



Date: 2023-06-13

File / dossier : 6.02.04

Edocs pdf : 7065347

Update from CNSC Staff

Mise à jour du personnel de la CCSN

Follow up from December 15-16,
2022 Commission Meeting

Suivi à la suite de la réunion de la
Commission du 15 et 16 décembre
2022

**Update from CNSC staff on the
Inspector's Order issued to Cameco
Corporation in October 2022
regarding the exceedance of the
approved volume of a waste rock
stockpile at the Cigar Lake mine**

**Mise à jour du personnel de la
CCSN au sujet de l'ordre d'un
inspecteur donné à Cameco
Corporation en octobre 2022 pour
avoir dépassé le volume approuvé
d'un amas de stériles à la mine de
Cigar Lake**

Commission Meeting

Réunion de la Commission

June 28, 2023

Le 28 juin 2023

BRIEFING NOTE FOR THE COMMISSION

ISSUE OR PURPOSE

This briefing note is to provide the Commission with an update to the Inspector's Order CNSC File #6896616 related to the quantity of waste rock at Stockpile "C" at Cameco's Cigar Lake Operation. The Commission was originally informed of the inspector's order on November 2, 2022, and additional information was provided at a Commission meeting on December 15, 2022. In item #60 of the [minutes](#) for the December 15-16 Commission meeting, the Commission directed CNSC staff to provide an update to the Commission on this event. This briefing note is provided to the Commission for information only, and no decision is required from the Commission.

BACKGROUND

For the period of October 17, 2022, to October 21, 2022, CNSC staff conducted an inspection of the Cigar Lake Operation, including Stockpile "C". On October 19, 2022, Cigar Lake staff informed the inspector that on September 28, 2022, the surveyed volume of material on Stockpile "C" was 413,172 m³. On October 20, 2022, CNSC staff confirmed that the maximum approved volume of Stockpile "C", as identified in Cigar Lake's Waste Management Program, is 400,000 m³. This was subsequently confirmed by Cameco representatives.

Cameco is required by licence condition 11.1 of its licence, number UML-MINE-CIGAR.00/2031, to implement and maintain a waste management program at the Cigar Lake Operation. The Cigar Lake Waste Management Program was approved by the Commission in Record of Decision DEC 21-H2.

Cigar Lake Operation is currently developing mining areas producing waste rock and, as of October 28, 2022, was still placing waste rock on Stockpile "C" although the quantity authorized on Stockpile "C" was already exceeded and Cameco had been made aware of the exceedance.

It was CNSC staff's determination that these events demonstrated a non-compliance of the licensee with the approved Cigar Lake Waste Management Program and a failure of the licensee to meet its obligation to take all reasonable precautions to protect the health and safety of persons and the environment, pursuant to paragraph 12(1)(c) of the *General Nuclear Safety and Control Regulations* (GNSCR) made under the *Nuclear Safety and Control Act* (NSCA).

On October 28, 2022, in accordance with subsection 35(1) of the NSCA, the lead inspector issued an order to Cameco Corporation to:

1. Immediately suspend all additions of material to Stockpile "C".
2. By November 15, 2022, provide the CNSC with information regarding the stability of the Stockpile "C" in its current state and initiate any necessary mitigatory actions to ensure safety at the current volume.

3. By November 30, 2022, provide a plan, including schedule, to bring the volume of Stockpile “C” to a volume less than the allowed value of 400,000 m³, including measures to ensure that this work is performed safely.
4. By November 30, 2022, provide a plan to ensure that future operation of Stockpile “C” respects the limits contained in the Cigar Lake Operation Waste Management Program as referenced in the Licence Conditions Handbook for the Cigar Lake Operation (e-Doc # 6327196).

Cameco received the Order on October 28, 2022, and on the same day notified CNSC staff that they had stopped placing additional material on stockpile “C”.

On November 1, 2022, Cameco was advised that the Order would be reviewed by a Designated Officer, and that they could avail themselves of an opportunity to be heard as part of that process. On November 9, Cameco informed the Designated Officer that they would not exercise their right to an opportunity to be heard. On November 23, 2022, Cameco was informed that the Designated Officer confirmed the Order as issued.

Throughout this time period, CNSC staff have worked closely with colleagues at the Saskatchewan Ministry of the Environment, who had independently identified the same non-compliance just in advance of CNSC staff’s inspection.

