



Consultation Paper

Proposed amendments to the
Crane Operators Regulations and the **Power Engineers Regulations**
under the *Crane Operators and Power Engineers Act*

September 18, 2006

CONTENTS

Part		Page
I	Introduction	3
II	Submissions	4
III	Proposed amendments to the Regulations	5

I Introduction

Background

Industry says that Public Safety legislation and regulation needs to be updated to reflect new technology and modernized standards. In response, the government is conducting a Public Safety review with the goals of improving flexibility and promoting a competitive business environment, while protecting the health and safety of Nova Scotians.

The Public Safety Review Project is part of the Competitiveness and Compliance Initiative; a program to improve the Department of Environment and Labour's regulatory systems, and to achieve better compliance. Early phases of the project will include a review of the *Steam Boilers and Pressure Vessels Act*, and the *Crane Operators and Power Engineers Act*. The objective of the review is to identify ways to reflect changes in technology, and to improve consistency in the application and interpretation of these Acts and regulations.

Current Situation

For the past two to three years, the Public Safety Division of the Department has met regularly with stakeholders in industry. These stakeholders have identified some barriers to the effective and efficient operation of their businesses as a result of the current *Crane Operators and Power Engineers Act* and regulations. The Power Engineers Board has also recommended changes to the *Power Engineers Regulations*. The Department has proposed some amendments to these regulations that may be carried out *now* to address these immediate concerns.

The proposed changes are set out in Part III of this paper. Some highlights include:

- *Excluding some refrigeration plants from the Power Engineers Regulations.*
- *Clarifying the requirements for periodic or minimum supervision of unfired boiler plants and some refrigeration plants.*
- *Adding a new certificate for those who are working with unfired boilers in registered plants.*
- *Increasing the credit for practical experience for crane operators taking training.*

This review of the *Crane Operators Regulations* and *Power Engineers Regulations* is only the first round of possible changes to these regulations as part of the broad Public Safety Review Project. Future changes to the *Crane Operators and Power Engineers Act* may result in further amendments to these regulations.

The Department is aiming to implement the proposed amendments by the end of November 2006.

II Submissions

The purpose of this consultation paper is to invite you to comment on the proposed changes to these regulations outlined in Part III. Your response is valuable to us. Please provide your feedback **in writing** to the Department of Environment & Labour by **4:30 p.m., November 3, 2006**.

Submissions should be forwarded to:

Mail / Hand-delivery: Crane Operators and Power Engineers Regulations
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Note: Comments in relation to proposed changes to the *Power Engineers Regulations* will be forwarded to the Power Engineers Board for review as well.

III Proposed amendments to the Regulations

Most of the proposed changes to the *Crane Operators Regulations* and *Power Engineers Regulations* are minor. They are intended to add clarity, reflect advances in technology, and adopt the latest versions of standards or codes. Some definitions have been added or amended to achieve greater clarity on the intent of the regulations.

The other proposals are directed towards increasing flexibility, and reducing or removing unnecessary requirements. These proposed changes are described in more detail below.

Crane Operators Regulations:

1. *Crane Operator Training*

- **Increase the credit for each week of crane operator training from a maximum of 1000 hours to a maximum of 1500.**

Crane operators, who have participated in appropriate training programs, could be eligible sooner to apply for certification.

2. *Board Membership*

- **Remove some of the restrictive requirements for the board members.**

Only people who are currently employed in the industry are eligible at the present time to be members of the Crane Operators Examination Committee and the Crane Operators Appeal Board. The Province has been unable to attract applicants under these unnecessary restrictions. As a result neither body has a quorum. The elimination of this requirement will permit qualified, knowledgeable, but retired members of industry to be accepted for these positions.

Power Engineers Regulations:

1. *Application*

- **Add a new Section to clarify which types of plants are subject to the Act and regulations.**

The proposal would exclude:

- (a) refrigeration plants that do not exceed 350kW;
- (b) plants that are comprised of centrifugal chillers (subject to certain conditions); or
- (c) plants that operate at a pressure less than 15 PSI.

