

## Reporting Requirements

# Reporting Requirements for Non-Power Reactor Class I Nuclear Facilities and Uranium Mines and Mills

REGDOC-3.1.2

June 2016







## Reporting Requirements for Non-Power Reactor Class I Nuclear Facilities and Uranium Mines and Mills

Regulatory document REGDOC-3.1.2

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Également publié en français sous le titre : Exigences relatives à la production de rapports : Installations nucléaires de catégorie I non productrices de puissance et mines et usines de concentration d'uranium

## **Document availability**

This document can be viewed on the CNSC website at <u>nuclearsafety.gc.ca</u>. To request a copy of the document in English or French, please contact:

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### **Publishing history**

[Month year] Version x.0

#### **Preface**

This regulatory document is part of the CNSC's reporting requirements series of regulatory documents, which also covers reporting requirements for nuclear power plants and other nuclear facilities. The full list of regulatory document series is included at the end of this document and can also be found on the CNSC's website.

Regulatory document REGDOC-3.1.2, Reporting Requirements for Non-Power Reactor Class I Nuclear Facilities and Uranium Mines and Mills sets out requirements and guidance for reports and notifications that licensees of Class I nuclear facilities (excluding power reactors) and of uranium mines and mills must submit to the CNSC. This document presents the types of reports, their frequency and the applicable timeframe for reporting.

This document replaces the following regulatory documents:

- R-25, Preparation of a Quarterly Report on the Operation of a Uranium Refinery or Uranium Chemical Conversion Facility
- R-26, Preparation of a Quarterly Health Physics Compliance Report for a Uranium Fuel Fabrication Plant
- R-27, Preparation of an Annual Compliance Report for a Uranium Fuel Fabrication Plant
- R-89, The Preparation of Reports of a Significant Event at a Uranium Processing or Uranium Handling Facility

REGDOC-3.1.2 is intended for inclusion in licences. This document will be used to assess new licence applications for nuclear facilities and activities.

Guidance contained in this document exists to inform the applicant, to elaborate further on requirements or to provide direction to licensees and applicants on how to meet requirements. It also provides more information about how CNSC staff evaluate specific problems or data during their review of licence applications.

Licensees are expected to review and consider guidance; should they choose not to follow it, they should explain how their chosen alternate approach meets regulatory requirements. An applicant or licensee may put forward a case to demonstrate that the intent of a requirement is addressed by other means and demonstrated with supportable evidence.

The requirements and guidance in this document are consistent with modern national and international practices addressing issues and elements that control and enhance nuclear safety. In particular, they establish a modern, risk-informed approach to reporting requirements.

**Important note:** Where referenced in a licence either directly or indirectly (such as through licensee-referenced documents), this document is part of the licensing basis for a regulated facility or activity.

The licensing basis sets the boundary conditions for acceptable performance at a regulated facility or activity, and establishes the basis for the CNSC's compliance program for that regulated facility or activity.

Where this document is part of the licensing basis, the word "shall" is used to express a requirement to be satisfied by the licensee or licence applicant. "Should" is used to express guidance or that which is

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advised. "May" is used to express an option or that which is advised or permissible within the limits of this regulatory document. "Can" is used to express possibility or capability.

Nothing contained in this document is to be construed as relieving any licensee from any other pertinent requirements. It is the licensee's responsibility to identify and comply with all applicable regulations and licence conditions.



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## Reporting Requirements for Non-Power Reactor Class I Nuclear Facilities and Uranium Mines and Mills

#### 1. Introduction

### 1.1 Purpose

This regulatory document sets out requirements and guidance for reports and notifications that licensees of Class I nuclear facilities (excluding power reactors) and of uranium mines and mills must submit to the Canadian Nuclear Safety Commission (CNSC). This document presents the types of reports, the frequency and the applicable timeframe for reporting.

Licensees are required to report to the CNSC regarding situations, events and dangerous occurrences that may require short-term action by the CNSC. Licensees must also submit an annual compliance monitoring report.

Licensees are also required to provide notification of certain normal business activities (such as work disruptions or financial status) and to file specific records with the CNSC in accordance with the *Nuclear Safety and Control Act* (NSCA) and the regulations made under the NSCA.

## 1.2 Scope

This regulatory document incorporates and clarifies requirements found in the NSCA and the regulations made under the NSCA for reporting. "Reporting" means scheduled reports, reports on events, notifications and the submission of specific records.

Nothing contained in this document is to be construed as relieving any licensee from any other pertinent requirements. It is the licensee's responsibility to identify and comply with all applicable regulations and licence conditions.

## 1.3 Relevant legislation

The following provisions of the NSCA and regulations made under the NSCA are relevant to this document:

- pursuant to subsection 24(5) of the NSCA, a licence may contain any term or condition that the Commission considers necessary for the purposes of the NSCA; when incorporated into a licence, this regulatory document requires reporting from the licensee that is in addition to the prescribed reporting requirements found in the NSCA and the regulations made under it
- paragraph 27(b) of the NSCA states that "Every licensee and every prescribed person shall (b) make the prescribed reports and file them in the prescribed manner [...]"; in accordance with section 2 of the NSCA, "prescribed" means prescribed by regulation of the Commission
- section 45 of the NSCA states that "Every person who, on reasonable grounds, believes that "(b) an event has occurred that is likely to result in the exposure of persons or the environment to a dose of radiation in excess of the prescribed limits "shall immediately notify the Commission or an appropriate authority of the location and circumstances of the contamination or event"
- section 15 of the *General Nuclear Safety and Control Regulations* states that "...every licensee shall notify the Commission of

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- (a) the persons who have authority to act for them in their dealings with the Commission;
- (b) the names and position titles of the persons who are responsible for the management and control of the licensed activity and the nuclear substance, nuclear facility, prescribed equipment or prescribed information encompassed by the licence; and
- (c) any change in the information referred to in paragraphs (a) and (b), within 15 days after the change occurs"
- subsections 28(1) and (2) of the *General Nuclear Safety and Control Regulations* stipulate the reporting requirements and procedures for record keeping and disposal as required by the NSCA, the regulations made under the NSCA or the licence, and subsection 28(3) states that "a person who notifies the Commission in accordance with subsection (2) shall file the record, or a copy of the record, with the Commission at its request"
- sections 29, 30 and 31 of the General Nuclear Safety and Control Regulations specify reporting requirements for general reports, safeguards reports and deficiencies in records; of particular note:
  - paragraph 29(1)(b) requires an immediate "preliminary report to the Commission of the location and circumstances of the situation and of any action that the licensee has taken or proposes to take with respect to [...] the occurrence of an event that is likely to result in the exposure of persons to radiation in excess of the applicable radiation dose limits prescribed by the *Radiation Protection Regulations*"
  - subsection 29(2) requires that "every licensee who becomes aware of a situation referred to in subsection (1) shall file a full report of the situation with the Commission within 21 days after becoming aware of it, unless some other period is specified in the licence"
- section 32 of the *General Nuclear Safety and Control Regulations* states that "(1) every report shall include the name and address of its sender and the date on which it was completed
  - (2) The date of filing of a report is the date on which it is received by the Commission"
- paragraph 6(2)(c) of the *Radiation Protection Regulations* states that "When a licensee becomes aware that an action level referred to in the licensee for the purpose of this subsection has been reached, the licensee shall
  - (c) notify the Commission within the period specified in the licence"
- section 16 of the *Radiation Protection Regulations* states that "when a licensee becomes aware that a dose of radiation received by and committed to a person or an organ or tissue may have exceeded an applicable dose limit prescribed by section 13, 14 or 15, the licensee shall
  - (a) immediately notify the person and the Commission of the dose
  - (e) within 21 days after becoming aware that the dose limit has been exceeded, report to the Commission the results of the investigation or on the progress that has been made in conducting the investigation"
- subsection 17(1) of the *Class II Nuclear Facilities and Prescribed Equipment Regulations* states that "Every licensee who installs a sealed source in any Class II prescribed equipment other than a pool-type irradiator shall, after installing the source, take measurements of radiation dose rates when the equipment is not in the irradiation mode and notify the Commission in writing as soon as practicable if the dose rate at any location that is 1 m from any sealed source in its shielded position exceeds the manufacturer's specifications"
- paragraph 19(2)(d) of the *Class II Nuclear Facilities and Prescribed Equipment Regulations* states that "where a licensee, in the course of conducting a leak test on a sealed source or on

shielding, detects the leakage of 200 Bq or more of a nuclear substance, the licensee shall [...]

- (d) immediately after complying with paragraphs (a) to (c), notify the Commission that the leakage has been detected"
- subsections 18(3) and 30(2) of the *Nuclear Substances and Radiation Devices Regulations* stipulate situations related to exposure devices or sealed sources that require notification and reporting; in addition, sections 35 and 38 of the same regulations stipulate situations related to nuclear substances and radiation devices that require notification and reporting
- subject to subsection 2(2)(o) of the *Packaging and Transport of Nuclear Substances Regulations*, 2015 (PTNSR 2015), subsections 3(3), 3(4) and 3(5) stipulate reporting requirements when characterizing a nuclear substance
- section 32 of the PTNSR 2015 states that "every consignor, carrier or consignee who becomes aware that a dose of radiation received by a person may have exceeded an applicable dose limit prescribed by the *Radiation Protection Regulations* must (a) immediately notify the person and the Commission of the dose
  - (d) within 21 days after becoming aware that the dose limit may have been exceeded, report to the Commission the results of the investigation or the progress that has been made in conducting it"
- subsection 36(2) of the PTNSR 2015 sets out the requirements for obtaining an expert's assessment after a dangerous occurrence has occurred and for reporting the results of the assessment to the Commission
- sections 37, 38, 40 and 41 of the PTNSR 2015 include requirements for notification and reporting concerning transportation of nuclear substances and radiation devices:
  - sections 37 and 38 stipulate the obligations of making preliminary and full reports to the Commission following the occurrence of a dangerous occurrence and the failure to comply with the requirements of section 26
  - section 40 stipulates the obligations to make a preliminary and a full report to the Commission following the occurrence of specified conditions during the opening of a package
  - section 41 stipulates the obligation to report to the Commission about undeliverable consignments
- subsection 7.5(4) of the *Nuclear Security Regulations* states that "every licensee shall provide a copy of the written record, together with a statement of actions taken as a result of the [yearly] threat and risk assessment, to the Commission within 60 days after completion of the assessment"; in addition, sections 21 and 36 and subsection 44(2) stipulate other situations requiring notification

## 2. Reporting Requirements

The following reporting requirements apply for Class I nuclear facilities (excluding power reactors) and uranium mines and mills:

- 1. the licensee shall file a report to the Commission in response to:
  - a. an event or a situation, or
  - b. a dangerous occurrence as stipulated in section 35 of the PTNSR 2015

- 2. as required, licensees shall provide other notifications or reports, including a failure to comply with section 26 of the PTNSR 2015
- 3. all reports filed by the licensee according to this regulatory document shall contain the name and address of the sender of the report, and the date the report was submitted to the Commission
- 4. after determining if a situation, event or dangerous occurrence is reportable, the licensee shall immediately notify, or file a preliminary report to, the Commission
- 5. the licensee shall report on the specific reporting provisions and licence conditions listed in table A in appendix A of this document, such as:
  - a. the discovery of counterfeit, fraudulent or suspect items
  - b. reaching an action level for radiation protection
  - c. reaching an action level for environmental protection
- 6. a full report, preliminary report or notification shall:
  - a. contain the specific information required by regulations; see sections 4.1 and 4.2
  - b. be submitted within the timeframes found in appendix A

#### Guidance

The NSCA and the regulations made under it state that reports are submitted to "the Commission". In terms of submitting reports and notifications, "the Commission" is understood to be "the CNSC". The licensee should contact their CNSC licensing specialist to determine details for submitting any particular report.

