FORM 51-102F3
MATERIAL CHANGE REPORT

Item 1: Name and Address of Company

Fission Uranium Corp. ("**Fission**" or the "**Company**")
Suite 700 – 1620 Dickson Ave.
Kelowna, British Columbia V1Y 9Y2

Item 2: Date of Material Change

September 3, 2015

Item 3: News Release

A news release announcing the material change was disseminated over Marketwired on September 3, 2015 and a copy was filed on the Company's profile at www.sedar.com.

Item 4: Summary of Material Change

Fission announced the summary results of a National Instrument 43-101 compliant preliminary economic assessment ("**PEA**") for the high-grade uranium resource identified to date on the Triple R deposit, at its 100% owned Patterson Lake South property ("**PLS Property**") in Canada's Athabasca Basin region. The PEA was prepared by RPA Inc. ("**RPA**").

Highlights

- Base case pre-tax net present value ("**NPV**") of $1.81 billion, post-tax NPV of $1.02 billion (10% discount rate)
- Mine life of 14 years producing an estimated 100.8 million pounds of yellowcake at a metallurgical recovery of 95% with 77.5 million pounds of U_3O_8 recovered in the first 6 years of production
- Average annual production of 7.2 million lbs U_3O_8 over the life of mine
- Base case pre-tax net cash flow over the proposed mine life of $4.12 billion, post-tax net cash flow of $2.53 billion
- Base case pre-tax internal rate of return ("**IRR**") of 46.7%, post-tax IRR of 34.2%
- Pay back estimated at 1.4 years (pre-tax), pay back at 1.7 year (post-tax)
- Estimated initial capital costs ("**CAPEX**") of $1.1 billion
- Average operating costs ("**OPEX**") of US$14.02/lb U_3O_8 over the life of mine

(Base case using US$65/lb U_3O_8 and an exchange rate of US$0.85:C$1.00). All values in C$ unless otherwise noted.

Item 5: Full Description of Material Change

5.1 Full Description of Material Change

Fission announced the summary results of a National Instrument 43-101 compliant PEA for the high-grade uranium resource identified to date on the Triple R deposit, at its PLS Property. The PEA was prepared by RPA.

Highlights

- Base case pre-tax NPV of $1.81 billion, post-tax NPV of $1.02 billion (10% discount rate)
- Mine life of 14 years producing an estimated 100.8 million pounds of yellowcake at a metallurgical recovery of 95% with 77.5 million pounds of U_3O_8 recovered in the first 6 years of production
- Average annual production of 7.2 million lbs U_3O_8 over the life of mine
- Base case pre-tax net cash flow over the proposed mine life of $4.12 billion, post-tax net cash flow of $2.53 billion
- Base case pre-tax IRR of 46.7%, post-tax IRR of 34.2%
- Pay back estimated at 1.4 years (pre-tax), pay back at 1.7 year (post-tax)
- Estimated initial CAPEX of $1.1 billion
- Average OPEX of US$14.02/lb U_3O_8 over the life of mine

(Base case using US$65/lb U_3O_8 and an exchange rate of US$0.85:C$1.00).

The PEA is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied that would enable them to be categorized as mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability. There is no certainty that the PEA will be realized.

The PEA study considers the PLS project as a stand-alone mine and mill operation, which includes development and extraction of the R00E and R780E zones (Triple R deposit). Due to the early stage of drill definition, the PEA does not include the recently discovered R600W zone.

The study envisions a combination of open-pit and underground mining, with a dyke system (dyke and slurry wall) for water control. High-grade mineralization (above 4% U_3O_8) is captured within the open pit, eliminating the need for expensive, specialized underground mining methods. This hybrid open pit and underground mining results in an OPEX cost of US$14.02/lb U_3O_8 over the life of mine, making Triple R potentially one of the lowest cost uranium producers in the world.

These results may be further enhanced with the addition of the R600W zone discovered 495m along strike to the west of the R00E zone. Although not included in the PEA production schedule, definition drilling continues to expand the known mineralization since the discovery of high-grade mineralization within the R600W zone during the winter 2015 drill program.

PEA METHODOLOGY DETAILS

The PEA was prepared by independent consultants led by RPA, who carried out resource estimation and mining work, assisted by BGC Engineering Inc. (geotechnical aspects), DRA Taggart (process and infrastructure), and Arcadis Canada Inc. (environmental and radiological considerations).

In addition to managing radiological issues common to high-grade uranium mining, a key technical challenge to developing the operation will be water control related to Patterson Lake and saturated sandy overburden. The PEA proposes a system of dykes and slurry walls – proven techniques successfully implemented at a number of Canadian mining operations, including the Diavik diamond mine and the Meadowbank gold mine. The development scenario does not require any new, untested, conceptual mining or construction methods.

