

Audit at a Glance

Report 1—Inspection of Nuclear Power Plants—Canadian Nuclear Safety Commission

What we examined (see Focus of the audit)

This audit focused on whether the Canadian Nuclear Safety Commission had adequately managed its site inspections of Canadian nuclear power plants to verify that the environment and the health, safety, and security of Canadians were protected. More specifically, we examined whether the CNSC adequately planned for and carried out site inspections of nuclear power plants. We also examined whether the CNSC applied enforcement measures to ensure that the deficiencies it identified were corrected to comply with regulatory and licence requirements. The audit focused on the management by the CNSC of its site inspections, and not on the overall safety of nuclear power plants in Canada.

Why we did this audit

This audit is important because inspections are one of the key tools the CNSC uses to verify that nuclear power plant operators are complying with regulatory and licence requirements and managing nuclear power plants in a way that protects the environment and the health, safety, and security of Canadians. Inspections are carried out to identify and document safety and control issues, communicate them to operators, and follow up to ensure they are corrected.

What we concluded

Site inspections are one of the key tools that the Canadian Nuclear Safety Commission (CNSC) uses to oversee the operation of nuclear power plants to verify that the environment and the health, safety, and security of Canadians are protected. We concluded that the CNSC could not show that it had adequately managed its site inspections of nuclear power plants. The CNSC could not demonstrate that its inspection plans included the appropriate number and types of inspections and that it had the staff needed to verify that nuclear power plants were complying with all applicable requirements or that site inspections were carried out according to the CNSC's procedures.

What we found

Planning inspections

Overall, we found that the Canadian Nuclear Safety Commission (CNSC) had insufficient or incomplete documentation to support or explain its planning decisions. For example, it could not show how it had taken risks into account when making decisions about which inspections it would and would not carry out each year. The CNSC could not show that it had determined the minimum number and types of inspections needed to verify that nuclear power plant operators were complying with regulatory and licensing requirements. We recognize that the CNSC's planning process must be flexible enough to respond to unforeseen events or issues. However, that does not preclude the need for a systematic, well-documented process so that the CNSC can demonstrate that its planning considers risk and that it allocates enough staff at the levels needed, commensurate with risk.

These findings are important because the CNSC needs to show that it carried out the appropriate number and types of site inspections. Site inspections are one of the key verification tools the CNSC uses to assure Canadians that nuclear power plants perform safely and comply with regulatory and licence requirements.

- **The Canadian Nuclear Safety Commission could not show that it had an adequate, systematic, risk-informed process for planning site inspections at nuclear power plants**

Recommendation. The Canadian Nuclear Safety Commission should develop and implement a well-documented planning process for site inspections of nuclear power plants that can demonstrate that the process is systematic and risk-informed. This should include determining the minimum required frequency and type of inspections needed to verify compliance, updating the five-year baseline inspection plan, and assessing whether it is assigning the appropriate number and levels of staff to carry out the number of inspections required to verify compliance.

Recommendation. The Canadian Nuclear Safety Commission should develop detailed criteria to help it identify when to conduct Type I inspections.

Conducting inspections

Overall, we found that the Canadian Nuclear Safety Commission (CNSC) could not show that inspectors always followed CNSC procedures when carrying out and documenting inspections of nuclear power plants. This has led to inconsistencies, gaps in documentation, and missed opportunities for identifying improvements in conducting inspections. For example, although the CNSC requires that inspection guides be developed and approved before inspections take place, we found that this was done for only one quarter of inspections during the 2013–14 and 2014–15 fiscal years. We also found that the CNSC did not provide clear guidance to its inspectors about which information they should retain in inspection files once the final inspection reports were complete. Because some information was not retained, the CNSC could not show that inspection reports fully and accurately reflected observations made during inspections. The CNSC also rarely used the information gathered during inspections to conduct lessons-learned exercises that could identify ways to improve its site inspections.