Table A in appendix A provides a list of situations and events to be reported, regardless of their safety significance. This table also includes other types of notifications or situations that must be reported even though they do not meet the definition of an event.

In addition to the list above, the licensee may be required to file facility-specific reports, as described in their licence conditions handbook (LCH).

In item 4 in the list above, "immediately" means as soon as practicable after the licensee becomes aware that a situation or event is reportable (however, for a dangerous occurrence, after the obligations listed in subsection 36(1) of the PTNSR 2015 have been met); that is, after the licensee has taken steps to mitigate the consequences (as applicable).

A preliminary report or notification that must be submitted immediately may be provided in person, by telephone, by email or by fax. Full reports may be filed by email, by fax or by regular mail. All information (including supporting information such as data for air/water monitoring) may be submitted in electronic format (for example, a database).

For an emergency involving a nuclear facility or nuclear substances, the licensee should contact the CNSC Duty Officer emergency telephone number. An emergency includes:

- any accident involving a nuclear reactor, nuclear fuel facility, or nuclear substances
- lost or damaged nuclear substances
- any threat, theft, smuggling, vandalism or terrorist activity involving a nuclear facility or nuclear substances
- an unplanned spill or release

- a worker injury that requires offsite medical response
- any event that requires activation of a site emergency plan

**Note:** If an emergency is reported to the CNSC duty officer, a preliminary report or immediate notification is not required.

Licensees may develop facility-specific reporting schemes, provided they meet the reporting requirements set out in this document. A facility-specific reporting scheme allows site-specific situations to be described in greater detail than the examples provided in this document (which is intended to cover many facility types); thus clarifying reporting requirements and reducing uncertainty following an event. Licensees using this option are required to submit their facility-specific reporting scheme to the CNSC. The reporting scheme may be referenced in the CNSC's LCH for that licensee.

The licensee should make all reasonable efforts to obtain timely information that has been reviewed for accuracy when filing a report to the CNSC. For reports of situations or events that have not attained stability and predictability, timeliness of informing CNSC staff of the situation or event should be prioritized over the availability of data and/or information.

A situation or event that triggers multiple reporting provisions may be amalgamated into a single report at the licensee's discretion.

Licensees should use the reporting provisions of table A that best correspond to the reported situation(s) or event(s).

If, after further investigation, the licensee concludes a situation or event was not reportable, the licensee may provide the CNSC with a written statement that includes a justification of their conclusion.

If the licensee determines that investigation beyond the preliminary report is unlikely to yield further relevant details or identify additional corrective actions to prevent recurrence of the situation or event, then a full report may not be necessary. In this case, the preliminary report should include the information required by the full report.

Licensees should use the situation or event reporting according to this regulatory document as an input to their public disclosure protocol.

Each report should be unclassified and should not contain any proprietary business information so it can be made available to the public upon request. Information should be considered public for the most part. Any information considered classified, protected, proprietary or personal should be submitted in accordance with the CNSC's *Guidance Document on Confidential Filings* [1].

## 3. Annual Compliance Monitoring Report

The licensee shall submit an annual compliance monitoring report that includes:

- 1. information that can be made available to the public (note: any classified, protected, proprietary or personal information shall be submitted to the CNSC separately in accordance with the CNSC's *Guidance Document on Confidential Filings* [1])
- 2. sufficient details to provide CNSC staff with information to verify that licensees are meeting their regulatory requirements and are operating safely

3. information on each of the 14 areas in the CNSC's safety and control area (SCA) framework and other matters of regulatory interest; if a particular SCA is not relevant or does not apply to the facility or to the activities of a facility, the licensee shall include a statement to that effect in the report

Each annual compliance monitoring report shall act as a stand-alone document. If information from any previous annual compliance monitoring report is needed for completeness, the licensee shall repeat it to the appropriate level of detail.

#### Guidance

For sites with multiple facilities (under the same licence) or a licensee possessing a licence with multiple locations, the licensee may submit a single consolidated annual compliance monitoring report.

The licensee may be required to submit additional compliance monitoring reports (e.g., quarterly, monthly or licensee-specific) as described in their licence or LCH. For example, other compliance monitoring reports may be required for new facilities or in situations where additional reporting is necessary (such as following a reportable event).

Flexibility is allowed for integrated/harmonized reporting. For example, if a licensee is required to submit reports to regulatory bodies other than the CNSC, then sending a copy of the report to the CNSC is acceptable provided the copied report contains all reporting information required by the CNSC. This option allows the licensee to avoid duplication of effort and to minimize administrative burden.

Appendix B provides a sample structure for an annual compliance monitoring report, based on the CNSC's SCA framework. The licensee is under no obligation to follow this format; however, the report should include all of the information listed in appendix B, as applicable.

## 4. Specific Reports and Notifications

Table A in appendix A provides a list of the situations and events for which a report or notification is required, and includes the timing for each report or notification.

#### 4.1 Contents of the preliminary reports and immediate notifications

A preliminary report or immediate notification of a situation or event, or of a dangerous occurrence as stipulated in section 35 of the PTNSR 2015, shall contain the following information:

- 1. the location
- 2. the circumstances, including:
  - a. a description
  - b. date and time of the onset and the duration, or date and time of discovery (if the time of occurrence is not known)
  - c. whether the situation, event or dangerous occurrence is ongoing or not
- 3. a description of any actions the licensee has taken or proposes to take
- 4. for situations and events, any preliminary information that is available regarding the effect on the health, safety and security of persons or the environment

#### Guidance

If the licensee has additional information on the situation or event, the licensee should include it in the preliminary report or notification.

Preliminary reports should contain enough information that CNSC staff have an understanding of the effects of the event on the health, safety and security of Canadians and the environment.

#### 4.2 Full reports

A full report shall contain the following information as far as practicable and applicable:

- 1. reference to the original preliminary report or notification
- 2. the date, time and location where the situation or event occurred or, if unknown, the approximate date, time and location and the date and time of becoming aware of the situation or event
- 3. the probable cause of the situation or event
- 4. a description of the situation or event and the circumstances including, if applicable, any problem with a radiation device
- 5. the effects on:
  - a. the health, safety and security of persons or the environment
  - b. the maintenance of national security
  - c. if applicable, international obligations that have resulted or may result from the situation or event
- 6. the effective dose and equivalent dose of radiation received by any person as a result of the situation or event, including the measured or estimated doses to the public
- 7. if the situation or event involved an exposure device, the qualifications of the workers, including any trainees, who were involved
- 8. if applicable, information on the nuclear substance and the name, model and serial number of the radiation device involved
- 9. for dangerous occurrences (under PTNSR 2015), the names of persons involved and the details of the packaging and packages
- 10. the actions that the licensee has taken or proposes to take, including actions identified and taken to re-establish normal operations and actions taken or proposed to prevent a recurrence
- 11. any actions that the licensee has taken to inform the public and target audience about the situation or event

#### Guidance

Licensees should include information that allows the report to be reviewed efficiently; for example:

- identify updates and new or additional information from that provided previously
- identify any further missing information and the date that the missing information will be provided to the CNSC
- identify the target completion date for each action that the licensee proposes to take to reestablish normal operations or to prevent a recurrence

- provide a summary of any analysis completed, including the probable cause(s) and conclusions drawn from the investigation(s) after the situation or event
- provide an evaluation of any deficiencies in design, operations, training, management or human performance uncovered by the situation or event

## 4.3 Action level reports

When a licensee becomes aware that a radiation protection action level or an environmental protection action level has been reached, the licensee shall:

- 1. within the time period specified in the licence, notify the CNSC that an action level has been reached
- 2. within 60 days of the notification date (or, if the licence specifies a different time period, within that time period), file a report with the CNSC that:
  - a. describes the results of the investigation conducted to establish the cause of reaching the action level
  - b. describes the steps identified and taken to restore the effectiveness of the radiation or environmental protection program
  - c. identifies any incomplete information and describes how and when the information will be provided to the CNSC

## 4.4 Specific reports under the *Packaging and Transport of Nuclear Substances Regulations*, 2015

### Expert assessment of a dangerous occurrence in packaging and transport

As per subsection 36(2) of the PTNSR 2015, in the event of a dangerous occurrence in the packaging or transport of radioactive material or a nuclear substance, the consignor, carrier or consignee must have an expert in radiation protection assess the situation. The expert must report the results of the assessment to the Commission as soon as feasible.

**Note:** "As soon as feasible" means as soon as the licensee becomes aware that a dangerous occurrence is reportable but after the obligations listed in subsection 36(1) of the PTNSR 2015 have been met.

#### Annual report of radiation detections in packaging and transport

As per subsection 3(1) of the PTNSR 2015, any nuclear substance referred to in paragraph 2(2)(o) (of the PTNSR 2015) must be characterized at the earliest possible time to determine the extent to which it is subject to the PTNSR 2015 and the *Nuclear Substances and Radiation Devices Regulations*.

As per paragraph 3(3)(b) of the PTNSR 2015, the person who performs the characterization must file an annual report with the Commission by April 30 that contains a summary of radiation detections for the calendar year before the date of the report.

