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Independent Assurance Statement

To the Board of Directors and Management of Cameco Corporation ("Cameco")

Scope of our Engagement

Our responsibilities included providing limited assurance over a selection of performance indicators as presented in Cameco's 2016 Sustainable Development Report (the "Report").

Subject Matter

We have performed limited assurance procedures for the following quantitative performance indicators as presented in their respective sections of the Report and the overall performance data table for the year ended December 31, 2015.

- EC9 Local spending
- ► EN3 Energy consumption within the organization
- ► EN22 Water discharge by quality and destination
- EN23 Waste
- MM1 Operational footprint (Land Disturbed/Rehabilitated)
- MM3 Mine waste (overburden, rock, tailings, sludges)
- LA1 Hiring and turnover (by age group, gender)
- LA6 Injury frequency, missed work

Criteria

Cameco has prepared its specified performance information in accordance with the Global Reporting Initiative ("GRI") G4 Sustainability Reporting Guidelines, GRI G4 Mining and Metals Sector Disclosures, and internally developed criteria as described in the Report (the "criteria").

Cameco Management Responsibilities

The Report was prepared by the management of Cameco, who are responsible for the collection and preparation of the subject matter and the criteria used in determining that the information is appropriate for the purpose of disclosure in the Report. In addition, management is responsible for maintaining adequate records and internal controls that are designed to support the reporting process.



Our Responsibilities

Our limited assurance procedures have been planned and performed in accordance with the International Standard on Assurance Engagements ("ISAE") 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information (together, "ISAE 3000").

Our procedures were designed to obtain a limited level of assurance on which to base our conclusion. The procedures conducted do not provide all the evidence that would be required in a reasonable assurance engagement and, accordingly, we do not express a reasonable level of assurance. While we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls and, accordingly, we express no conclusions thereon.

This assurance statement has been prepared for Cameco for the purpose of assisting management in determining whether the Subject Matter is in accordance with the criteria and for no other purpose. Our assurance statement is made solely to Cameco in accordance with the terms of our engagement. We do not accept or assume responsibility to anyone other than Cameco for our work, or for the conclusions we have reached in this assurance statement.

Assurance procedures

We planned and performed our work to obtain all the evidence, information and explanations considered necessary in relation to the above scope. Our assurance procedures included but were not limited to:

- Interviewing relevant personnel at the head office to understand data management processes related to the selected performance indicators.
- ► Checking the accuracy of calculations performed on a test basis primarily through inquiry, variance analysis and performance of re-calculations.
- ► Checking that data and statements have been correctly transcribed from the corporate system into the Report.
- Assessing risk of material misstatement due to fraud or errors relating to the selected performance indicators.
- ▶ Evaluating the overall presentation of the Report, including the consistency of the Subject Matter.

Limitations of our Work Performed

Our scope of work did not include expressing conclusions in relation to:

- ► The materiality, completeness or accuracy of data sets or information relating to areas other than the selected performance data, and any site-specific information.
- Information reported outside of the Report.
- Management's forward looking statements.
- Any comparisons made by Cameco against historical data.
- ▶ The appropriateness of definitions for internally developed criteria.



Independence and competency statement

In conducting our engagement, we have complied with the applicable requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants ("IESBA").

Our Conclusion

Based on our procedures for this limited assurance engagement described in this report, we conclude that nothing has come to our attention that causes us to believe that the Subject Matter is not, in all material respects, reported in accordance with the relevant criteria.

Chartered Accountants Licensed Public Accountants

Ernst & young LLP

Calgary, Canada July 26, 2016