Additional Reviews By M. D. Campbell and Associates, L.P.

(http://www.mdcampbell.com)

Key to Comments:

Black = Original Article Content
Yellow = Particular Offending words or phrases
Red = C&A Mining Group Comments

Article in Question:

Uranium Mining Causes Concern [By Whom?]

By Jocelyn Mercer
Friday, July 6, 2007

While down in Pincher Creek speaking on the groundwater protection and the oil and gas industry, Senior Policy Analyst at the Pembina Institute, Mary Griffiths touched on the subject of uranium mining in southern Alberta.

> **[1) This introduction was designed to introduce Mary Griffiths but fails to provide any indication of her education & background, except that she is "Senior Policy Analyst at the Pembina Institute" without identifying what Pembina Institute has to do with uranium exploration and development.**
>
> **2) Turns out that PI is funded by the wind-energy industry…]**

"I am concerned, I think we need to find out a lot more about it," she told a group of citizens at the Heritage Inn last Monday. "In-situ leaching is used to extract uranium in the US, Australia, Germany and Eastern Europe. From the looks of it, it could be arriving in southern Alberta anytime soon."

> **[1) The author fails to mention that Canada is one of the world's largest uranium producers and implies that ISL is something new to Canada. Cameco alone operates eight projects in Canada using ISL methods.**
>
> **2) Why are citizens listening to Ms. Griffiths when she is being deceptive in not divulging that her presentations and activities are funded by the wind-energy industry]**.

The demand for uranium is exceeding supply," says Griffiths, explaining the renewed interest in southern Alberta. Prospectors first looked at the area during the 70s and 80s, but back then it was too expensive to warrant extracting. With changing economies, two prospectors are now looking at setting up shop in the area and since 2005, half a million hectares has been staked out for uranium.

> **[Ms. Griffiths insinuates that 2 prospectors are hording land and you know one can't trust prospectors…]**

Firestone Ventures Inc has plans for uranium extraction 30 kilometres south of Fort Macleod. In April 2007 the company conducted an aerial survey of four target areas; however they have not started any drilling work yet. Uranium is found buried in old river channels, laid down thousands of years ago.

> **[The author betrays her lack of understanding or training in the geology of uranium deposits but claims to know. Roll-front uranium deposits are not "laid down" with a river channel, they are deposited by a combination of chemical and biological reactions after the channels have been long-buried in the subsurface. These reactions remove naturally-occurring uranium in solution in the ground water and deposit it in the pore spaces between the sand grains.]**

Griffiths says the interest is in shallow formations about 100 metres deep. International Ranger/ North American

Gems is another stakeholder in southern Alberta's uranium market. Last year the company drilled 37 exploration wells. Griffiths says that four fifths of the world's uranium comes from open mines with the remainder from in-situ leaching - the method proposed for this area. While Griffiths says the surface impacts are by far less dramatic than mining, in-situ leaching can have serious consequences for the area's groundwater.

[Ms. Griffiths claims that in-situ leaching seriously impacts ground water but fails to provide any supporting information or how in-situ mining impacts ground water; why she know since she is not a professional environmental scientist. Maybe she should have asked one to respond to this issue for her]

Developers aren't required to complete an environmental impact assessment, and only the public directly affected gets the chance to give some input.

[1) Environmental impact assessments are required in the United States. The reason that "only the public that is directly affected gets to give input has to do with the legal concept of "standing" or otherwise having a direct interest in the mining where they "stand" to be damaged (surface or ground water). In a judicial hearing, for instance, only parties with a vested interest, as acknowledged by the judge, may present arguments.

2) Why should uninvolved "busybodies" have an input, especially those who are promoting windmills?]

It would be very much in your court to raise a flag," advised Griffiths.

[Why should the advice of Ms. Griffiths mean anything to people with a stake in and around the development of uranium in the area? It is the Canadian regulatory agencies responsibilities to handle the permitting. The general public, if it feels unprotected by its own government, should cause their policymakers to enact legislation that ensures protection of human health and the environment.]

The actual operation of a uranium mine includes many wells, pipelines and a processing facility. Most wells have a life span of one to three years. Acids or alkali solutions are used to extract uranium. Griffiths suspects that alkalis will be used here because of the acidic soil.

[1) What do we care about what Ms. Griffiths suspects or even her opinions about the details of uranium development ? She has no qualifications or standing in such matters.

2) The use of the term "alkalis" is misleading as the reader has no idea of the nature of these solutions. Are they strongly alkalic or are they just weak solutions?

3) Also, she "suspects" that alkalis will be used but this is just a guess on her part.

4) Does she know the precise chemical makeup of the soils in these areas? Why should she, she has no qualifications on such subjects.

5) In the United States, most in-situ mines inject oxygen and a minor volume of carbon dioxide with water].

While ground water can be remediated once it has been contaminated, Griffiths says it's a costly and difficult process. In the States, she said huge volumes of water have had to be used to treat contaminated water before it reaches its original level of clarity.

[1) Once again, we are presented with the notion that the ground water is contaminated during the extraction process. The ground water has been naturally contaminated by natural processes thousands (if not hundreds of thousands) of years earlier as the uranium was formed within the sedimentary rocks or sediments.

2) Remediation is necessary in the event production fluids leak into an aquifer above or below the uranium-production zone. Any wayward migration has been monitored by one or more monitoring wells and it is relatively easy to recover by pumping such aquifers.]

In Texas, she said that companies were having so much difficulty restoring water to its original state that the government was forced to relax its standards.

[1) The ground water is never restored to its "original" state because after extraction, the production zone, including the ground water it contains, was naturally contaminated by the natural process of uranium concentration within the sedimentary rocks. The zone often has less uranium-source mineralization than before in-situ recovery.

2) The ground water within the production zone is restored to a state that is negotiated between the operator and the regulatory agency, and based on pre-mining ground-water background data. Ms. Griffiths attempts to perpetuate a falsehood. There are no "standards" that have been relaxed. The operator has remediation goals, not standards, to meet. If the goals are thought to be unrealistic by both the operator and the regulatory agency, there is a negotiation process whereby more realistic goals can be set. Whatever is realized after agreement between the operator and regulatory agency, the concentration will not be such that they (the concentrations remaining) will adversely affect human health and the environment.]

One thing that concerns Griffiths about Firestone Ventures' plans south of Fort Macleod is that the developers are extracting the uranium from a layer with no shale or clay layer above it to protect the aquifer.

[1)The geological representations are difficult to believe (basically because she is attempting to practice geology here). Do we care what she represents here? Do we believe she has credibility in such matters, even if it is a correct representation of what she read or was told by others? There is likely additional information to be revealed here. If there is no shale or clay layer above the uranium mineralization, then the overlying aquifer is part of the uranium zone, which would suggest that the mineralization is very shallow.

2) If declared a production zone, ground water would not likely be permitted for use as a source of drinking water. It is has been contaminated or within the pumping influence of uranium mineralization since well before recorded human history.]

She advises landowners to insist upon a baseline aquifer survey before any development goes ahead and to find out what depth the uranium will be mined. Ask for restoration plans and obtain an independent assessment, she says. At the moment there are too many question marks for my comfort," said Griffiths.

[1) Typical regulatory requirements include baseline ground-water surveys, and "restoration plans." The questions arises what is an independent assessment for? The regulatory agency is responsible for these independent assessments conducted on behalf of the public.

2)The implication here is that there are unanswered questions and that somehow makes the whole project suspect. Who cares if Ms. Griffiths is uncomfortable (read this as "fear of radioactive materials") with this project and what axe is she attempting to grind here? Oh, that's right, windmills.]

xxx