## Appendix A: Reports, Notifications and Timing

Table A lists the situations and events that require a report or notification, along with timeframes for providing the report or notification:

- for significant situations or events, the report is due immediately (where "immediately" means as soon as the licensee becomes aware that an event is reportable) and, if required, shall be updated with additional information in a full report within 60 days after becoming aware of the event
- some exceptions on timing apply to specific situations and events; reports are due within 21 days for radiation devices and sealed sources, safeguards, packaging and transport, and for exposures in excess of legal radiation dose limits



Table A: Situations and events for which a report or notification is required, including the timing

|     | Event, notification or filing of specific records with the CNSC   |                            | Timing      |  |
|-----|---|----------------------------|-------------|--|
| No. |   | Notification or            | Preliminary | Full report                                      |
|     |   | filing of specific records | report      |  |
| Α.  | Authorized activities   |                            |             |  |
| 1   | Contravention of the Nuclear Safety and Control Act (NSCA) in relation to an activity   | that is authoriz           | zed         |  |
|     | Applicable section(s) of NSCA or regulations made under the NSCA:  NSCA:  27. Every licensee and every prescribed person shall []  (b) make the prescribed reports and file them in the prescribed manner, including a report on  (ii) any contravention of this Act in relation to an activity that is authorized by this Act and any measure that has been taken in respect of the contravention  General Nuclear Safety and Control Regulations (GNSCR):  29. (1) Every licensee who becomes aware of any of the following situations shall immediately make a preliminary report to the Commission of the location and circumstances of the situation and of any action that the licensee has taken or proposes to take with respect to it:  (a) a situation referred to in paragraph 27(b) of the NSCA |                            | Immediate   | Within 60 days after becoming aware of the event |

| 2  | Notification of authorized delegates and responsible persons   |                |
|----|--|----------------|
|    | <ul> <li>Applicable section(s) of the NSCA or regulations made under the NSCA:</li> <li>GNSCR:</li> <li>15. Every applicant for a licence and every licensee shall notify the Commission of (a) the persons who have authority to act for them in their dealings with the Commission;</li> <li>(b) the names and position titles of the persons who are responsible for the management and control of the licensed activity and the nuclear substance, nuclear facility, prescribed equipment or prescribed information encompassed by the licence; and</li> <li>(c) any change in the information referred to in paragraphs (a) and (b), within 15 days after the change occurs.</li> </ul> | Within 15 days |
| В. | Management system, human performance, conventional health and safety, financial s  | status         |
| 3  | Contingency plan   |                |
|    | Applicable section(s) of NSCA or regulations made under the NSCA:  GNSCR:  29. (1) Every licensee who becomes aware of any of the following situations shall immediately make a preliminary report to the Commission of the location and circumstances of the situation and of any action that the licensee has taken or proposes to take with respect to it:  |                |

|     | Event, notification or filing of specific records with the CNSC  | Timing                                     |                       |  |  |
|-----|--|--|-----------------------|--|--|
| No. |  | Notification or filing of specific records | Preliminary<br>report | Full report                                      |  |
| 3a) | <ul> <li>(d) a situation or event that requires the implementation of a contingency plan in accordance with the licence;</li> <li>Guidance A contingency plan may include: <ol> <li>any situation or event (flood, fires, earthquakes, etc.) that requires the implementation of an emergency plan, or the use of any abnormal operating procedures or emergency operating procedures, or the mobilization of resources in response to the situation or event <ol> <li>the occurrence of any unusual external events (flood, fires, earthquakes, etc.) at or near the site that require further inspection to verify its effect on any structures, systems and components</li> </ol> </li> <li>Note: Full reports may not be necessary if a contingency plan is triggered but the situation is resolved quickly and the contingency plan is not fully implemented. For further information, see the guidance provided in section 2.</li> </ol></li></ul> |  | Immediate             | Within 60 days after becoming aware of the event |  |
| 3b) | (g) an actual, threatened or planned work disruption by workers;  Guidance  The licensee should report any actual, impending, planned or threatened work disruption, including a slowdown, walkout, strike or any other action (such as a civil demonstration) that could affect the safety or security of operations at the facility or the capability of the licensee to maintain the staffing levels required by the licensee. Situations involving the possibility of a strike are considered to be reportable when a union that operates at the facility is in a legal strike position, regardless of whether any actual strike activity has taken place.   |  | Immediate             | Within 60 days after becoming aware of the event |  |

|     |  | Timing                                     |                       |  |  |
|-----|--|--|-----------------------|--|--|
| No. | Event, notification or filing of specific records with the CNSC  | Notification or filing of specific records | Preliminary<br>report | Full report  |  |
| 4   | Serious illness, injury or death   |  |                       |  |  |
|     | Applicable section(s) of NSCA or regulations made under the NSCA:  GNSCR:  29. (1) Every licensee who becomes aware of any of the following situations shall immediately make a preliminary report to the Commission of the location and circumstances of the situation and of any action that the licensee has taken or proposes to take with respect to it:  (h) a serious illness or injury incurred or possibly incurred as a result of the licensed activity;  (i) the death of any person at a nuclear facility;   |  | Immediate             | Within 60 days after becoming aware of the event             |  |
|     | Guidance At Class I nuclear facilities, this requirement does not make any distinction for cause of death as a factor in determining if the situation or event is reportable.  |  |                       |  |  |
|     | Illnesses and injuries that do not result directly from the licensed activity, such as illness from a pre-existing condition or injuries that may occur in any office environment (e.g., a back strain due to ergonomic configuration of a desk) do not need to be reported.   |  |                       |  |  |
|     |  |  |                       |  |  |
| 5   | Financial status   |  |                       |  |  |
|     | Applicable section(s) of NSCA or regulations made under the NSCA: <b>GNSCR:</b> 29. (1) Every licensee who becomes aware of any of the following situations shall immediately make a preliminary report to the Commission of the location and circumstances of the situation and of any action that the licensee has taken or proposes to take with respect to it:  (j) the occurrence of any of the following events:  (i) the making of an assignment by or in respect of the licensee under the Bankruptcy and Insolvency Act,  (ii) the making of a proposal by or in respect of the licensee under the Bankruptcy |  | Immediate             | Within 60<br>days after<br>becoming<br>aware of<br>the event |  |

|     |  |  | Timing   | Гiming                      |  |
|-----|--|--|--|-----------------------------|--|
| No. | Event, notification or filing of specific records with the CNSC  | Notification or filing of specific records | Preliminary<br>report                                    | Full report                 |  |
|     | <ul> <li>and Insolvency Act,</li> <li>(iii) the filing of a notice of intention by the licensee under the Bankruptcy and Insolvency Act,</li> <li>(iv) the filing of a petition for a receiving order against the licensee under the Bankruptcy and Insolvency Act,</li> <li>(v) the enforcement by a secured creditor of a security on all or substantially all of the inventory, accounts receivable or other property of the licensee that was acquired for, or used in relation to, a business carried on by the licensee,</li> <li>(vi) the filing in court by the licensee of an application to propose a compromise or an arrangement with its unsecured creditors or any class of them under section 4 of the Companies' Creditors Arrangement Act,</li> <li>(vii) the filing in court by the licensee of an application to propose a compromise or an arrangement with its secured creditors or any class of them under section 5 of the Companies' Creditors Arrangement Act,</li> <li>(viii) the making of an application for a winding-up order by or in respect of the licensee under the Winding-up and Restructuring Act,</li> <li>(ix) the making of a liquidation, bankruptcy, insolvency, reorganization or like order in respect of the licensee under provincial or foreign legislation, or</li> <li>(x) the making of a liquidation, bankruptcy, insolvency, reorganization or like order in respect of a body corporate that controls the licensee under provincial or foreign legislation.</li> </ul> |  |  |                             |  |
| С.  | Records  |  |  |                             |  |
| 6   | Inaccurate or incomplete records   |  |  |                             |  |
|     | Applicable section(s) of NSCA or regulations made under the NSCA:  GNSCR:  31. (1) Every licensee who becomes aware of an inaccuracy or incompleteness in a record that the licensee is required to keep by the Act, the regulations made under the Act or the licence shall file a report of the inaccuracy or incompleteness with the Commission within 21 days after becoming aware of it, and the report shall contain the following information:  |  | Within 21 days after becoming aware of the inaccuracy Or | 60 days<br>(if<br>required) |  |

|     |   | Timing   |   |             |
|-----|---|--|---|-------------|
| No. | Event, notification or filing of specific records with the CNSC   | Notification or filing of specific records               | Preliminary<br>report                           | Full report |
|     | <ul> <li>(a) the details of the inaccuracy or incompleteness; and</li> <li>(b) any action that the licensee has taken or proposes to take with respect to the inaccuracy or incompleteness.</li> <li>(2) Subsection (1) does not apply to a licensee if</li> <li>(a) the licence contains a term or condition that requires the licensee to report inaccuracies or incompleteness in a record to the Commission; or</li> <li>(b) the inaccuracy or incompleteness in the record could not reasonably be expected to lead to a situation in which the environment, the health and safety of persons or national security is adversely affected.</li> <li>Guidance</li> <li>Examples of inaccuracies or incompleteness in records can include dosimetry records, effluent and emission monitoring records, security/access control records. Inadvertent loss or destruction of records should also be reported under this event.</li> </ul> |  | Not required<br>if GNSCR<br>31(2)(b)<br>applies |             |
| 7   | Notification and filing of record of disposal of records  |  |   |             |
|     | Applicable section(s) of NSCA or regulations made under the NSCA:  GNSCR:  28. (2) No person shall dispose of a record referred to in the Act, the regulations made under the Act or a licence unless the person  (a) is no longer required to keep the record by the Act, the regulations made under the Act or the licence; and  (b) has notified the Commission of the date of disposal and of the nature of the record at least 90 days before the date of disposal.  (3) A person who notifies the Commission in accordance with subsection (2) shall file the record, or a copy of the record, with the Commission at its request.  | At least<br>90 days<br>before the<br>date of<br>disposal |   |             |

| D. | Operating performance   |           |  |
|----|---|-----------|--|
| 8  | Failure, degradation or weakening of structures, systems and components   |           |  |
|    | Applicable section(s) of NSCA or regulations made under the NSCA:  GNSCR:  29. (1) Every licensee who becomes aware of any of the following situations shall immediately make a preliminary report to the Commission of the location and circumstances of the situation and of any action that the licensee has taken or proposes to take with respect to it:  (f) information that reveals the incipient failure, abnormal degradation or weakening of any component or system at the site of the licensed activity, the failure of which could have a serious adverse effect on the environment or constitutes or is likely to constitute or contribute to a serious risk to the health and safety of persons or the maintenance of security;  Guidance  Reporting should include any incipient failure, abnormal degradation or weakening of any systems that could result in a hazard to the health and safety of any person, or that could prevent the system from performing its intended safety function or meeting its limiting conditions for safe operation. Some examples of events that could result in serious adverse effects are:  • failure of a crane, hoist or other lifting device  • failure of a supplied air respirator  • unanticipated failure or collapse of an excavation  • failure of a structure, scaffold or dam  • systematic fuel failure in a nuclear reactor including experimental loops  • unexpected inflow of water into a mine  • significant impairment of fire protection system  • a safety-significant pressure boundary failure or leak in a system that:  • contains radioactive or hazardous substances in high enough concentrations to pose a hazard to unprotected personnel  • is of sufficient pressure or temperature to pose a hazard to unprotected personnel  • results in a leak of any material that impinges upon any electrical component  • results in a leak that causes damage or flooding that affects the safe operation of | Immediate | Within 60 days after becoming aware of the event |

