PRESS RELEASE

Metallurgy of the Rose deposit
Lithium recovery of 90.7% at a grade of 5.87% Li_2O and Tantalum recovery of 84.8% at a grade of 1,016 ppm Ta_2O_5.

AUGUST 16TH, 2011 – MONTREAL, QUEBEC – **CRITICAL ELEMENTS CORPORATION** (TSX.V: CRE) (US OTCQX: CRECF) (FSE: F12) is pleased to report the last results of the metallurgical testing program for its Rose deposit, James Bay, Quebec.

Results from the metallurgical testing program for the treatment of the Rose Deposit were provided by Acme Metallurgical Limited of Vancouver.

The tests were carried out on a composite from mineralized drill cores from sections 0+60 W to 4+80 E which were encountered above a depth of 100 metres from surface, as of January 2011, thus providing a highly representative composite of the material to be mined within the first ±8 years of operation. These were the drill holes available at the time that the metallurgical program was initiated.

The grind size required is coarse at 0.265 mm (265 micrometers) for full liberation of the spodumene and tantalite. An extensive program of kinetic flotation determined the best combination of operating conditions, repeatability of results and simplicity of processing using a flotation reagents combination of FA-2 (fatty acid) and other industrial chemicals.

The process consists of coarse grinding followed by rougher flotation, one cleaner flotation followed by a short scavenger flotation circuit. Desliming is not necessary.

The final flotation results obtained were a recovery of **90.7% for lithium at a grade of 5.87% Li_2O and 84.8% for tantalum at a grade of 1016 ppm Ta_2O_5**, without recycling. Recycling to be tested later may improve results further.

The grades obtained in the concentrate, including for all other contained elements, are in the normal range for the production of lithium chemicals by the common processes used industrially (Li_2CO3, LiOH or LiF).

Preliminary tests have indicated that the tantalite can be separated from the spodumene by magnetic separation to produce a high grade tantalite concentrate. Further tests are being performed in Vancouver. Results will be published shortly.

In parallel to this program, an additional testing program is presently being carried out in **China**.

“These positive results are in line with the high quality low risks mining project scenario that the major consumers in the critical metals markets are looking for,” stated Jean-Sébastien Lavallée, President & CEO of Critical Elements Corporation.

ABOUT CRITICAL ELEMENTS CORPORATION

Critical Elements is actively developing its 100%-owned Rose lithium-tantalum flagship project located in Quebec. The project hosts a current new NI 43-101 compliant **Indicated resource of 26.5 million tonnes of 1.30% Li_2O Eq. or 0.98% Li_2O and 163 ppm Ta_2O_5 and Inferred resource of 10.7 million tonnes of 1.14% Li_2O Eq. or 0.86% Li_2O and 145 ppm Ta_2O_5.**

Critical Elements has commissioned a prefeasibility study for the project from Genivar, one of the largest independent engineering firms in Canada. Genivar is also doing an environmental study, and Acme Metallurgical Ltd. of Vancouver is carrying out project metallurgy.

Critical Elements' portfolio also includes rare-earth and tantalum-niobium projects in the Rocky Mountains of British Columbia and in Quebec, as well as a 50% interest in the Croinor project, which is located in Quebec and hosts a current NI 43-101 compliant measured and indicated resource of 814,228 tonnes at 9.11 g/t Au, for 238,414 ounces of gold at a 5 g/t cut-off.

Jean-Sebastien Lavallee (OGQ #773), geologist, shareholder and president and chief executive officer by interim of the Company and a Qualified Person under NI 43-101, has reviewed and approved the technical content of this release.

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