Physicals

- Three years of pre-production and 14 year mine life, processing nominally 1,000 tonnes per day (350,000 tonnes per year)
- Total Tonnes Processed: 4.8 million tonnes at 1.00% U_3O_8 average grade
    - Open pit mining of 1.56 million tonnes at 2.21% U_3O_8
    - Underground mining of 3.25 million tonnes at 0.42% U_3O_8
- Process recovery of 95%, supported by metallurgical testwork
- Production of 100.8 million lbs U_3O_8
    - An average of 13 million lbs U_3O_8 per year for 6 years, followed by an average of 3 million lbs U_3O_8 per year for 8 years

Revenue

- Long term uranium price of US$65/lb U_3O_8
- Exchange rate of US$0.85:C$1.00
- Gross revenue of $7.71 billion
    - Less Saskatchewan gross revenue royalties of $556 million
    - Less product transportation charges of $34 million
- Net revenue of $7.12 billion

Operating Costs

- Average OPEX of $16.50/lb (US$14.02/lb) U_3O_8 over the life of mine
- Unit Operating Costs of $346 per tonne processed
    - Combined Mining: $154 per tonne processed
    - Processing: $114 per tonne processed
    - Surface and G&A: $78 per tonne processed
- Operating cash flow of $5.45 billion

Capital Costs

- Pre-Production capital costs of $1.1 billion
    - Open pit mining $363 million (includes dyke, slurry wall, and overburden removal)
    - Process plant $198 million
    - Infrastructure $117 million
    - Indirects $209 million
    - Contingency $208 million
- Sustaining capital costs of $189 million (includes completion of overburden stripping, all underground mine capital costs, and tailings dam lifts)
- Reclamation and closure cost of $50 million
- Cash flow from operations of $4.12 billion

PLS Mineralized Trend & Triple R Deposit Summary

Uranium mineralization at the PLS Property has been traced by core drilling approximately 2.31 km of east-west strike length in four separate mineralized "zones". From west to east, these zones are: R600W, R00E, R780E and R1620E.

The discovery hole of what is now referred to as the Triple R deposit was announced on November 05, 2012 with drill hole PLS12-022, from what is considered part of the R00E zone. Through successful exploration programs completed to date, it has evolved into a large, near surface, basement hosted, structurally controlled high-grade uranium deposit.

The Triple R deposit consists of the R00E zone on the western side and the much larger R780E zone further on strike to the east. Within the deposit, the R00E and R780E zones have an overall strike length of approximately 1.2m with the R00E measuring approximately 125m in strike length and the R780E zones measuring approximately 900m in strike length. A 225 m gap separates the R00E zone to the west and the R780E zones to the east, though sporadic narrow, weakly mineralized intervals from drill holes within this gap suggest the potential for further significant mineralization in this area. The R780E zones are located beneath Patterson Lake which is approximately six metres deep in the area of the deposit. The entire Triple R deposit is covered by approximately 50m of overburden.

Mineralization remains open along strike both to the western and eastern extents. Mineralization is both located within and associated with a metasedimentary lithologic corridor, associated with the PL-3B basement Electro-Magnetic (EM) Conductor. Recent very positive drill results returning wide and strongly mineralized intersections approximately 495m west of the Triple R deposit, have significantly upgraded the R600W zone to a very prospective area for further growth of the PLS Property resource. The R600W zone is covered by approximately 100m of overburden.

Patterson Lake South Property

The 31,039 hectare PLS project is 100% owned and operated by Fission Uranium Corp. The PLS Property is accessible by road with primary access from all-weather Highway 955, which runs north to the former Cluff Lake mine and passes through the nearby UEX-Areva Shea Creek discoveries located 50km to the north, currently under active exploration and development.

Qualified Persons

This material change report describes a PEA cash flow model based upon geological, engineering, technical and cost inputs developed by RPA. A National Instrument 43-101 PEA technical report will be filed on SEDAR and made available on the Company's website in conjunction with the mailing by Fission of an Information Circular to its shareholders in connection with its proposed plan of arrangement with Denison Mines Corp., as previously disclosed in a news release dated July 6, 2015. The technical information in this material change report has been prepared in accordance with the Canadian regulatory requirements set out in National Instrument 43-101 and reviewed on behalf of the Company by Ross McElroy, P.Geol. President and COO for Fission Uranium Corp., a qualified person.

5.2 Disclosure for Restructuring Transactions

Not applicable.

Item 6: Reliance on subsection 7.1(2) of National Instrument 51-102

Not applicable.

Item 7: Omitted Information

Not applicable.

Item 8: Executive Officer

For further information, please contact Ross McElroy, President & COO of the Company at 250-868-8140.

Item 9: Date of Report

September 14, 2015.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

Certain information contained in this material change report constitutes "forward-looking information", within the meaning of Canadian legislation. Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur", "be achieved" or "has the potential to". Forward looking statements contained in this material change report may include statements regarding the future operating or financial performance of Fission including the net present value, metal recoveries, capital costs, operating costs, production, rates of return, payback and impact of the R600W zone on the operations which involve known and unknown risks and uncertainties which may not prove to be accurate. Actual results and outcomes may differ materially from what is expressed or forecasted in these forward-looking statements. Such statements are qualified in their entirety by the inherent risks and uncertainties surrounding future expectations. Among those factors which could cause actual results to differ materially are the following: market conditions and other risk factors listed from time to time in our reports filed with Canadian securities regulators on SEDAR at www.sedar.com. The forward-looking statements included in this material change report are made as of the date of this material change report and the Company and Fission Uranium disclaim any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as expressly required by applicable securities legislation.