|     |  | Timing                                     |                       |   |  |
|-----|--|--|-----------------------|---|--|
| No. | Event, notification or filing of specific records with the CNSC  | Notification or filing of specific records | Preliminary<br>report | Full report   |  |
|     | the facility   |  |                       |   |  |
| 9   | Nuclear substances, radiation devices, exposure devices and Class II equipment   |  |                       |   |  |
|     | Applicable section(s) of NSCA or regulations made under the NSCA:  |  |                       |   |  |
| 9a) | <ul> <li>Nuclear Substances and Radiation Devices Regulations (NSRDR):</li> <li>30. (2) Every licensee who becomes aware of any of the following situations shall notify the Commission immediately of the location and circumstances of the situation and of any action that the licensee has taken or proposes to take with respect to it: <ul> <li>(a) the exposure device or the sealed source assembly is lost, stolen or damaged to an extent that could impair its normal use;</li> <li>(b) the exposure device has a radiation dose rate of more than 2 mSv per hour on any part of its surface when the sealed source assembly is in the shielded position;</li> <li>(c) the sealed source assembly is separated from the exposure device when the latter is not being serviced; or</li> <li>(d) the sealed source assembly fails to return to the shielded position inside the exposure device.</li> </ul> </li> <li>Subsection 38(2) of the NSRDR stipulates the content to be included in the report.</li> </ul> | Immediate                                  |                       | Within 60 days after the day on which the licensee becomes aware of the event |  |
| 9b) | NSRDR:  38. (1) Every licensee who possesses or uses a nuclear substance or a radiation device and becomes aware of any of the following situations shall notify the Commission immediately of the location and circumstances of the situation and of any action that the licensee has taken or proposes to take with respect to it:  (a) the nuclear substance or the radiation device is lost or stolen;  (b) the radiation device is damaged to an extent that could impair its normal use;  (c) the sealed source is separated from the radiation device when the latter is not being serviced;  (d) the sealed source fails to return to the shielding position inside the radiation device; and  (e) there is a spill of   | Immediate                                  |                       | Within 60 days after the day on which the licensee becomes aware of the event |  |

|     |   | Timing                                     |                       |  |
|-----|---|--|-----------------------|--|
| No. | Event, notification or filing of specific records with the CNSC   | Notification or filing of specific records | Preliminary<br>report | Full report  |
|     | <ul> <li>(i) an unsealed radioactive nuclear substance that is set out in column 1 of Schedule 1, that has produced in excess of 100 times the activity set out in column 3, and</li> <li>(ii) an unsealed radioactive nuclear substance that is not set out in column 1.</li> <li>Subsection 38(2) of the NSRDR stipulates the content to be included in the report.</li> </ul>  |  |                       |  |
| 9c) | Class II Nuclear Facilities and Prescribed Equipment Regulations:  17. (1) Every licensee who installs a sealed source in any Class II prescribed equipment other than a pool-type irradiator shall, after installing the source, take measurements of radiation dose rates when the equipment is not in the irradiation mode and notify the Commission in writing as soon as practicable if the dose rate at any location that is 1 m from any sealed source in its shielded position exceeds the manufacturer's specifications.  Guidance  In many instances, the licensee may arrange for a contractor to install the sealed sources and take the measurements; however, the licensee is responsible to notify the Commission. | In writing, as soon as practicable         |                       |  |
| 9d) | NSRDR:  35. (1) Every licensee who uses more than 2 GBq of a nuclear substance that is not a sealed source for the purpose of conducting a tracer or subsurface tracer study shall notify the Commission before conducting the study.  (2) Every licensee shall, within 60 days of after using a nuclear substance referred to in subsection (1) for the purpose of conducting a tracer or subsurface tracer study, file with the Commission a report  Guidance  Subsection (2) continues with details of the contents to be included in the report.  | Before conducting the study                |                       | Within 60<br>days after<br>using a<br>nuclear<br>substance |

|     |  | Timing                                     |                       |                       |  |
|-----|--|--|-----------------------|-----------------------|--|
| No. | Event, notification or filing of specific records with the CNSC  | Notification or filing of specific records | Preliminary<br>report | Full report           |  |
| 10  | Counterfeit, fraudulent or suspect items   |  |                       |                       |  |
|     | Specific reporting provisions  The licensee shall report on the discovery of counterfeit, fraudulent or suspect items during the conduct of licensed activities.   |  | Immediate             | 60 days (if required) |  |
| 11  | Other reportable situations and events   |  |                       |                       |  |
|     | Applicable section(s) of the NSCA or regulations made under the NSCA:  NSCA:  24. (5) A licence may contain any term or condition that the Commission considers necessary for the purposes of this Act, including a condition that the applicant provide a financial guarantee in a form that is acceptable to the Commission.   |  | Immediate             | 60 days               |  |
|     | Specific reporting provisions  The licensee shall report on all other situations or events that are not otherwise specified in this document but can be reasonably assumed to be of regulatory interest, including notifications and situation or event reports to other regulatory agencies within the scope covered by the objects of the Commission (see section 9 of the NSCA).  Guidance  The licensee may submit copies of the report(s) or notification(s) prepared for other governing regulatory bodies to the CNSC in accordance with established communication protocols. |  |                       |                       |  |

| E.   | Radiation protection; environmental protection   |           |  |
|------|--|-----------|--|
| 12   | Actual or potential exposure in excess of legal radiation dose limits (worker)   |           |  |
|      | Applicable section(s) of NSCA or regulations made under the NSCA:  |           |  |
| 12a) | <ul> <li>GNSCR:</li> <li>29. (1) Every licensee who becomes aware of any of the following situations shall immediately make a preliminary report to the Commission of the location and circumstances of the situation and of any action that the licensee has taken or proposes to take with respect to it:</li> <li>(b) the occurrence of an event that is likely to result in the exposure of persons to radiation in excess of the applicable radiation dose limits prescribed by the <i>Radiation Protection Regulations</i></li> <li>Guidance</li> <li>Limits are provided under the <i>Radiation Protection Regulations</i>, sections 13, 14 and 15.</li> <li>An example of when an event is "likely" to result in an exposure in excess of a limit is where there is a reason to believe that a regulatory dose limit may be exceeded but has not yet been confirmed.</li> <li>"Persons" include nuclear energy workers, a pregnant nuclear energy worker and any person who is not a nuclear energy worker.</li> <li>If a licensee submits a full report under item 11b) in this table [<i>Radiation Protection Regulations</i>, section 16] or under item 23 [<i>Packaging and Transport of Nuclear Substances</i>, 2015, subsection 3(4)] within 21 days, the licensee is not required to also submit this report within 60 days.</li> </ul> | Immediate | Within 60 days after becoming aware of the event |

|      |  |  | Timing                |   |  |
|------|--|--|-----------------------|---|--|
| No.  | Event, notification or filing of specific records with the CNSC  | Notification or filing of specific records | Preliminary<br>report | Full report   |  |
| 12b) | <ul> <li>Radiation Protection Regulations (RPR):</li> <li>16. When a licensee becomes aware that a dose of radiation received by and committed to a person or an organ or tissue may have exceeded an applicable dose limit prescribed by section 13, 14 or 15, the licensee shall</li> <li>(a) immediately notify the person and the Commission of the dose; []</li> <li>(e) within 21 days after becoming aware that the dose limit has been exceeded, report to the Commission the results of the investigation or on the progress that has been made in conducting the investigation.</li> <li>Guidance</li> <li>Results of the investigation are expected to confirm whether the exposure resulted in a dose that exceeded the applicable dose limits.</li> <li>If a licensee submits this full report, the licensee is not required to also submit a full report under item 11a [GNSCR 29(1)] within 60 days or (for situations and events related to packaging and transport) under item 23 [PTNSR 2015] within 21 days.</li> </ul> | Immediate                                  |                       | Within 21 days after becoming aware that the dose limit has been exceeded |  |
| 12c) | NSCA:  45. Every person who, on reasonable grounds, believes that []  (b) an event has occurred that is likely to result in the exposure of persons or the environment to a dose of radiation in excess of the prescribed limits, shall immediately notify the Commission or an appropriate authority of the location and circumstances of the contamination or event.  Guidance  NSCA 45(b) applies to every person who is aware of the event.  | Immediate                                  |                       |   |  |

|      |  |  | Timing                |   |  |  |
|------|--|--|-----------------------|---|--|--|
| No.  | Event, notification or filing of specific records with the CNSC  | Notification or filing of specific records | Preliminary<br>report | Full report   |  |  |
| 13   | Reaching an action level for the purposes of radiation or environmental protection   |  |                       |   |  |  |
|      | Applicable section(s) of NSCA or regulations made under the NSCA:  NSCA:  24. (5) A licence may contain any term or condition that the Commission considers necessary for the purposes of this Act, including a condition that the applicant provide a financial guarantee in a form that is acceptable to the Commission.  Guidance  An "action level" is as defined in the Radiation Protection Regulations, subsection 6(1) and in the Uranium Mines and Mills Regulations (UMMR), subsection 4(1).  Each licensee's specific values for action levels are defined in the licensee's radiation protection program and environmental protection program.  Uranium mines and mills licensees are to follow the reporting procedures referenced in the environmental protection program code of practice if an action level is reached (refer to UMMR 4(2) for the contents of a proposed code of practice). |  |                       |   |  |  |
| 13a) | <ul> <li>RPR:</li> <li>6. (2) When a licensee becomes aware that an action level referred to in the licence for the purpose of this subsection has been reached, the licensee shall</li> <li>(a) conduct an investigation to establish the cause for reaching the action level;</li> <li>(b) identify and take action to restore the effectiveness of the radiation protection program;</li> <li>(c) notify the Commission within the period specified in the licence.</li> <li>Licence condition:</li> <li>The licensee shall implement and maintain a radiation protection program, which includes a set of action levels. When the licensee becomes aware that an action level has been reached, the licensee shall notify the Commission within X days.</li> <li>Note: In the specific licence condition, "X days" will be replaced with a specified period.</li> </ul>                                  | Within the period specified in the licence |                       | Within 60 days of the notification date or, if the licence specifies a different time period, within that time period |  |  |

|      |   | Timing                                     |                       |   |
|------|---|--|-----------------------|---|
| No.  | Event, notification or filing of specific records with the CNSC   | Notification or filing of specific records | Preliminary<br>report | Full report   |
| 13b) | Licence condition:  The licensee shall implement and maintain an environmental protection program, which includes a set of action levels. When the licensee becomes aware that an action level has been reached, the licensee shall notify the Commission within X days.  Note: In the specific licence condition, "X days" will be replaced with a specified period. | Within the period specified in the licence |                       | Within 60 days of the notification date or, if the licence specifies a different time period, within that time period |