DISCUSSION

CNSC staff note that Cameco has, since receipt of the Order, complied with requirement #1, and that Cameco met the required timelines for requirement #2, #3 and #4. Under requirement #3, CNSC staff have reviewed the submission provided by Cigar Lake including their “net drawdown plan” for stockpile “C”, submitted March 17, 2023. In brief, the net drawdown plan puts in place a schedule for decreasing the stockpile “C” volume until it meets the requirements, and a schedule for the construction and commissioning of site infrastructure to support the plan. Since the net drawdown plan includes instances when new material will be emplaced on stockpile “C” before the stockpile can be returned to an authorized volume, Cameco has also made a commitment that the volume of stockpile “C” will not exceed its current volume at any time during the implementation of the net drawdown plan. On May 5, 2023, CNSC staff notified Cigar Lake Operation that CNSC staff consider the net drawdown plan, and supporting submissions, to be sufficient to meet the requirements of CNSC Order Number #6896616 and the Order was thereby considered closed.

The drawdown plan, as submitted by Cameco, identifies that activities to reduce the stockpile to the volume, as identified in the Cigar Lake Waste Management Program, will take until August 2024 and will include using the current stockpile as a transition point for the addition of new material from underground.

CNSC staff have identified four items that Cameco must report to CNSC staff:

- any addition of new material to the stockpile,
- weekly updates on the volume of the stockpile while the stockpile is above 420,000m³

- monthly updates on the volume of the stockpile while it is between 420,000m³ and 400,000m³, and,
- any changes to the net drawdown plan or schedule as submitted.

INVESTIGATION REPORT

On April 3, 2023, Cameco provided CNSC staff with the *Summary of Stockpile C Non-Compliance Investigation* report [4] that included 10 causal factors, 7 root causes and 6 associated corrective actions.

The root causes can be grouped into two general areas: Safety Culture and Management Systems. Full details on the causal factors, root causes and corrective actions can be found in the *Summary of Stockpile C Non-Compliance Investigation* report [4].

Safety Culture:

Root Cause 1: Cultural aspects influenced individual and team behaviour and undermined process and control outcomes.

Root Cause 2: There were errors in judgement with respect to the level of risk and significance of the regulated capacity limit and the impacts of its exceedance.

Root Cause 5: Site management misinterpreted the applicability of work undertaken to increase Stockpile C capacity to the Cigar Lake Change Control Procedure.

Root Cause 6: There was a lack of SHEQ representation (corporate and/or site) in the life of mine process.

Management Systems:

Root Cause 3: There was a lack of accountability amongst various groups over maintenance of information, monitoring it for compliance, and raising issues and actions to resolve.

Root Cause 4: There was no mechanism to track all open regulatory matters or action items within the Cigar Lake SHEQ team at the time the site-based senior coordinator left the organization.

Root Cause 7: There is uncertainty around expectations on the SHEQ Audit mandate, scope, program, and possible associated budget to execute on compliance audits to quality expectations.

CNSC staff have verified that Cameco has completed or is on schedule to complete all of the corrective actions identified to address the causal factors and root causes.

CNSC staff will continue to verify implementation of corrective actions identified by Cameco.

CONCLUSION

At this time, Cameco remains in non-compliance with the volume limit for stockpile “C” at the Cigar Lake site. As a result, CNSC staff consider this matter to be ongoing in spite of the closure of the Order. CNSC staff have determined that Cameco’s net drawdown plan will be protective of workers, the public and the environment, and will return stockpile “C” to the

volume authorized in the approved *Cigar Lake Operation Waste Management Program as referenced in the Licence Conditions Handbook for the Cigar Lake Operation* CNSC have informed Cameco that this event has resulted in additional regulatory focus on Cigar Lake including increased compliance and verification activities associated with the management of Stockpile “C” and its associated work areas. CNSC staff continue to work closely with the Saskatchewan Ministry of the Environment on this file.

Prepared by: *William Stewart, Sr. Project Officer, UMMD*

Reviewed by: *Patrick Burton, Director, UMMD*

Approved by: *Ramzi Jammal, Executive Vice President, ROB*

Date: June 9th, 2023

REFERENCES

- [1] CNSC Inspector Order issued to Cameco Cigar Lake – Stewart (CNSC) to Rowson (Cameco), October 28, 2022 – E-DOC: 6896616
- [2] CNSC Inspection Report CAMECO-CL-2022-05 – E-DOC: 6896602
- [3] Cover Letter to CNSC Inspection Report Cameco-CL-2022-05, Stewart (CNSC) to Rowson (Cameco), Jan 18, 2023 – E-DOC: 6949703
- [4] Stockpile C Non-Compliance Investigation - Summary Report: April 3, 2023, Pouteaux (Cameco) to Stewart (CNSC) – E-DOC: 7009580
- [5] Order Closure – Stewart (CNSC) to Rowson (Cameco), May 5, 2023 – E-DOC: 7029607