Trade Contractors
<u>Real estate and rental and leasing</u>
<input type="checkbox"/> Machinery and Equipment Rental and Leasing
<u>Others</u>
<input type="checkbox"/> Please specify: _____

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SECTION 2: RIGGER

Please read the text in the box below before answering the following questions.

Under the proposed rule (WAC 296-155-53400(43)(c)(iii) and WAC 296-155-53402(19)(a)), qualified riggers are required whenever workers are **within the fall zone** and hooking, unhooking, or guiding a load, or doing the initial connection of a load to a component or structure. Additionally, employers must use qualified riggers **during hoisting activities for assembly and disassembly work**.

Proposed qualification requirements (WAC 296-155-53306): Employees must pass a **written test** and a **practical test** in order to be qualified riggers and this qualification must be **renewed every five years**. Employers must use **either a third party qualified evaluator or their own qualified evaluator** to assess and ensure that a rigger is qualified.

2a. Do any of your employees perform these specific tasks? How many?

- Yes: _____ employees.
- No: please go to Section 3: Crane Signal Persons

2b. Are any of your workers performing these jobs already **qualified** riggers as outlined in the box above? How many?

- Yes: _____ **qualified** riggers.
- No.

2c. Please estimate the hours of training your employees will need to be provided to meet the requirements for qualified riggers.

_____ hours per qualified rigger

2d. Please estimate the costs of all the other necessary services your employees will need to be provided to meet the requirements for qualified riggers.

	Cost per qualified rigger
Written Test	\$
Practical Test	\$
Use of a qualified evaluator to assess and document the qualifications of the candidate	\$

SECTION 3: CRANE SIGNAL PERSONS

Please read the text in the box below before answering the following questions.

Under the proposed rule (WAC 296-155-53406(1)), a **qualified signal person** must be provided in each of the following situations:

(a) **The point of operation**, meaning the load travel or the area near or at load placement, **is not in full view** of the operator.

(b) When the crane is traveling, **the view in the direction of travel is obstructed**.

(c) Due to **site-specific safety concerns**, either the operator or the person handling the load determines that it is necessary.

Proposed qualification requirements (WAC 296-155-53302): Employees must pass an **oral or written test** and a **practical test** in order to be qualified signal persons and this qualification must be **renewed every five years**. Employers must use **either a third party qualified evaluator or their own qualified evaluator** to assess and ensure that a signal person is qualified.

3a. Are any of your workers designated as signal persons? How many?

- Yes: _____ employees.
- No: please go to Section 4: General Requirements for Self-erecting Tower Cranes

3b. Are any of your workers designated as signal persons already **qualified** as outlined in the box above? How many?

- Yes: _____ **qualified** signal persons.
- No.

3c. Please estimate the hours of training your employees will need to be provided to meet the requirements for qualified signal persons.

_____ hours per qualified signal person

3d. Please estimate the costs of all the other necessary services your employees will need to be provided to meet the requirements for qualified signal persons.

	Cost per qualified signal person
Oral or Written Test	\$
Practical Test	\$
Use of a qualified evaluator to assess and document the qualifications of the candidate	\$

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SECTION 4: GENERAL REQUIREMENTS FOR SELF-ERECTING TOWER CRANES

4a. Do you use self-erecting tower cranes to perform any construction work?

- Yes: please read the text in the box below and continue with question 4b through 4f.
- No: Your survey is complete-please return it in the postage-paid envelope by May 31, 2011.

Under the proposed rule, there are two major new requirements employers should comply with when using self-erecting tower cranes to perform any construction work:

Requirement 1: When cranes are erected and after each reconfiguration, before placing the crane in service, all functional motions, motion limiting devices, brakes, and indicating devices must be tested for operation.

Requirement 2: Conditions that adversely affect the crane at the time of erection, reconfiguration, or dismantling must be a limiting factor that could require suspending the operation. These conditions include but are not limited to:

- (a) Support conditions;
- (b) Wind velocity or gusting winds;
- (c) Heavy rain;
- (d) Fog;
- (e) Extreme cold or heat;
- (f) Ice;
- (g) Artificial lighting.

4b. Approximately how many crane jobs are completed by your firm using the self-erecting tower cranes each year? _____ crane jobs

4c. Are you already in compliance with Requirement 1 as stated in the box above?

- Yes [**Please go to Question 4e**]
- No: [**Please continue with Question 4d**]

4d. Please estimate the amount of time needed to test all these devices each time self-erecting tower cranes are erected or reconfigured. _____hours _____minutes

4e. Please estimate the number of times that an operation would be suspended due to any of the conditions under Requirement 2 as stated in the box above in a year. _____times per year

4f. Please estimate the cost of suspending the operation due to the occurrence of one of the conditions under Requirement 2. \$_____per suspended operation

Thank you for completing this survey. Please return it in the postage-paid envelope by May 31, 2011.