

Additional Reviews By M. D. Campbell and Associates, L.P.
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Black = Original Article Content

Yellow = Particular Offending words or phrases

Purple = Mining Company's Response

Red = C&A Mining Group Comments

Article in Question:

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Uranium Company Won't Admit the Health Dangers

Lilias Jones Jarding, Ph.D.

Those of us who live in Northern Colorado have good reasons to be concerned about the potential for uranium mining in our area. There are now five uranium companies active here. One concern is that uranium mining companies have a history of minimizing the problems they cause - until it's too late and the damage is done.

[Powertech (USA) Inc.'s proposal to recover uranium in Weld County has created lots of media ink -- and even more misinformation. We understand there are concerns among northern Colorado residents and legislators about our plans, and we encourage all interested parties to focus on facts, science and regulation from reliable sources, rather than innuendo and fear.]

[The mining company representative calls for rationality and accurate commentary on their project, as they should expect from the involved community.]

One of the companies that wants to mine here doesn't seem to be able to admit that uranium mining - which releases radioactivity into the air and water - poses unique dangers to our health. Its leaders keep talking about a Web site with "over 140" studies that show "uranium mining operations do not increase the risk of cancer mortality or cause adverse health impacts."

[Opponents will have you believe that our proposed operations at the Centennial Project would be overlooked by regulatory agencies, thus contaminating the entire Laramie-Fox Hills aquifer and releasing harmful radioactive dust, and that Powertech would pocket millions in profits without spending a dime to remediate the site. This information is not only false and inflammatory, but it is continually disseminated by individuals who have been provided with the facts, but thus far have chosen to ignore them.]

[Notice that author does not provide the actual link or citation to the article under her review. For the actual article, see: ([Here](#)). Also, here is the link to the "over 140 studies" ([Here](#)). Why doesn't she offer this for the readers' review? In reviewing this list, please note that there are reports on uranium miners who spent many years underground, and who smoked, which would reflect poor ventilation present in the

old mines. For surface or open pit operations, none of these reports suggest that air-borne particles were in sufficient concentration to affect mining personnel or the community at large. Take the time to review these reports and place their results in the appropriate context. These reports, in the order included (with links to their abstracts), involve:

[1](#)) and [2](#)) mortality rates for men and woman living near uranium and vanadium mining and milling operations in Colorado and Texas - dated 2007 and 2003, respectively,

[3](#)) living near two former nuclear materials processing facilities in Pennsylvania – dated 2003,

[4](#)) a general comparison study of industrial, mining, and military sites in Sardinia, Italy - dated 2006,

[5](#)) An update on previous study – dated 1997,

[6](#)) living near the Hanford Nuclear Site, Washington – dated 2006,

[7](#)) a comparison study between Japanese A-Bomb survivors and the Colorado underground uranium miners – dated 2002,

[8](#)) mortality studies among residents of Uravan, Colorado who lived near a uranium mill from 1936 to 1984 – dated 2007,

[9](#)) a follow-up study to clarify previous studies – dated 1999,

[10](#)) a study of cancer incidence in municipalities near nuclear materials processing facilities in Pennsylvania – dated 2003,

[11](#)) a study of radon exposure and cancers other than lung cancer among uranium miners in West Bohemia – 1993,

[12](#)) a long-term study of uranium miners in West Bohemia – 1994,

[13](#)) a study on radionuclide exposure in 3 UK nuclear industry workforces – dated 1998,

[14](#)) a study of the value of standardized mortality ratios SMRs and years of life lost per years employed as uranium miners – dated 2002,

[15](#)) a mortality study among Navajo uranium miners – dated 1995,

[16](#)) a mortality study among nonsmoking uranium miners exposed to radon

daughter (products) – dated 1989,

17) etc. to 125) more studies on evaluating health impacts on uranium miners, populations living near nuclear facilities, of mining other commodities, and of sampling for analyses.

Looking at the Web site is truly educational ([Here](#)), but probably not in the way the company intends. For starters, only 39 of the 143 studies actually talk about uranium operations. The rest have titles that include "Colorado Climate," "Hotel room suicide" and "Mortality among Catholic nuns certified as radiologic technologists."

[1. Uranium mining operations do not increase the risk of cancer mortality or cause adverse health impacts, as alleged by the Larimer County Medical Society. [See allegation ([Here](#)).

[The Colorado Medical Society has since retracted this draft announcement on the basis that the individual who drafted the document was not qualified to offer medical opinions. The references cited are either without technical merit, gross exaggerations of the results of the original article, or not related to uranium exploration or mining.]

2. Colorado State University's Department of Environmental and Radiological Health Sciences has independently compiled over 140 peer-reviewed scientific studies that challenge these allegations at:

http://www.cvmbs.colostate.edu/erhs/uranium_mining_info.htm

[Notice the sarcasm exhibited by the author, which is hardly appropriate. She begins by commenting on irrelevant issues in the papers cited from the list assembled by the university people. The list was not assembled by the mining company.]

So 39 studies are actually about uranium. Thirty-two of these are about uranium miners, and 25 of them show increases in lung cancer (of the other seven, two are about cardiovascular disease; one shows no results; one is not a health study; one shows no increase; and the other two are not clear).

