



BC Association for
CRANE SAFETY

Crane Operator Qualification

INDUSTRY WORKSHOP REPORT

TOWER CRANE TASKGROUP MEETING #3

Construction Labour Relations Association,

New Westminster, BC

January 24, 2006

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In Attendance:	Ron Karras	Micron
	Larry Becker	PCL
	Greg Starchuk	Eagle West
	Kerry Hawley	Mega Cranes
	Joe Bishop	IUEO 115 Tower Crane instructor
	Val Coupal	Coupal Climbing Cranes Ltd.
	Vic Vendrasco	Fibre-Crown/ITAL
	Fraser Cocks	BCACS (Executive Director)
	Kathy Sheppard	WorkSafe BC (Work Group Coordinator)
	Lee Middleton	Fulford Harbour Consulting (Facilitator)

Background

This workshop was the third in a series of task group workshops for tower crane industry stakeholders. These stakeholders are working toward a competency based, licensing and certification framework for tower crane operators in BC. The BC Association for Crane Safety is facilitating this process and providing the administrative support needed for industry to lead this change. The competency based certification framework will be used by WorkSafeBC as the foundation for a crane safety regulation to be enacted in January 2007.

The previous two workshops focused on defining the skills standards for tower crane operators. Attention was paid to skills standards first because having these agreed to by industry is important for these reasons:

1. Skills standards define the assessment of a competent operator.
2. Skills standards show what different levels the operator requires to do their job.
3. Skills standards lay out a training and career pathway for operators.

Together with the industry supported operator licensing structure, which was the focus of this, the third workshop, the skills standard outlines the framework for a competency based operator standard as well as the training required to get new operators to the required competency standard. The framework also shows what training and experience existing operators need to be able to move to higher certifications or to move within the industry.

Workshop Goals

The tower crane and self erect operator occupation spans a number of industries and a variety of equipment types including tower cranes, city crane (self –erect) and self erect cranes with a wide range of lifting capacities, and built in safety limiting devices. In developing a certification structure it is important to strike a balance between certification requirements that ensure a safe and competent level of operation and one that does not impose an inappropriate number and/or level of competencies for the different levels of required work. The task group was quite clear that they wanted the certification structure to mirror the natural progression of how a tower crane operator is trained in the industry, and of how self erect crane owners train the client’s designated operator.

Refine certification structure

In the third workshop we set out to refine the certification structure to strike the right balance between licensing complication and the operational realities of the industry.

Assessment strategy

After reviewing the certification strategy decide on assessment points and the type of assessment used at each point and at the final end point of certification. These assessments will be used to certify existing operators.

A related goal was to define an industry approach to assess existing operators in as streamlined a way possible to maximize safety while also keeping the administrative burden low enough that it doesn’t become a hurdle to develop and implement a competency based crane safety regulation.

Tracking and documentation

Explore ways crane operator’s licenses and record of certification can be stored, documented and validated by employers.

Business models

Describe preferences for a business model to implement and coordinate all necessary crane certification assessment and documentation, and map out funding options that might be available to support this model from existing government industry training funds.

Certification Structure

During the workshop, a certification structure emerged that identified a base level of competency and then a division of the certification levels by major crane type - tower and self erect. The foundation for self – erect cranes is less than that the common core, though a route to add to the self-erect foundation of skills to bring the self-erect operator up to the foundation skill level required for entry to tower crane operation is identified. This reflects the operational reality of basic self-

erect cranes (city crane self-erects are classed as tower cranes in this scheme). Basic self-erect cranes are set up by the owner and programmed with strict load limit switches that limit the risk inherent in the crane operation. Operators are trained from the client's workforce and typically operate the crane as required through the day. All service and maintenance checks are for the most part conducted by the equipment owner. Self-erect stakeholders felt that a higher level of training would be workable provided a solid means of tracking and proving competency in self-erect operation could be devised. In this way a pool of competent operators in the ICI Construction sector would grow and be used from job to job.

Following the approach taken by the other crane stakeholders, the tower crane stakeholders reduced the certification and assessment points and described an integrated approach to certifying tower and self-erect operator competency.

Appendix A contains the diagram of the competency structure proposed for tower crane and self erect crane operators.

Assessment Options

Once the certification structure was decided upon by the group, assessment points were assumed to occur at the transition from one certification level to the next. These assessments would be required for an operator to be certified at the next level.