Safety would not be minimized or jeopardized by excluding these types of plants.

2. *Definitions*

- **Add a new definition for “accident”.**

Define an accident to include an event which affects the structural integrity of registered plant equipment; or poses a risk to the safety of employees or to the public.

- **Add a new definition for “direct supervision”.**

Define direct supervision in relation to people as “one-on-one”, whenever a person in

training or a trainee is performing the duties of a power engineer or an operator.

- **Add a new definition for “person in training or a trainee”.**

The definition would reflect that these are uncertified personnel who are permitted to work in a plant, but who must not act in the capacity of one who is certified.

- **Add a new definition for “supervision”.**

The definition of supervision in relation to people would mean a controlled situation where a trained and certified power engineer gives direction and takes responsibility for the action of other power engineers and other members of the work crew.

- **Amend the definition of “assistant shift power engineer”.**

The current wording would be amended to clarify that the assistant is certified; and that uncertified personnel are not replacing certified personnel. This change would not preclude a person in training from entering the plant. A person in training is not considered an assistant, and must not act as one.

- **Add a new definition for “assistant shift operator”.**

The definition would clarify that the assistant is certified; and that uncertified personnel are not replacing certified personnel. This change would not preclude a person in training from entering the plant. A person in training is not considered an assistant, and must not act as one. Assistant shift operators would be under the supervision of a shift operator.

- **Amend the definition of “logbook”.**

Change the current wording of the definition to include electronic record-keeping.

3. *Modernize*

The current regulations do not take into consideration advanced technology and the modern ways of operating a plant. Several changes are proposed to improve flexibility for employers and employees:

- **Amend the log book requirement to permit computerized record keeping.**

Change the current wording for log book requirements to permit electronic record-keeping.

- **Amend the periodic and minimum supervision provisions.**

Change the current wording to

a) allow unfired boiler plants to fall under “periodic” supervision. Unfired boiler plants are treated as fired boiler plants, and cannot be guarded when above 3500 kW. However, unfired boiler plants may necessitate only periodic (instead of continuous) supervision because they may be guarded. Reduced supervision of unfired boiler plants would not jeopardize public safety;

b) raise the ceiling limits for “minimum” or “periodic” supervision. By raising ceiling limits, more plants and modern compressor units could qualify for minimum or periodic supervision;

c) consider the occupancy type (i.e. commercial; institutional) and technology (i.e. capacity

control; failure detection). Depending on the occupancy, the standard of safety may differ. For instance, the level of safety required in a public arena is different than what is required in an unoccupied warehouse.

- **Move Group B1 refrigerants into the same category as Group A1 refrigerants.** Other jurisdictions have done this. Although grouped with the A1 refrigerants a Group B1 refrigerant still could not be used in applications involving air conditioning for human comfort. (This rule is covered in CSA -B52-05, Section 4.5.2, System Application Rules, clause (g)).

- **Update references to standards and codes.**

The references to standards and codes will be updated to the current versions to assist users of the regulations.

4. *New “Provincial Fourth Class Unfired Plant Operator” certification*

- **Create a new certification for a Provincial Fourth Class Unfired Plant Operator.** This certificate would meet the needs of those who are working with unfired boilers in registered plants. Every applicant for this certificate would be required to have 12 months practical experience. The holder of this certificate may progress to a Chief in an unfired plant.

5. *Practical experience requirements*

- **Remove the 6 months operating experience requirement for Inter-provincial Third Class Power Engineers.**

Currently, to qualify as an Inter-provincial Third Class Power Engineer, an applicant must successfully complete a course in power engineering acceptable to the Inspector-Examiner and have 6 months operating experience. However, some approved training courses now have 3rd class plant experience within their program. In such cases the practice experience is obtained during the training. The proposal would remove the requirement for the 6 months operating experience where the experience is included in the training.