| 14 | Nuclear and hazardous substance release   |          |           |   |
|----|---|----------|-----------|---|
|    | Applicable section(s) of NSCA or regulations made under the NSCA:  GNSCR:  29. (1) Every licensee who becomes aware of any of the following situations shall immediately make a preliminary report to the Commission of the location and circumstances of the situation and of any action that the licensee has taken or proposes to take with respect to it:  (c) a release, not authorized by the licence, of a quantity of radioactive nuclear substance into the environment  |          | Immediate | Within<br>60 days<br>after<br>becoming<br>aware of<br>the event |
|    | NSCA:  24. (5) A licence may contain any term or condition that the Commission considers necessary for the purposes of this Act, including a condition that the applicant provide a financial guarantee in a form that is acceptable to the Commission.   | <i>y</i> |           |   |
|    | Specific reporting provisions  The licensee shall report on: a. any failure to monitor, control or record the release of a nuclear substance as required by the licence b. any failure to monitor or control the release of a hazardous substance as required by any federal or provincial regulation, or a licence, permit or certificate issued by a municipal, provincial or other federal authority c. any event that has or has the potential to adversely affect the environment  |          |           |   |
|    | Guidance  Any releases into the environment that are not within the licence release limits or the limits specified in the licence conditions handbook (LCH) must be reported.  Some examples of events that should be reported are:  • radioactive release or hazardous substance release to the environment due to pipes, vessels or fuel failures  • any line leak causing a release of radioactive mine water into the environment  • failure of air pollution abatement equipment resulting in an atmospheric release of a radioactive substance or hazardous substance |          |           |   |

|     |  | Timing   |                       |             |  |
|-----|--|--|-----------------------|-------------|--|
| No. | Event, notification or filing of specific records with the CNSC  | Notification or filing of specific records   | Preliminary<br>report | Full report |  |
| 15  | Notification of sealed source leakage of 200 Bq or greater   |  |                       |             |  |
|     | Applicable section(s) of NSCA or regulations made under the NSCA:  NSRDR:  18. (3) Where a licensee, in the course of conducting a leak test on a sealed source or on shielding, detects the leakage of 200 Bq or more of a nuclear substance, the licensee shall (d) immediately after complying with paragraphs (a) to (c), notify the Commission that the leakage has been detected.  Class II Nuclear Facilities and Prescribed Equipment Regulations:  19. (2) Where a licensee, in the course of conducting a leak test on a sealed source or on shielding, detects the leakage of 200 Bq or more of a nuclear substance, the licensee shall (d) immediately after complying with paragraphs (a) to (c), notify the Commission that the leakage has been detected.  Guidance  If the leakage of the sealed source leads to an event as found in GNSCR 29(1), then a full report would be required. | Immediately after complying with paragraphs 18(3)(a) to (c) of the NSRDR or paragraphs 19(2)(a) to (c) of the Class II regulations |                       |             |  |

| F. | Security   |           |   |
|----|--|-----------|---|
| 16 | Theft or loss of nuclear substance, prescribed equipment or prescribed information   |           |   |
|    | Applicable section(s) of NSCA or regulations made under the NSCA:  NSCA:  27. Every licensee and every prescribed person shall []  (b) make the prescribed reports and file them in the prescribed manner, including a report on  (i) any theft or loss of a nuclear substance, prescribed equipment or prescribed information that is used in carrying on any activity that is authorized by this Act  GNSCR: | Immediate | Within<br>60 days<br>after<br>becoming<br>aware of<br>the event |
|    | 29. (1) Every licensee who becomes aware of any of the following situations shall immediately make a preliminary report to the Commission of the location and circumstances of the situation and of any action that the licensee has taken or proposes to take with respect to it:  (a) a situation referred to in paragraph 27(b) of the NSCA   |           |   |
|    | Guidance A nuclear substance is as defined in section 2 of the NSCA, and includes controlled nuclear substances as defined in the <i>Nuclear Non-Proliferation Import and Export Control Regulations</i> , subsection 1(2).  |           |   |
|    | Prescribed equipment and prescribed information are as defined in sections 20 and 21 of the GNSCR, and include controlled nuclear equipment and controlled nuclear information as defined in the <i>Nuclear Non-Proliferation Import and Export Control Regulations</i> , subsections 1(3) and 1(4).   |           |   |

| 17 | Actual or attempted breach of security or act of sabotage   |                   |           |  |
|----|---|-------------------|-----------|--|
|    | Applicable section(s) of NSCA or regulations made under the NSCA:  GNSCR:  29. (1) Every licensee who becomes aware of any of the following situations shall immediately make a preliminary report to the Commission of the location and circumstances of the situation and of any action that the licensee has taken or proposes to take with respect to it:  (e) an attempted or actual breach of security or an attempted or actual act of sabotage at the site of the licensed activity;  Guidance  Includes any damage to any building or equipment that might affect the security of the facility or site, and includes actual or attempted theft, loss or unauthorized movement of nuclear substances or prescribed information. Examples include but are not limited to:  • unauthorized access to a facility or site  • attempted or actual breach against electronic systems and/or subsystems  • discharge of firearms or the application of use-of-force options  Note: "Security" includes cybersecurity (such as hacker attacks on computer systems). |                   | Immediate | Within 60 days after becoming aware of the event |
| 18 | Filing of security record for threat and risk assessment  |                   |           |  |
|    | Applicable section(s) of NSCA or regulations made under the NSCA:  Nuclear Security Regulations (NSR):  7.5 (4) Every licensee shall provide a copy of the written [threat and risk assessment] record, together with a statement of actions taken as a result of the threat and risk assessment, to the Commission within 60 days after completion of the assessment.  Guidance  This notification applies only to high-security sites (nuclear facilities where category I or II nuclear material is processed, used or stored).  | Within<br>60 days |           |  |

|     | Event, notification or filing of specific records with the CNSC  | Timing  |                       |             |  |
|-----|--|---|-----------------------|-------------|--|
| No. |  | Notification or filing of specific records            | Preliminary<br>report | Full report |  |
| 19  | Notification of revocation of authorization  |   |                       |             |  |
|     | <ul> <li>Applicable section(s) of NSCA or regulations made under the NSCA:</li> <li>NSR:</li> <li>21. (2) Subject to subsection (3), a licensee shall immediately notify the Commission in writing of any revocation made under subsection (1) and the reasons for it.</li> <li>(3) If a revocation is in respect of an authorization under section 17, a licensee need not inform the Commission of the revocation and the reasons for it unless the revocation was made because there were reasonable grounds to believe that the person to whom the authorization was issued posed or could have posed a risk to the security of the facility.</li> <li>Guidance</li> <li>This notification applies only to high-security sites (nuclear facilities where category I or II nuclear material is processed, used or stored).</li> </ul> | Immediately in writing                                |                       |             |  |
| 20  | Notification of intent to conduct security exercise  |   |                       |             |  |
|     | Applicable section(s) of NSCA or regulations made under the NSCA:  NSR:  36. (3) Every licensee shall notify the Commission in writing of its intention to conduct a security exercise at least 60 days before the exercise date.  Guidance  This notification applies only to high-security sites (nuclear facilities where category I or II nuclear material is processed, used or stored).  | In writing, at least 60 days before the exercise date |                       |             |  |

|     |  |  | Timing                |  |
|-----|--|--|-----------------------|--|
| No. | Event, notification or filing of specific records with the CNSC  | Notification or filing of specific records | Preliminary<br>report | Full report  |
| 21  | Notification of revocation of facility-access security clearance   |  |                       |  |
|     | Applicable section(s) of NSCA or regulations made under the NSCA:  NSR:  44. (2) A licensee shall immediately notify the Commission in writing of any revocation made under paragraph (1)(a).  | In writing, immediately                    |                       |  |
|     | <b>Guidance</b> Paragraph (1)(a) pertains to situations where a licensee revokes a facility-access security clearance if there are reasonable grounds to believe that the person who has the facility-access clearance poses or could pose a risk to the security of a nuclear facility.   |  |                       |  |
|     | This notification applies only to licensees listed in column 2, schedule 2 of the NSR.   |  |                       |  |
| G.  | Safeguards and non-proliferation   |  |                       |  |
| 22  | Safeguards   |  |                       |  |
|     | Applicable section(s) of NSCA or regulations made under the NSCA:  GNSCR:  30. (1) Every licensee who becomes aware of any of the following situations shall immediately make a preliminary report to the Commission of the situation and of any action that the licensee has taken or proposes to take with respect to it:  (a) interference with or an interruption in the operation of safeguards equipment or the alteration, defacement or breakage of a safeguards seal, other than in accordance with the safeguards agreement, the Act, the regulations made under the Act or the licence; and  (b) the theft, loss or sabotage of safeguards equipment or samples collected for the purpose of a safeguards inspection, damage to such equipment or samples, or the illegal use, possession, operation or removal of such equipment or samples. |  | Immediate             | Within 21<br>days after<br>becoming<br>aware of<br>the event |

|      |   |  | Timing                |             |  |
|------|---|--|-----------------------|-------------|--|
| No.  | Event, notification or filing of specific records with the CNSC   | Notification or filing of specific records | Preliminary<br>report | Full report |  |
|      | aware of it, unless some other period is specified in the licence, and the report shall contain the following information:  (a) the date, time and location of becoming aware of the situation;  (b) a description of the situation and the circumstances;  (c) the probable cause of the situation;  (d) the adverse effects on the environment, the health and safety of persons and the maintenance of national and international security that have resulted or may result from the situation;  (e) the effective dose and equivalent dose of radiation received by any person as a result of the situation; and  (f) the actions that the licensee has taken or proposes to take with respect to the situation.  Guidance  If there is any question as to whether interference, theft, loss or sabotage of safeguards equipment or samples collected for the purpose of safeguards inspection has occurred, the licensee should make a preliminary report. |  |                       |             |  |
| н.   | Packaging and transport   |  |                       |             |  |
| 23   | Characterizing a nuclear substance  |  |                       |             |  |
|      | Applicable section(s) of NSCA or regulations made under the NSCA:   |  |                       |             |  |
| 23a) | <ul> <li>Packaging and Transport of Nuclear Substances Regulations, 2015 (PTNSR 2015):</li> <li>3. (1) The nuclear substance referred to in paragraph 2(2)(o) [of the PTNSR 2015] must be characterized at the earliest possible time to determine the extent to which it is subject to these Regulations [PTNSR 2015] and the Nuclear Substances and Radiation Devices Regulations.</li> <li>(3) The person who performs the characterization must</li> <li>(c) immediately notify the Commission if the source of the radioactivity in the load is determined to be a licensable quantity of a nuclear substance.</li> </ul>  | Immediate                                  |                       |             |  |