On the Draft Certification structure the diagram shows the assessment points with a star. The group discussed assessments in a general sense describing what they felt would work as an approach to assessing competence at different levels, with a focus on existing operators. They came up with some principles of assessment that they directed the Association and contractors to adhere to when designing an assessment program for boom truck operators.

Principles of assessment

- 1 **Assess competency using a practical skills test:** This was one of the main means promoted by stakeholders to assess the final competency of operators. Modeled on the NCCCO 'cone' test, a third party assessor would come and set up a cone course which the operator would have to move a test load or the unloaded hook through. Communication with the assessor would be minimal and a pass or fail would be communicated through the mail.
- 2 **Assess competency on the job:** Due to the minimal downtime of a tower crane the industry also supported assessment of operators while they are performing their regular duties. Some stakeholders' felt that observing an operator and assessing their skill with the

right tools (assessment guides to ensure objectivity) would provide an assessment of skill above that of the NCCCO cone test. The conclusion of whether one type of assessment would be used over another was deferred to the fourth workshop when the stakeholders would review all options open to them in a more detailed assessment and certification plan.

- 3 **Use an independent mobile assessor:** Use an assessor who is very skilled as an operator, who has received training in assessing operators on the job or through practical skill tests, and who is independent i.e. not affiliated with the employer the operator works for.
- 4 **Produce assessment tools that are public:** The industry would like to see assessment tools that are publicly available, closely linked into the skills standards for the operator and which can be used to guide operator learning prior to assessment.
- 5 **Link theory and practice:** When assessing on the job, and even when assessing in a practical, formal test, carefully design the tools so that a person's theoretical knowledge is demonstrated without their having to write a written test.
- 6 **Don't write off written tests:** Stakeholders pointed out the value of motivating people to study technical material when they know a return test will be delivered at the end of the study period. The stakeholders propose that material be made available for study by operators and that during an assessment period the operator answers test questions in either a written or a verbal format.
- 7 **Define a limited use assessment point:** In consultation with stakeholders there is a defined need for a restricted use operator class. The executive director presented a list of ten points that were suggested to him by industry as the framework for a restricted use category. Further definition and decisions are required to concretely define this type of operator license at the fourth session. Kathy Sheppard noted that the wording of the regulation in regard equipment types covered may guide what equipment types are covered by a restricted operator class. This restricted use issue only affects certain types of self-erect cranes and may have already been addressed by the differing foundational skills required of a self erect crane operator in this certification scheme. Additionally in the certification structure the capabilities of the trainee operator need to be defined with an employer guideline that indicates what the trainee operator can and can't do and when. This development work will take place at the fourth workshop.

Tracking and documentation

Stakeholders felt that a certification system had to be very easy to use and implement. They provided the association with some principles to stick with in going out and designing a tracking and documentation of competency (licensing) system. These were:

- 1 **Have the system third party verified:** In short what the employers wanted was a place to go and verify the accuracy of the licensing information an operator presents.

- 2 **Link licensing to a Logbook:** If an operator wishes to move through the certification levels having a way to document with some detail their experience against the skill requirements of the next licensing level is important. Additionally recertification options would depend very much on being able to track an operators working history, the idea being active operators would have less frequent and less onerous recertification requirements.

- 3 **Track the safety record of each operator:** Stakeholders felt a third party association should have responsibility for tracking the safety record of each operator by logging accidents. This is similar to the driving licensing scheme in use in the Province.

- 4 **Link with companies existing record keeping:** Some companies are already tracking the competency of their operators and stakeholders felt that for the assessment and licensing system to work most effectively in the Province, these existing structures should be used to support licensing where they exist.

Business model

In the preliminary discussion at the meeting stakeholders directed the association to draft a business model that showed how, and at what cost, the linked assessment system for all crane operators would work. The stakeholders were told of funds from the Industry Training Authority that could be secured for development, in partnership with WorkSafeBC, of assessment tools. The Federal Government may be in a position to support development of Logbooks.

Stakeholders were also quite clear that a user pay component for financing of the business model, provided the products of these fees were clear and unambiguous, was quite acceptable. This possibility will be explored further, as with the other funding sources, once the certification framework and assessment plan is drafted in more detail.

Next steps

The next task group meeting is scheduled for February 13th. At that meeting stakeholders will review a more detailed assessment plan as well as a more precisely defined certification structure. It is anticipated that task groups will meet every two to three weeks to develop a fully stakeholder driven competency certification plan drafted in final form by April for presentation at public hearing in May.