- **Change the Departmental policy for actual operating experience for an Inter-provincial Fourth Class Power Engineer (note: This is not a proposed amendment to the regulations)**

Stakeholders have requested that changes be made to requirements for actual operating experience for an Inter-provincial Fourth Class Power Engineer. If an applicant has achieved a mechanical / chemical engineering degree, the 3 months practical experience is critical to operate a plant in a safe manner. This can be addressed through a policy change. A mechanical / chemical engineer may challenge the examinations for a Fourth Class Power Engineer prior to receiving the 3 months practical experience. After the practical experience is verified by the Chief Engineer or Chief Operator as indicated by Subsection 47(2), certification can be issued.

6. *Examination process*

- **Add a time restriction to the ability to rewrite an exam where three prior failures.**

The amendment would prohibit a person who has failed an examination three times in a row from rewriting that exam until after six months from the date of the last exam. This proposed requirement is in accordance with the policy of the Standardization of Power Engineers' Examinations Committee, of the Association of Chief Boiler and Pressure Vessel Inspectors, dated August 8, 2005, and re-approved August 7, 2006.

7. *Clarified duties of power engineers*

- **Add references to the “Assistant shift power engineer” and “Assistant shift operator” in the Scope of Qualifications provisions.**

The power engineers and operators duties listed in the current regulations do not include these positions. This proposal would clarify when a power engineer is able to act as an Assistant Shift Power Engineer or Assistant Shift Operator. In particular an Inter-provincial Fourth Class Power Engineer may act as an assistant shift power engineer or assistant shift operator for any unfired or heating boiler plant, refrigeration plant, compressor plant, or a fired power boiler plant that has a power rating of not more than 20,000 kW. A Provincial Fourth Class may act as an assistant shift power engineer for an unfired boiler or heating plant, compressor plant, or a fired power boiler plant as described above. A Provincial Third Class may act as assistant shift power engineer in any fired, unfired, or heating boiler plant, or compressor plant.

- **Add references to power engineer.**

The current regulations require further clarification on which references are to “power engineers”.

8. *Duties of Chief*

- **Remove the restriction on the absence of the Chief Power Engineer or Chief Operator.**

The regulations currently require that when the Chief Power Engineer or Chief Operator is absent from the plant for more than 72 hours, their duties must be assigned. Most jurisdictions do not have a regulation that addresses Chiefs' absence. It is recommended that this provision be removed from the regulations, recognizing that the regulations place the responsibility on the Chief Power Engineer or Chief Operator to ensure the safe operation of the plant.

- **Add an availability requirement for the Chief Power Engineer or Chief Operator.**

It is proposed that a new requirement be added requiring that the Chief Power Engineer or Chief Operator must be available during **regular working hours**. However, the Chief Power Engineer must not hold the position of shift power engineer if the person holds the position of Chief Power Engineer in a first or second class plant. The intent is to ensure that the Chief Power Engineer is not placed on shift work, since most operation and maintenance takes place during regular working hours.

- **Change the Departmental policy for regular working hours, absences and reporting accidents (note: This is not a proposed amendment to the regulations)**

In addition to the regulation changes, a Departmental policy would be drafted to clarify that:

a) Normal working hours are between 6 am and 6 pm.

b) If a Chief is absent (i.e. due to illness), an acting Chief may replace them, subject to other requirements of the *Crane Operators and Power Engineers Act*.

9. *Power rating calculation for a boiler.*

- **Add an amendment to clarify the power rating for any boiler by including an alternate method of calculation.**

Currently the power rating for a boiler is only determined by dividing the maximum heat “input” (the regulations state “input” in error, and should state “output”) as specified by the boiler manufacturer and measured in British Thermal Units per hour, by 3412. Another method to calculate power rating is by dividing the maximum heat input, as specified by the boiler manufacturer and measured in British Thermal Units per hour, by 3412, multiplied by the boiler efficiency. The proposal is to amend the regulations to recognize both methods of calculating the power rating.

10. *Incident reporting requirement.*

- **Add a requirement that the Chief report incidents within 24 hours to the Inspector-Examiner.**

The proposal would require that the Chief report within 24 hours to the Inspector-Examiner any action of a power engineer or operator which endangered the health and safety of any person.

Questions?

Any questions in relation to the proposed changes may be directed to:

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