|      |  | Timing                                     |                       |   |  |
|------|--|--|-----------------------|---|--|
| No.  | Event, notification or filing of specific records with the CNSC  | Notification or filing of specific records | Preliminary<br>report | Full report   |  |
| 23b) | <ul> <li>PTNSR 2015:</li> <li>3. (4) If the measured dose rate at the time that the alarm is triggered is greater than 5 μSv/h and less than or equal to 25 μSv/h and there is no loss or dispersal of the nuclear substance during the transport, the consignor, the carrier and the consignee must (a) immediately make a preliminary report to the Commission indicating the alarm level, the details of the transport, information on the location and circumstances of the detected radiation and any action that they have taken or propose to take in respect of it; and</li> <li>(b) characterize the source of the radiation within 10 days after its detection and make a follow-up report</li> <li>(i) immediately, if the characterization of the source of the radioactivity in the load indicates that it is a licensable quantity of a nuclear substance, or</li> <li>(ii) within 21 days after the initial detection, if the nuclear substance in the load is determined not to be of a licensable quantity, with a summary of the radiation detection and the disposal of the substance and a confirmation that it is not of a licensable quantity.</li> <li>Guidance</li> <li>This reporting requirement applies if an alarm has been triggered and therefore a person is characterizing a nuclear substance in a load that is being transported (see paragraph 2(2)(o) of the PTNSR 2015).</li> </ul> |  | Immediate             | Within 10 days of the initial detection (if the quantity is licensable)  OR  Within 21 days after the initial detection (if the quantity is not licensable) |  |

|      |  | Timing |                       |   |
|------|--|--------|-----------------------|---|
| No.  | Event, notification or filing of specific records with the CNSC  |        | Preliminary<br>report | Full report   |
| 23c) | <ul> <li>PTNSR 2015:</li> <li>3. (5) If the measured dose rate at the time that the alarm is triggered is greater than 25 μSv/h but less than or equal to 500 μSv/h and there is no loss or dispersal of the nuclear substance during the transport, the consignor, carrier and consignee must (a) immediately make a preliminary report to the Commission indicating the alarm level, the details of the transport, information on the location and circumstances of the detected radiation and any action that they have taken or propose to take in respect of it; (b) isolate the load, prevent dispersal of the nuclear substance and control access to it to ensure that persons are not exposed to effective doses that exceed the limits set out in section 13 of the Radiation Protection Regulations;</li> <li>(c) have an expert in radiation protection assess the situation; and</li> <li>(d) report the results of the assessment to the Commission within 10 days after the detection and make a follow-up report</li> <li>(i) immediately, if the characterization of the source of the radioactivity in the load indicates that it is a licensable quantity of a nuclear substance, or</li> <li>(ii) within 21 days after the initial detection, if the nuclear substance in the load is determined not to be of a licensable quantity, with a summary of the radiation detection and the disposal of the substance and a confirmation that it is not of a licensable quantity.</li> <li>Guidance</li> <li>This reporting requirement applies if an alarm has been triggered and therefore a person is characterizing a nuclear substance in a load that is being transported (see paragraph 2(2)(o) of the PTNSR 2015).</li> </ul> |        | Immediate             | Within 10 days of the initial detection (if the quantity is licensable)  OR  Within 21 days after the initial detection (if the quantity is not licensable) |

|      |  | Timing                                     |                       |  |  |
|------|--|--|-----------------------|--|--|
| No.  | Event, notification or filing of specific records with the CNSC  | Notification or filing of specific records | ng of specific report |  |  |
| 24   | Actual or potential exposure in excess of legal radiation dose limits (during transport)   |  |                       |  |  |
|      | PTNSR 2015:  32. Every consignor, carrier or consignee who becomes aware that a dose of radiation received by a person may have exceeded an applicable dose limit prescribed by the <i>Radiation Protection Regulations</i> must  (a) immediately notify the person and the Commission of the dose;  (d) within 21 days after becoming aware that the dose limit may have been exceeded, report to the Commission the results of the investigation or the progress that has been made in conducting it.  Guidance  Results of the investigation are expected to confirm whether the exposure resulted in a dose that exceeded the applicable dose limits.  If a licensee submits this full report, the licensee is not required to also submit a full report under item 11a [subsection 29(1) of the GNSCR] within 60 days or under item 11b [section 16 of the RPR] within 21 days. | Immediate                                  |                       | Within 21 days after becoming aware that the dose limit may have been exceeded |  |
| 25   | Dangerous occurrence   |  |                       |  |  |
|      | Dangerous occurrences with respect to packaging and transport of radioactive material are defined in the glossary. Dangerous occurrences do not include minor errors in documentation, labelling, or handling. Similarly, they do not include any instance of non-compliance with the PTNSR 2015 or with any licence or certificate applicable to a package that may be reasonably expected to have no adverse effects on the environment or the health and safety of persons or national security.  Applicable section(s) of NSCA or regulations made under the NSCA:   |  |                       |  |  |
| 25a) | PTNSR 2015:  36. (2) As soon as feasible after a dangerous occurrence has occurred the consignor, carrier or consignee of the package or radioactive material involved in the occurrence a d   |  |                       |  |  |

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| No.  |   | Timing                                     |                       |   |
|------|---|--|-----------------------|---|
|      | Event, notification or filing of specific records with the CNSC   | Notification or filing of specific records | Preliminary<br>report | Full report   |
|      | must have an expert in radiation protection assess the situation. The expert must report the results of the assessment to the Commission as soon as feasible.   | occurrence                                 |                       |   |
|      | Guidance  |  |                       |   |
|      | "As soon as feasible" means as soon as the licensee becomes aware that a dangerous occurrence is reportable but after the obligations listed in subsection 36(1) of the PTNSR 2015 have been met.   |  |                       |   |
|      | The expert in radiation protection may be an employee of the consignor, carrier or consignee, or may be an independent consultant retained for the purpose of assessing the situation and reporting to the Commission.  |  |                       |   |
| 25b) | PTNSR 2015: 37. (1) Immediately after becoming aware of a failure to comply with the requirements of section 26 or after the obligations set out in subsection 36(1) have been discharged, every consignor, carrier, consignee and holder of a licence to transport a package while in transit must make a preliminary report of the situation to the Commission.  38. Within 21 days after the failure to comply with the requirements of section 26 or after the dangerous occurrence, the consignor, carrier and consignee and any holder of a licence to transport a package while in transit must file a full report with the Commission that includes the following information:  (a) the date, time and location of the failure to comply or of the dangerous occurrence;  (b) the names of the persons involved;  (c) the details of the packaging and packages;  (d) the probable cause;  (e) the effects on the environment, the health and safety of persons, and national or international security that have resulted or may result;  (f) the doses of radiation that any person has received or is likely to have received; and  (g) the actions taken to remedy the failure to comply or the dangerous occurrence and to prevent its recurrence. |  | Immediate             | Within 21 days after a dangerous occurrence or a failure to comply with the require- ments. |
|      | Subsection 37(1) and section 38 refer to section 26, which sets out the requirements for  |  |                       |   |

| No. |  | Timing                                     |               |   |
|-----|--|--|---------------|---|
|     | Event, notification or filing of specific records with the CNSC  | Notification or filing of specific records | ecific report |   |
|     | presenting a package containing radioactive material or a nuclear substance for transport.   |  |               |   |
|     | Subsection 37(1) refers to subsection 36(1), which sets out the [non-reporting] obligations of the consignor, carrier or consignee in the event of a dangerous occurrence.   |  |               |   |
|     | As stated in subsection 37(2), no preliminary report is required for the dangerous occurrence referred to in paragraph 35(f) in respect of the internal surfaces of a tank or intermediate bulk container, as those terms are defined in the IAEA Regulations – or of a freight container or conveyance – that is dedicated to the transport of unpackaged radioactive material under exclusive use for as long as it remains under that specific exclusive use.   |  |               |   |
| 26  | Package is damaged, tampered with, or contents are outside the containment system  |  |               |   |
|     | <ul> <li>PTNSR 2015:</li> <li>40. (3) Every person who receives a package or who opens a package must, at that time, determine if any of the following conditions exist: <ul> <li>(a) the package is damaged;</li> <li>(b) the package has been tampered with;</li> <li>(c) if the package contains fissile material, whether any portion of the fissile material is outside the confinement system; and;</li> <li>(d) any portion of the contents of the package is outside the containment system.</li> </ul> </li> <li>(4) If any of the conditions exist, the person must immediately make a preliminary report to the Commission and to the consignor.</li> </ul> |  | Immediate     | Within<br>21 days<br>after the<br>discovery |
|     | <ul> <li>(5) The preliminary report must include information on how and where the condition was discovered and on any action that the person has taken or proposes to take with respect to it.</li> <li>(6) Within 21 days after the condition has been discovered the consignor and the person who made the preliminary report must file a full report with the Commission that includes the following information:</li> <li>(a) the date, time and location of the discovery of the condition;</li> <li>(b) the names of the persons involved;</li> </ul>  |  |               |   |

|     |   | Timing                     |                    |             |
|-----|---|----------------------------|--------------------|-------------|
| No. | Event, notification or filing of specific records with the CNSC   |                            | Preliminary report | Full report |
|     |   | filing of specific records | терогі             |             |
|     | (c) the details of the packaging and packages;  |                            |                    |             |
|     | (d) the probable cause;   |                            |                    |             |
|     | (e) the effects on the environment, the health and safety of persons, and national or   |                            |                    |             |
|     | international security that have resulted or may result;  |                            |                    |             |
|     | <ul><li>(f) the doses of radiation that any person has received or is likely to have received; and</li><li>(g) the actions taken to remedy the condition and to prevent its recurrence.</li></ul> |                            |                    |             |
|     | (g) the actions taken to remedy the condition and to prevent its recurrence.  |                            |                    |             |
| 27  | Notification of undeliverable consignments  |                            |                    |             |
|     | Applicable section(s) of NSCA or regulations made under the NSCA:   | As soon as                 |                    |             |
|     | PTNSR 2015:   | feasible                   |                    |             |
|     | <b>41.</b> If a consignment cannot be delivered to the consignee, the carrier must  |                            |                    |             |
|     | (a) notify the consignor, the consignee and the Commission;   |                            |                    |             |
|     | (a) hour, the consigner, the consigner and the commission,  |                            |                    |             |



# **Appendix B: Sample Structure and Content for an Annual Compliance Monitoring Report**

This appendix provides a sample structure for an annual compliance monitoring report, based on the CNSC's 14 safety and control areas (SCAs). The licensee is under no obligation to follow this format; however, the report shall include all information as applicable. For more information on SCAs and the specific areas within each SCA, refer to the CNSC website.

