

REGDOC-2.2.4, *Fitness for Duty: Managing: Worker Fatigue* – Impact Statement

INTRODUCTION

The CNSC has the authority, under the *Nuclear Safety and Control Act* (NSCA), to regulate the development, production and use of nuclear energy and the production, possession and use of nuclear substances, prescribed equipment and prescribed information in Canada. Under the NSCA, regulations set out obligations of licensees, as well as information requirements for all types of licence applications.

The CNSC's regulatory documents provide greater detail and clarity to licensees and applicants on how to meet the requirements set out in the NSCA. The benefits of having a comprehensive suite of regulatory documents in place to address all areas of CNSC responsibility include:

- clearly documented CNSC regulatory expectations
- greater regulatory certainty for licensees
- greater consistency in the information applicants and licensees provide to the CNSC
- transparency for the Canadian public and international community about the standards and expectations the Canadian nuclear industry must meet

In keeping with its commitment to stakeholder engagement, the CNSC consults with stakeholders prior to and during the development of a regulatory document. The CNSC considers the impacts of its proposals on all stakeholders and welcomes feedback on potential impacts throughout the consultation process.

BACKGROUND

The *General Nuclear Safety and Control Regulations* require licensees to ensure the presence of a sufficient number of qualified workers. To satisfy this requirement, workers must be fit for duty. As fatigue can make a worker "unfit" by degrading several aspects of human performance, it is essential that licensees effectively manage worker fatigue.

Federal or provincial employment standards legislation addressing hours of work applies to licensees regulated by the CNSC. However, the hours of work limits are inconsistent between jurisdictions and are not sufficiently restrictive to control fatigue for the purpose of ensuring nuclear safety and security.

REGDOC-2.2.4, *Managing Worker Fatigue*, builds on the CNSC's broader initiative of strengthening oversight of fitness for duty. The purpose of this document is to provide requirements and guidance for managing fatigue. Managing worker fatigue encompasses measures to manage risks associated with fatigue, including measures to manage the level of fatigue that workers experience at work and to reduce the likelihood and consequences of fatigue-related errors.

An earlier draft version of this document was issued for public consultation from September 2013 to January 2014 as REGDOC-2.2.1, *Managing Worker Fatigue and Hours of Work*. That document proposed a single population of workers to which all of the requirements, including hours of work limits, would apply. In response to stakeholder feedback, CNSC staff have modified the approach used in the current document, REGDOC-2.2.4, *Managing Worker Fatigue*, to include two worker populations: the broad population and the safety-sensitive positions. The current regulatory approach is explained below.

OBJECTIVES

The objectives of this regulatory document are to:

- ensure that worker fatigue is managed for the purpose of nuclear safety and security commensurate with the risk of the licensed activity
- establish a clear public record of the CNSC’s expectations for managing worker fatigue
- strengthen the CNSC’s oversight of fitness for duty

REGULATORY APPROACH

REGDOC-2.2.4, *Managing Worker Fatigue*, applies to high-security sites, as defined in the *Nuclear Security Regulations*: “a nuclear power plant or a nuclear facility where Category I or II nuclear material is processed, used or stored.”

REGDOC-2.2.4, *Managing Worker Fatigue*, includes a graded approach with programmatic requirements and guidance applying to a broad population of workers who when fatigued could pose a risk to nuclear safety and security. As part of the programmatic requirements, licensees must establish and implement limits on hours of work and recovery periods that meet performance-based criteria for the broad population, as well as document the rationale justifying their approach.

For a smaller subset of workers who fill safety-sensitive positions, the regulatory document includes prescriptive limits on hours of work and recovery periods. The regulatory document also includes a requirement for licensees to identify safety-sensitive positions through a documented, risk-informed analysis.

POTENTIAL IMPACTS ON LICENSEES

Licensees already have procedures that establish limits on hours of work and recovery periods. CNSC staff have verified that NPP licensees comply with their hours-of-work procedures. Licensees already have tools in place to support adherence to their procedures. However, during the transition stage, licensees may have to modify existing procedures and any associated software.

NPP licensees currently report hours-of-work non-compliances for certified reactor and unit 0 operators, control room shift supervisors and plant shift supervisors. With this regulatory document, the reporting requirement would extend to those filling safety-sensitive positions. Licensees will also have to identify any additional safety-sensitive positions through a documented, risk-informed analysis.

CNSC staff will continue to carry out compliance activities to verify that licensees comply with their procedures. CNSC staff will also verify that licensees update their procedures to address the requirements and guidance in the regulatory document.

Both licensees and unions have expressed concerns that labour agreements may need to be revised following the publication of REGDOC-2.2.4.

CNSC staff believe the benefits of establishing regulatory clarity, strengthening the fitness for duty regulatory framework, and ensuring worker fatigue is managed for the purposes of nuclear safety and security justify the associated transitional impacts on stakeholders.

IMPLEMENTATION

REGDOC-2.2.4, *Managing Worker Fatigue*, is intended to form part of the licensing basis for a regulated facility or activity within the scope of the document. It is intended for inclusion in the licensing basis, either as part of the conditions and safety and control measures in a licence, or as part of the safety and control measures to be described in a licence application and the documents needed to support that application.

Facilities will be given a transition period to become compliant with the requirements of this regulatory document. The CNSC will confirm the implementation timeframe with each licensee. Associated licence conditions handbooks will be amended as soon as practical to reference REGDOC-2.2.4, *Managing Worker Fatigue*.

Unique provisions at Canadian Nuclear Laboratories will require additional discussions with CNSC staff.

At this time, the CNSC expects that implementation of this regulatory document will be complete within a two-year period.

FEEDBACK REQUESTED

The CNSC welcomes comments and additional information on the potential impacts of this regulatory document.

Comments or feedback may be submitted to the CNSC no later than December 18, 2015, in one of the following ways:

Email: consultation@cnsccsn.gc.ca

Fax: 613-995-5086

Mail: Canadian Nuclear Safety Commission

P.O. Box 1046, Station B

280 Slater Street

Ottawa, Ontario K1P 5S9

How this information will be used by the CNSC

In fulfilling its mandate as a federal regulator, the CNSC must give consideration to values and principles that are difficult to quantify in dollar value, such as the need to clearly document its regulatory expectations for all Canadians. It must also give consideration to fulfilling its responsibility under the *Nuclear Safety and Control Act* to disseminate objective scientific and regulatory information. For these reasons, the CNSC does not intend to conduct a strict quantitative assessment of the costs and benefits of this regulatory document. However, careful consideration will be given to any information provided by stakeholders on the impacts of this regulatory document or on alternative approaches that may be used to meet its safety objective.

If providing cost estimates, stakeholders are encouraged to be transparent and to ensure benefits and costs are clearly attributed. Assumptions made when calculating costs should be clearly stated, and enough detail should be provided to allow an independent observer to understand how the cost estimate was derived.