

## Demonstration Plant operations progressing

### Highlights

- Continuous on-site operation of PhosEnergy Process Demonstration Plant progresses
- High uranium recoveries (>92 per cent) consistently achieved during steady state operations
- Testing of additional process improvements and completion of PFS planned for next half

In August 2013 the Company announced that it had, together with Cameco Corporation, entered into an Agreement with a US based fertilizer producer to assess the commercial viability of applying the PhosEnergy Process (the Process) to the producer's existing operations. The Agreement covers on-site operation of the PhosEnergy demonstration plant with the results providing inputs to a Pre-Feasibility Study (PFS). The PFS will allow the parties to assess the economic viability of the Process and make a commercial decision on progressing further toward a full scale operation.

Between October and December 2013 a number of process enhancements were installed in the Demonstration Plant and tested off-site. The results of this testwork were positive, allowing for the operation of continuous Demonstration Plant operations.

In early 2014 the Demonstration Plant was relocated to the fertilizer producer's site and connected directly to their Filter Grade Acid (FGA) stream. Following construction and winterisation of the on-site demonstration assembly, continuous operations commenced on March 10, 2014 and are scheduled for completion on 23 May 2014 (See Figure 1).



**Figure 1: The Demonstration Plant on site**

Initial analytical results have been received confirm the key outcomes of previous off-site work including:

- Consistently high uranium extraction (greater than 92 per cent) from the phosphate stream during steady-state operation;
- No deleterious build-up of impurities in the extraction media across multiple cycles;
- Chemical and reagent consumptions within expected range;
- Purification and concentration of uranium is achievable without significant uranium losses;
- The chemistry of the phosphate stream is unaffected except for the removal of uranium and vanadium;
- A concentrated product was shipped to a licensed uranium production facility in Wyoming where the concentrate was converted into a final product.

The Demonstration Plant operation was a jointly staffed effort between Cameco and PEL.



**The Demonstration Plant in operation**



**Extraction vessels in the Demonstration Plant**

### **Next Steps**

Follow up testwork is planned for Q3 2014 to finalise data compilation required for the PFS as well as to evaluate further process improvements.

The design criteria derived from the Demonstration Plant operation will be fed into a PFS. The PFS will include operating and capital cost estimates, a detailed risk assessment of the project and financial sensitivity analyses.

Before making any decisions on proceeding towards a Definitive Feasibility Study (DFS) the parties will have the opportunity to review the outcome of the above work and project economics.

### **The Process**

The Process is a technology for the extraction of uranium from phosphate streams produced in the production of phosphate-based fertilisers. PhosEnergy Limited (PEL) and global uranium company Cameco Corporation are jointly commercializing the Process via a Colorado company called Urtek LLC, which is owned 73 per cent by Cameco and 27 percent by PEL.