## Cover page

The cover page of the report should clearly summarize the name of the facility, the licensee and the reporting period.

**Note:** Where the period for a set of information is different from the reporting period, the licensee should use the information that most closely aligns with the reporting period. The licensee should clearly identify this detail. In all cases, each annual compliance monitoring report shall be contiguous with the previous annual report.

#### **Table of contents**

The following is a suggested structure that licensees may use for their annual compliance monitoring report:

- 1.0 Identifying information
- 2.0 Introduction
- 3.0 Safety and control areas
  - 3.1 Management system
  - 3.2 Human performance management
  - 3.3 Operating performance
  - 3.4 Safety analysis
  - 3.5 Physical design
  - 3.6 Fitness for service
  - 3.7 Radiation protection
  - 3.8 Conventional health and safety
  - 3.9 Environmental protection
  - 3.10 Emergency management and fire protection
  - 3.11 Waste management
  - 3.12 Security
  - 3.13 Safeguards and non-proliferation
  - 3.14 Packaging and transport
- 4.0 Other matters of regulatory interest
  - 4.1 Licensee's public information and disclosure program
  - 4.2 Improvement plans and significant future activities
  - 4.3 Financial guarantees
  - 4.4 Other facility-specific matters of regulatory interest

#### **Identifying information**

The report should include the following identifiers:

- licensee's name
- licence number

- name of the facility or facilities (as identified in the licence or LCH)
- · reporting period
- licensee's business address (including suite number, if applicable, and postal code)

#### Introduction

The report should include the following general information:

- date of submission of the report
- a summary of the licensee's compliance with other federal, provincial and municipal regulations
- a summary of any new licensed activities (since the last compliance monitoring report)
- a summary of significant modifications or changes to the site or facility, including modifications to any facility buildings, processes, equipment, procedures, programs or organizational structure

## Safety and control areas

The report should include information on all 14 SCAs. If a particular SCA is not relevant or does not apply to the facility or licensed activity, the licensee should include a statement to that effect. The minimum information to be included for each SCA is described below.

## **Management system**

The report should include, as applicable:

- a description of the degree of implementation of the management system and the scope of activities it applies to
- a conclusion of the effectiveness of the management system in meeting all of its requirements (including all the programs and safety areas under the management system), supported by a summary of the outcome of assessments of the effectiveness of each element of the management system, plus any resultant improvement actions and their progress
- an overview and the conclusions of audits of the management system carried out by the licensee and external parties, including a description of any resultant actions and the status of these actions
- a summary of any revisions or changes to the management system, its processes and the documents that describe it
- a summary of any changes to the organizational structure and the roles and responsibilities of
  the persons responsible for the management and control of the licensed activity and the
  nuclear substance, nuclear facility, prescribed equipment or prescribed information
  encompassed by the licence, including the revised organizational structure, roles and
  responsibilities

#### **Human performance management**

The annual compliance report should include, as applicable:

- a description of the implementation status of the various programs used in the management of human performance, and of the interfaces between the programs
- an assessment of the overall performance of the human performance management program
- a summary of the applicable training, including how the training programs satisfy the conditions outlined in the licensee's LCH as well as the legislative requirements of the *Nuclear Safety and Control Act* (NSCA) and the regulations made under the NSCA; a general description of relevant statistics should include mandatory federal and provincial legislative training activities and job/task-specific training activities

**Note:** For any mandatory training program (such as the radiation protection training program), the licensee is required to provide training and qualification statistics (such as completion rate), including a comparison with the performance benchmark adopted by the licensee

- confirmation that the licensee had a sufficient number of qualified workers to carry on the licensed activities safely and in accordance with the NSCA and the regulations made under the NSCA
- any matters concerning the examination for certification and the certification of personnel (including recertification and decertification) and any change in status of certified personnel (for example, termination, removal from duties, failure to pass a requalification exam, retirements and transfers)

#### **Operating performance**

The report should include, as applicable:

- an assessment of how well the licensee conducted operations in accordance with the licensee's relevant programs and procedures
- an overview and the conclusion of any audits (related to the licensed activities) that were carried out by the licensee and external parties during the review period
- information about compliance with operational limits and conditions
- a summary of reportable events during the review period, excluding exceedances of radiation and environmental protection regulatory limits and action levels (which should be reported under the radiation protection section and the environmental protection section of this report)
- a summary of annual production or utilization data pursuant to the facility operating licence, including compliance verification for any limits specified in the licence (note: if this information is proprietary, it may be provided in a separate, secure document)

#### Safety analysis

The report should include, as applicable:

- a description of how the facility's overall safety case was validated and maintained over the reporting period, including an assessment of the effectiveness of the validation and maintenance
- a summary of all modifications and changes to the facility that may affect that facility's safety analysis
- a description of actual or potential hazards or benefits/improvements associated with those modifications and changes
- a description of how the preventive measures and strategies for the potential hazards are implemented, along with the evaluation of their effectiveness
- where applicable, a description of the effectiveness of the nuclear criticality program

## Physical design

The report should include, as applicable:

- a summary of the changes that occurred in the physical design and related activities that
  affect the ability of structures, systems and components (SSCs) to meet and maintain their
  design basis
- for any major changes, a description of all validation activities and the results of the validation

#### Fitness for service

The report should include, as applicable:

- a description of the effectiveness of the maintenance, surveillance, and in-service inspection and testing programs, including post-maintenance verification and testing; these programs ensure that all SSCs are available to perform their intended design function when called upon to do so
- a description of the effectiveness of all aging management strategies

## **Radiation protection**

The report should include, as applicable:

- a summary of the application of the ALARA (as low as reasonably achievable) principle; that is, a description of initiatives and activities undertaken to improve the control of worker doses and radiological hazards for the reporting period, and a summary of initiatives and targets for the upcoming year (next reporting period)
- a summary that evaluates the radiation protection program performance against the initiatives and activities identified above, including a discussion of initiatives and activities that were planned but not completed or conducted
- a summary of revisions and improvements to the radiation protection program; some examples are methods and processes, instrumentation and equipment, procedures and training programs
- a summary of radiation doses received by all persons as a result of the licensed activity during the reporting calendar year (that is, January 1 to December 31) according to the following specifications:
  - radiation dose data should be reported for all monitored persons and additional dose data should be provided for each work group, as identified by the licensee (for example, various operational work groups, administrative staff, contractors and visitors)
  - radiation dose data should include, as a minimum, the total number of persons monitored
    and the average, maximum and collective dose for all groups of persons as defined above,
    for the reporting period; two averages should be reported an average that includes dose
    values of zero, and an average of all measurable doses that excludes the zero dose values,
    where:
    - average dose is the arithmetic mean of all exposure results for persons monitored for that licensed activity during the reporting period
    - maximum dose is the highest dose incurred by an individual as a result of the licensed activity during the reporting period
  - the maximum individual dose for the current five-year dosimetry period should be provided
  - the radiation dose data should be reported as effective dose, with additional data for each assigned dose component (for example, internal, long-lived radioactive dust, radon progeny; each dose component category should include the average and maximum dose, as well as the number of persons assigned a dose in each category
  - the equivalent dose results (for example, extremity, skin and lens of the eye) should be reported for all monitored persons and for all additional groups of persons as defined by the licensee, as applicable
  - the radiation dose data should be presented in tabular or graphical format, and should include the distribution of radiation doses by total number of persons monitored by dose

- range; dose ranges should be appropriate for the range of data and should include the following ranges as a minimum: 0 mSv; 0.01 to 1.00 mSv; 1.01 to 5.00 mSv; 5.01 to 10.00 mSv; 10.01 to 20.00 mSv; > 20.01 mSv
- an assessment of the significance of the radiation dose trends from year to year should be included, for a minimum period of five years
- a discussion of data and results, including an assessment of trends and fluctuations, of routine radiation surveys and contamination monitoring conducted during the reporting period; some examples are:
  - radiation field surveys
  - measurements of the concentrations of airborne nuclear substances
  - measurements of surface contamination
  - personnel contamination events
- a summary of the estimated effective doses to members of the public, including:
  - the results and calculations of the annual radiation doses to the representative persons and/or critical group or groups in comparison to the regulatory public dose limit
  - a description of the environmental transfer / exposure pathways associated with the operation of the facility, including the dispersion and dosimetric models used
  - the mean and maximum doses
  - a discussion of the significance of the data
  - a description of the trends from year to year, with comments on their significance, for a period of five years

## Conventional health and safety

The report should include, as applicable:

- a discussion of the conventional health and safety program and its effectiveness, including:
  - frequency of internal and external inspections, audits and reviews
  - a description of the findings and corrective actions from the inspections, audits and reviews
  - a discussion of effectiveness and adequacy of managerial control on the prevention of unreasonable risks to persons
- details of the occupational/conventional health and safety committee, including:
  - frequency of meetings
  - a description of initiatives and performance measured against the goals and targets for the year
  - a summary of initiatives and targets for the upcoming year
- a summary of any conventional health and safety improvements and revisions; some examples are methods, instrumentation, equipment and procedures
- a discussion of all conventional health and safety occurrences related to non-radiological health and safety activities, including medical aids/consultations and lost-time incidents (frequency and severity)

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## **Environmental protection**

The report should include, as applicable:

- a summary of effluent (air and water releases) monitoring, including:
  - a description of the monitoring and testing methods, quality assurance, quality control and detection limits
  - discussion on how the results were estimated or calculated
  - data for both radiological and non-radiological releases (for example, activity, concentrations, flow rates and loadings)
- an analysis of the effluent monitoring results, including:
  - a discussion of any emerging trends
  - a separate discussion for each air and water quality monitoring activity on the significance of the air and water release monitoring results
  - details on how these trends or results relate to the estimated dose to the public and any critical groups
  - trends from year to year, for a period of five years or longer
- whenever either an environmental protection regulatory limit was exceeded or action level was reached, a summary of the investigations completed and corrective actions taken
- an overview of how the environmental protection program is reviewed and its effectiveness, including:
  - the frequency of internal and external inspection, audits and reviews
  - a description of the findings and corrective actions
- a summary of any environmental protection program improvements and revisions; some examples are the methods, instrumentation, equipment and procedures
- for the environmental protection program performance:
  - a description of all performance and initiatives compared against the goals and targets for the year
  - a summary of initiatives and targets for the upcoming year
  - an evaluation of whether the environmental protection program met its previous year objectives, goals and targets
  - a summary of environmental monitoring, including:
    - a description of the monitoring and testing methods, quality assurance, quality control and detection limits
    - discussion on how the results were calculated
    - data for both radiological and non-radiological releases (for example, activity, concentrations)
  - an analysis of the environmental monitoring results, including:
    - a discussion of any emerging trends
    - a separate discussion for each environmental monitoring activity on the significance of the results
    - trends from year to year, for the same period of five years or longer as for the effluent monitoring results
  - a summary of spills to the environment, including a description of any corrective actions taken, and their effectiveness