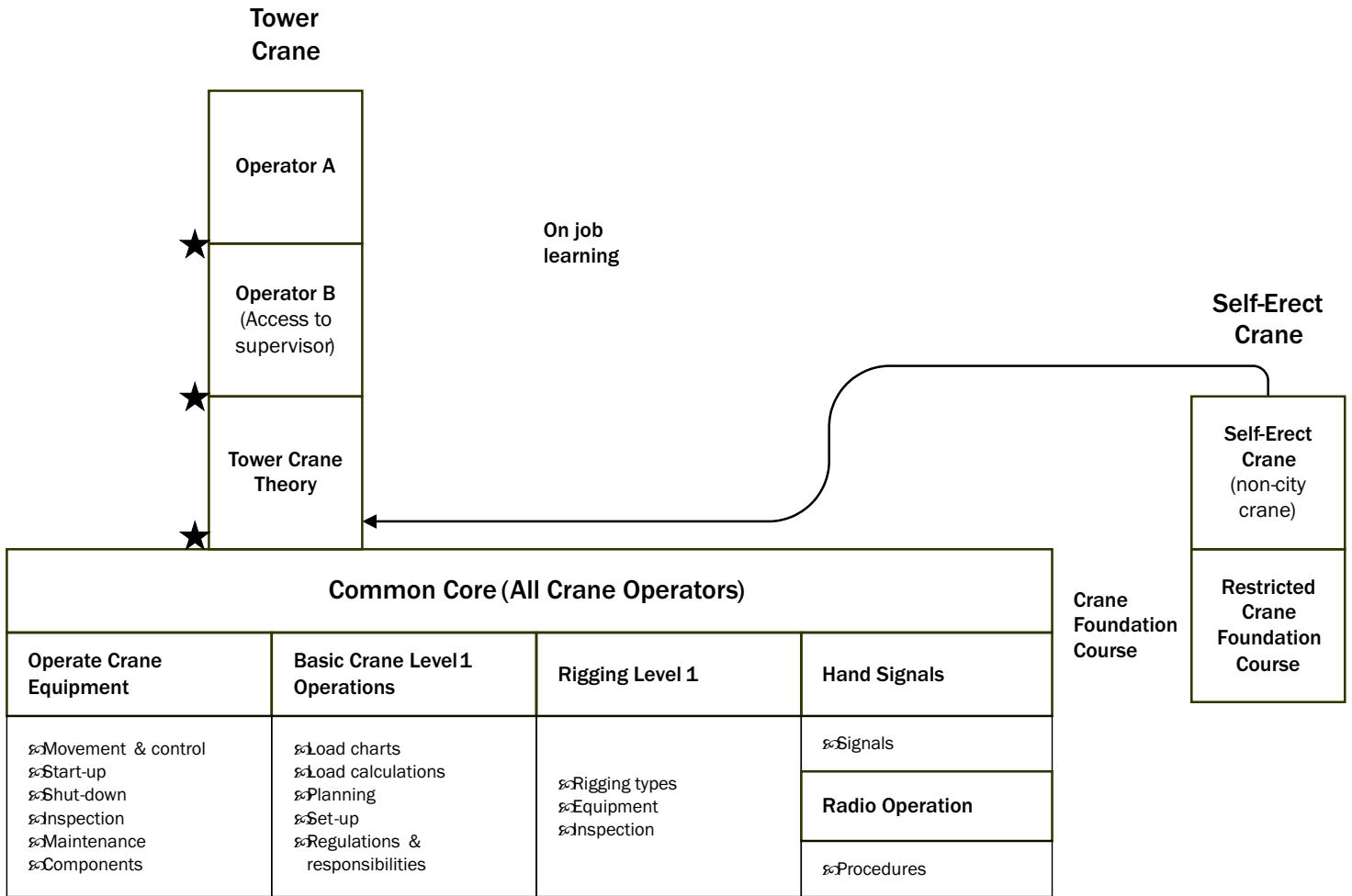
Letter of support

Additionally, in order to demonstrate industry support of this plan in anticipation of securing government development funding, a letter of support will be required by the end of February. Precise format of this letter will be covered at the next meeting on February 13th; generally the letter should cover the following:

- Demand for new trainees in your operation expected over the next five years.
- Need for a certification structure that supports competent operation in the province and your operation's desire to work with that certification structure.
- Desire to see a practical or competency based assessment to prove operator competence.
- Statement that once such a training and certification system is in place, that you will use it

Appendix A Draft Certification Structure

Tower Crane / Self-Erect Crane Operator January 24/06 Model



★ = Assessment Point