These findings are important because following procedures ensures that all inspections are carried out in a way that verifies compliance with the applicable regulatory and licence requirements and that noted deficiencies and lessons learned are captured, documented, and addressed in a consistent way.

- **The Canadian Nuclear Safety Commission did not always follow its own inspection procedures**

Recommendation. The Canadian Nuclear Safety Commission should ensure that its inspections follow its own procedures. This requires that it develop approved inspection guides with appropriate criteria before conducting inspections to assess that nuclear power plants are complying with applicable regulatory and licence requirements. The Canadian Nuclear Safety Commission should also clearly explain to its staff how to decide which documents should be considered transitory and which documents should be retained after they issue inspection reports.

Recommendation. The Canadian Nuclear Safety Commission should ensure that it documents lessons learned in carrying out its inspections, to help it make continuous improvements to its inspection practices.

Enforcing compliance with regulatory and licence requirements

Overall, we found that the Canadian Nuclear Safety Commission (CNSC) followed up on instances of non-compliance identified through site inspections and confirmed that the nuclear power plants involved had taken corrective action or were in the process of doing so. We also found that the CNSC was slow to issue final inspection reports to nuclear power plant operators in about one third of cases.

This is important because, through timely enforcement activities, the CNSC ensures that nuclear power plants address the safety and control issues noted during an inspection and documented in the final inspection report. Even though the CNSC is to immediately inform the operator when it identifies a compliance issue during a site inspection so that safety concerns can be immediately addressed, it is important that the CNSC issue its reports to plant operators on time, because the 60-day period the operators have to provide a response to the CNSC only starts after they receive the final inspection report.

- **The Canadian Nuclear Safety Commission followed up to confirm that nuclear power plants corrected compliance violations it identified, but did not always issue final reports on time**

Recommendation. The Canadian Nuclear Safety Commission should determine why it does not issue timely final inspection reports and decide whether it needs to make any changes to its processes or standards.

Entity Responses to Recommendations

The audited entity agrees with our recommendations, and has responded (see List of Recommendations).

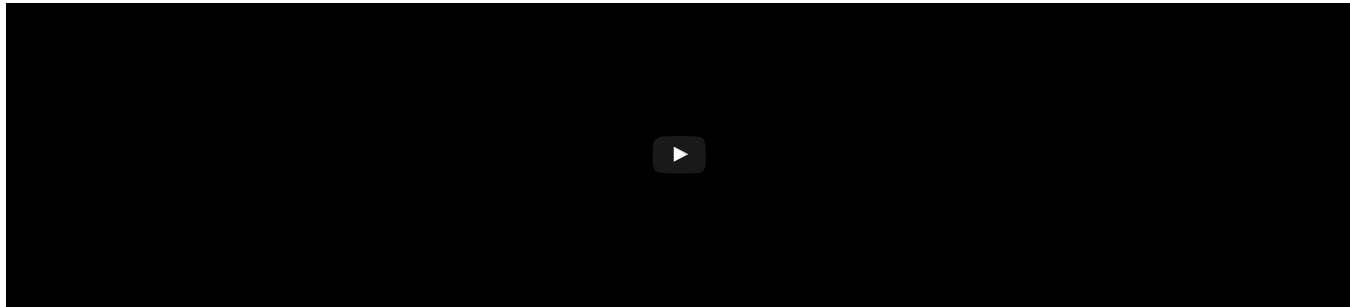
Related Information

Report of the	Commissioner of the Environment and Sustainable Development
Type of product	Performance audit
Topics	<ul style="list-style-type: none"> • Environment • Health • Safety and Security
Audited entities	<ul style="list-style-type: none"> • Canadian Nuclear Safety Commission
Completion date	28 July 2016
Tabling date	4 October 2016
Related audits	<ul style="list-style-type: none"> • Chapter 6—Canadian Nuclear Safety Commission—Power Reactor Regulation, 2005 February Status Report of the Auditor General of Canada

For more information

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The Commissioner's Comments



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