CAMECO CORP
Form 6-K
August 18, 2008

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549
FORM 6-K
Report of Foreign Private Issuer
Pursuant to Rule 13a-16 or 15d-16 Under
the Securities Exchange Act of 1934
For the month of August, 2008
Cameco Corporation
(Commission file No. 1-14228)
2121 11th Street West
Saskatoon, Saskatchewan, Canada S7M 1J3
(Address of Principal Executive Offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F o Form 40-F þ

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes o No þ

If Yes is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): _____

Exhibit Index

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: August 18, 2008

Cameco Corporation

By: *Gary M.S. Chad*
Gary M.S. Chad, Q.C.
Senior Vice-President, Governance,
Law and Corporate Secretary

FORM 51-102F3
MATERIAL CHANGE REPORT

Item 1 Name and Address of Company

Cameco Corporation (Cameco)
2121 11th Street West, Saskatoon, Saskatchewan S7M 1J3

Item 2 Date of Material Change

August 12, 2008

Item 3 News Release

The English version and the French translation version of the news release relating to this material change were distributed and filed by CCN Mathews through their Canadian Timely Disclosure Pack and U.S. Timely Disclosure Pack on August 12, 2008.

Item 4 Summary of Material Change

Cameco suspended remediation work at the No. 1 shaft at Cigar Lake after an increase in the rate of water inflow in the mine was observed. Cameco plans to allow the water in the shaft to return to the natural equilibrium level over the next few weeks, being the level prior to the commencement of removal of water from the mine by pumping in late June 2008/early July 2008. Cameco is assessing the situation to determine the source and characteristics of the inflow, the implications for planned remediation work and costs and the impact, if any, on Cigar Lake s planned production commencement date.

Item 5 Full Description of Material Change

Remediation work at the No. 1 Shaft at Cameco s Cigar Lake uranium project was suspended on August 12, 2008 after an increase in the rate of water inflow to the mine was observed.

Remediation and dewatering of the No. 1 Shaft had been progressing smoothly up to this point, and the No. 1 Shaft had been pumped down to 430 metres below surface when the increase was reported early on the morning of Tuesday, August 12, 2008. Work in the shaft was suspended a few hours later. During the day, the inflow rate increased steadily to approximately 600 cubic metres per hour (m^3/hr), which is beyond the range that can be managed while sustaining work in the shaft. The mine has a total depth of 500 metres and the mine underground workings are at the 480 metre level.

The water level in the shaft was initially allowed to rise to approximately 100 metres below surface. This allowed additional data to be gathered from instruments used to monitor groundwater conditions. This information will be analyzed to determine next steps. As the water level rises, the rate of inflow will naturally diminish.

Cameco plans to allow water in the No. 1 shaft to return to its natural equilibrium level over the next couple of weeks, being the level prior to the commencement of removal of water from the mine by pumping in late June 2008/early July 2008.

On October 23, 2006, the underground mine at Cigar Lake was flooded following a water inflow, which caused a termination of underground activities. Since that time, Cameco has been proceeding with a phased plan to restore the underground workings at Cigar Lake. During the second half of 2007, a concrete barrier plug was constructed in the vicinity of the original inflow and grouting was placed

around it to seal it off. In February 2008, the underground seal was found effective in a test consisting of lowering the water level to 100 metres below surface. In addition, Cameco completed an assessment of two areas of the mine and determined that no additional reinforcement or other precautionary measures were required prior to dewatering.

On June 27, 2008, Cameco announced it had received regulatory approval to pump water out of the flooded Cigar Lake mine. A material change report for this announcement was filed on SEDAR on July 7, 2008.

Cameco is assessing the situation to determine the source and characteristics of the August 12, 2008 inflow, the implications for planned remediation work and costs, and the impact, if any, on Cigar Lake s planned production commencement date. Before the August 12, 2008 inflow, Cameco had forecast that production would commence at Cigar Lake in 2011, at the earliest, which forecast was based upon a number of assumptions and subject to a number of risks that could cause delay, including the occurrence of another water inflow at Cigar Lake.

As previously disclosed, the remediation plan for Cigar Lake includes options to address excess inflows including additional grouting from surface and ground freezing if necessary.

The above scientific and technical information for Cigar Lake was prepared under the supervision of Grant Goddard, a professional engineer employed by Cameco as the general manager of the Cigar Lake project and a qualified person for the purpose of National Instrument 43-101.

Item 6 Reliance on subsection 7.1(2) or (3) of National Instrument 51-102.

Not applicable.

Item 7 Omitted Information

Not applicable.

Item 8 Executive Officer

Gary M.S. Chad
Senior Vice-President, Governance, Law and Corporate Secretary
Cameco Corporation
(306) 956-6303

Item 9 Date of Report

August 18, 2008