## **Emergency management and fire protection**

The report should include, as applicable:

- a summary of emergency preparedness program activities, including:
  - reviews conducted with external agencies and authorities
  - a description of the effectiveness of the program and any review
  - a summary of any changes and improvements to the emergency preparedness program
- a summary of the fire protection program, including:
  - the frequency of the inspections, audits, drills and reviews
  - any findings and corrective actions
  - a description of the effectiveness of the program and any review
  - a summary of any changes and improvements to the fire protection program

## Waste management

The report should include, as applicable:

- a description of any change or improvement made to the waste management program during the reporting period
- identification and characterization of the waste streams generated by the operation of the facility, including:
  - production rates and volumes
  - physical, chemical and radiological characteristics of each of the waste streams
- inventories of each of the following, including type, volume, total activity level and/or concentration:
  - hazardous or radioactive waste stored onsite
  - waste that is transferred elsewhere (within a site or offsite) for processing, storage or disposal
  - waste that is disposed through authorized controlled releases into the environment
- a description of the effectiveness of the existing waste segregation and/or minimization components, if any, of the facility's waste management program, including the effectiveness of any new waste segregation and/or minimization strategies implemented in the course of the reporting period
- the results of any inspection, audit or review completed on any aspect of the waste management program

#### Security

The report should include, as applicable but without compromising the security of the site, information on the status of compliance with the regulatory requirements related to security.

## Safeguards and non-proliferation

The report should include, as applicable:

- an assessment of the overall performance of the safeguards program, including the program's effectiveness
- a summary of any changes to the safeguards program

• information on safeguards inspections (if applicable), including the number and type of inspections, who performed the inspections, and any findings (such as issues, best practices, etc.) resulting from the inspections

#### Packaging and transport

The report should include, as applicable, a brief description of the licensee's performance with respect to packaging and transporting nuclear substances in accordance with the appropriate regulations.

## Other matters of regulatory interest

The report should include information on the following additional matters of regulatory interest.

## Licensee's public information and disclosure program

The report should include, as applicable:

- a summary of activities under the public information and disclosure program; some examples are:
  - analysis on public inquiries, opinions and concerns, including analysis of media coverage about the facility
  - engagement activities with the general public and target audiences, including Aboriginal communities
  - information channels and products revised or developed (social media, web, print, video)
  - facility tours
  - public opinion research
  - analysis of website and social media analytics
  - information released under the disclosure protocol, method for distribution and community feedback on the disclosure
  - changes made to the public information and disclosure program
- samples of products related to the public information and disclosure program (such as advertisements, newsletters, presentations, handouts, fact sheets, and social media updates)

#### **Improvement plans and significant future activities**

The report should include, as applicable:

- a summary of any improvements planned to be implemented during the next year
- a summary of any changes for which the Commission's approval may be requested during the next year

## **Financial guarantees**

The report should include, as applicable, confirmation that the financial guarantee is maintained and is valid.

#### Other facility-specific matters of regulatory interest

The report should include, as applicable, information about any facility-specific matter of regulatory interest, to an appropriate level of detail.

## Glossary

## **action level** (seuil d'intervention)

A specific dose of radiation or other parameter that, if reached, may indicate a loss of control of part of a licensee's radiation protection program and triggers a requirement for specific action to be taken. (Source: *Radiation Protection Regulations*)

#### OR

A specific dose of radiation or other parameter that, if reached, may indicate a loss of control of part of a licensee's radiation protection program or environmental protection program, and triggers a requirement for specific action to be taken. (Source: *Uranium Mines and Mills Regulations*)

#### counterfeit item (article contrefait)

An item that is intentionally manufactured or altered to imitate a product without the legal right to do so.

## dangerous occurrence (situations dangereuses)

Any of the following situations:

- a) a conveyance carrying radioactive material is involved in an accident
- b) a package shows evidence of damage, tampering or leakage of its contents, or its integrity is degraded in a manner that may reasonably be expected to impair its ability to comply with [the *Packaging and Transport of Nuclear Substances Regulations*, 2015 (PTNSR 2015)] or its certificate
- c) radioactive material is lost, stolen or no longer in the control of a person who is required to have control of it under the [Nuclear Safety and Control Act (NSCA)]
- d) radioactive material has escaped from a containment system, a package or a conveyance during transport
- e) fissile material is outside the confinement system during transport
- f) the level of non-fixed contamination, as defined in the IAEA Regulations, during transport exceeds the following limits as applicable when averaged over any area of 300 cm<sup>2</sup> of any part of the surface of the package or the conveyance:
  - i. 4 Bq/cm<sup>2</sup> for beta and gamma emitters and low toxicity alpha emitters, or
  - ii. 0.4 Bq/cm<sup>2</sup> for all other alpha emitters
- g) there is a failure to comply with the provisions of [the NSCA], the provisions of [the PTNSR 2015], or any licence or certificate that is applicable to a package that may reasonably be expected to lead to a situation in which the environment, the health and safety of persons, or national security is adversely affected

(Source: Packaging and Transport of Nuclear Substances Regulations, 2015, section 35)

## environment (environnement)

The components of the Earth:

- land, water and air, including all layers of the atmosphere
- all organic and inorganic matter and living organisms
- the interacting natural systems that include the above components

## event (événement)

Any unintended occurrence, including operating error, equipment failure or another mishap, or deliberate action on the part of others, the consequences or potential consequences of which may be significant from the point of view of protection or safety.

#### **exposure device** (appareil d'exposition)

A radiation device that is designed for carrying out gamma radiography, and includes any accessory to the device such as a sealed source assembly, a drive mechanism, a sealed source assembly guide tube and an exposure head.

#### **fire** (incendie)

A process of combustion characterized by heat emission and accompanied by smoke or flame, or both.

## **flooding** (inondation)

Liquid present in an area in a quantity exceeding what would normally be expected and that has an impact on the safe operation of the facility.

## **fraudulent item** (article frauduleux)

An item whose material, performance or characteristics are knowingly misrepresented with intent to deceive. Include items provided with incorrect identification, or falsified or inaccurate certification. Also includes manufacturing overages sold by entities with the legal right to manufacture a specified quantity of an item but that produce a larger quantity than authorized, which is then sold as legitimate inventory.

#### **licensing basis** (fondement d'autorisation)

A set of requirements and documents for a regulated facility or activity comprising:

- the regulatory requirements set out in the applicable laws and regulations
- the conditions and safety and control measures described in the facility's or activity's licence and the documents directly referenced in that licence
- the safety and control measures described in the licence application and the documents needed to support that licence application

#### risk (risque)

The chance of injury or loss, defined as a measure of the probability and severity of an adverse effect (consequences) to health, property, the environment or other things of value; mathematically, risk is the probability of occurrence (likelihood) of an event multiplied by its magnitude (severity).

#### **safety significance** (importance pour la sûreté)

The significance of a situation, event or issue with respect to the impact on meeting the nuclear safety objectives as defined by the IAEA in document SF-1, *Fundamental Safety Principles* [IAEA Safety Standards Series, 2006]. In general, a situation, event or issue has safety significance if it denotes a deviation from the safety case accepted in the licence, in a direction detrimental to safety, such as but not limited to:

- reducing margins to (or exceeding) the accepted limits
- increasing risk to the health, safety and security of persons and the environment
- impairing (various degrees) the safety systems or the safety functions for accident mitigation
- reducing defence in depth
- causing radioactive releases and spills of hazardous substances and/or injuries to workers or the public

#### **sealed source** (source scellée)

A radioactive nuclear substance in a sealed capsule or in a cover to which the substance is bonded, where the capsule or cover is strong enough to prevent contact with or the dispersion of the substance under the conditions for which the capsule or cover is designed.

#### **situation** (situation)

Conditions, circumstances or configurations that occur, are discovered or that may lead to an event.

## structures, systems and components (SSCs) (structures, systèmes et composants [SSC])

A general term encompassing all of the elements of a facility or activity that contribute to protection and safety. Structures are the passive elements: buildings, vessels, shielding, etc. A system comprises several components, assembled in such a way as to perform a specific (active) function. A component is a discrete element of a system. Some examples are wires, transistors, integrated circuits, motors, relays, solenoids, pipes, fittings, pumps, tanks and valves.

## suspect item (article suspect)

An item that is suspected to be counterfeit, fraudulent or substandard.



## References

1. CNSC, *Guidance Document on Confidential Filings*, Ottawa, Canada, 2014 <a href="http://www.nuclearsafety.gc.ca/eng/the-commission/pdf/guidance-document-on-confidential-filings-eng.pdf">http://www.nuclearsafety.gc.ca/eng/the-commission/pdf/guidance-document-on-confidential-filings-eng.pdf</a>



## **CNSC Regulatory Document Series**

Facilities and activities within the nuclear sector in Canada are regulated by the Canadian Nuclear Safety Commission (CNSC). In addition to the *Nuclear Safety and Control Act* and associated regulations, these facilities and activities may also be required to comply with other regulatory instruments such as regulatory documents or standards.

Effective April 2013, the CNSC's catalogue of existing and planned regulatory documents has been organized under three key categories and twenty-five series, as set out below. Regulatory documents produced by the CNSC fall under one of the following series:

#### 1.0 Regulated facilities and activities

| Series | 1.1 | Reactor facilities |
|--------|-----|--------------------|
| DCHC2  | 1.1 | Reactor facilities |

- 1.2 Class IB facilities
- 1.3 Uranium mines and mills
- 1.4 Class II facilities
- 1.5 Certification of prescribed equipment
- 1.6 Nuclear substances and radiation devices

## 2.0 Safety and control areas

- Series 2.1 Management system
  - 2.2 Human performance management
  - 2.3 Operating performance
  - 2.4 Safety analysis
  - 2.5 Physical design
  - 2.6 Fitness for service
  - 2.7 Radiation protection
  - 2.8 Conventional health and safety
  - 2.9 Environmental protection
  - 2.10 Emergency management and fire protection
  - 2.11 Waste management
  - 2.12 Security
  - 2.13 Safeguards and non-proliferation
  - 2.14 Packaging and transport

#### 3.0 Other regulatory areas

- Series 3.1 Reporting requirements
  - 3.2 Public and Aboriginal engagement
  - 3.3 Financial guarantees
  - 3.4 Commission proceedings
  - 3.5 CNSC processes and practices

**Note:** The regulatory document series may be adjusted periodically by the CNSC. Each regulatory document series listed above may contain multiple regulatory documents. For the latest list of regulatory documents, visit the CNSC's website.