[1. In citing the results of the studies, the author apparently mis-reads or doesn't understand, or purposely distorts the results of the studies. The bottom line on the studies we have is that there is some increase in cancer rates for underground uranium workers but more of an increase for those underground uranium workers who also smoked. The difference is highlighted by the results between men (who worked underground) and woman (who didn't work underground). The question arises "why is the author pointing to studies on underground uranium miners of the 1980 and before?" What relevance do they have to present ISR and proposed associated mining activities, which are completely different mining methods and

have entirely different exposures?

2. The importance of sampling ground-water supplies to avoid contamination in rural areas with potential for uranium mineralization cannot be over-stated. Family water wells should be regularly maintained to avoid iron-fowling but also sampled for uranium and associated elements. Studies have shown that a naturally occurring uranium exposure over a number of years via the consumption of water from a family water well showed some impact to the kidneys of the younger member of the family but no apparent damage. For the full report, see ([Here](#)). When in rural areas it is important that family water wells be periodically sampled and properly maintained, as they would the family automobiles.]

About a quarter of these studies were done in Colorado - one at Uravan, which became a ghost town and Superfund hazardous waste cleanup site after the last uranium boom.

[So what's the author's point in discussing past activities that are likely not to be allowed to happen again? This is especially true since ISR operations and new technology are much more efficient and much cleaner to operate and to close out.]

So 25 of 26 studies say uranium miners suffer from increased lung cancer. That's 96 percent! Hardly a ringing endorsement of uranium's safety.

Seven studies also show higher rates of other health problems in the miners. These include tuberculosis, emphysema and other lung diseases; diseases of the circulatory system; liver cancer and cirrhosis; and laryngeal cancer. One study even shows higher death rates due to accidents, homicide and mental disorders.

I'd call all of these adverse health impacts.

[We would call her opinions as being unfounded, dishonest, self-serving, and grossly exaggerated. She obviously is unqualified to opine on toxicological matters.]

Five studies listed on the Web site look at health impacts on people living near uranium sites. These are probably of more direct concern to most of us.

One of these studies showed increased lung cancer. One study didn't include lung cancer - the most common problem associated with uranium. A third didn't show any increase in cancer deaths, but its author thanked "the Texas Uranium industry for providing financial support." Hmm. Another study done in the same county did find abnormal DNA and increased health risks.

[Notice the author slips in a major accusation regarding "abnormal DNA and increased health risks" without providing the reader with a citation to establish the claim's credibility. Why is that? However, she does go out of her way to insinuate

that any study done by the Uranium Industry must be biased.]

The final paper was not a health study. It said more attention needs to be given to the health and environmental impacts of uranium mining and milling. Of course, four studies can't be considered the final word on anything in science. And given the well-established fact that radiation causes health problems - primarily cancer - this author was probably on the right path.

[Again the relevancy issues are dragged in *ad nosium* throughout the author's article. The author continues to try to introduce uncertainty and fear in the reader concerning uranium health issues, which in reality, are related only to radon in underground uranium mines of 1950s, 60s, 70s and 80s, and to male smoking (linked as a vehicle for carrying radon attached to dust particles being drawn deeply into the lungs). Notice how the author generalizes the results of the studies. Yes, increased lung cancer but for men who worked in underground uranium but who also smoked. Yes, radon and smoking is a problem for underground miners who worked in underground mines before the 1980s. Increased attention to improved ventilation of the mine's air, improved technology, and not allowing the men to smoke where radon may be present would have likely eliminated the problem. This has nothing to do with present ISR and other uranium exploration and mining operations planned for the future because the miners will not be underground, surrounded by the deposit but hundreds of feet above it at the surface. The author rings more of misrepresentation and deception than of safety.]

But I'd rather not be a guinea pig for future studies. Let's keep uranium in the ground.

[Certain individuals obviously disseminate deceptive information because they have a different agenda to pursue; in many cases, individuals selling wind and solar power are funded to develop markets in Colorado and elsewhere (see author's involvement in developing wind energy ([Here](#)). The community apparently is not aware of this deception and appear to be heavily influenced by people (even neighbors or personnel from technical institutes with whom the author is associated) who continue to pass on misinformation concerning uranium exploration and mining because of an alternative agenda. Solving today's energy problems will require numerous solutions, not just one or two.]

[Powertech has not engaged in unapproved activities and will not begin mining operations until it receives all appropriate federal, state and local permits.]

[Powertech is not lying or withholding information. Opponents continue to disregard our responses to their questions and science that compete with their myths. Read them for yourself at www.powertechuranium.com. Uranium from the Centennial site likely would be processed in Wyoming, and used for nuclear energy generation in U.S. power plants. The U.S. obtains 20 percent of its electricity from nuclear power plants, but about 94 percent of the uranium used is imported from countries including Kazakhstan, Australia and Canada. As concerns grow about global warming and energy independence, nuclear power is a key solution as a

domestically-fueled energy source that doesn't spew carbon dioxide.]

[Nuclear power will play an increasingly important part of the energy resources in the U.S. over the next 25 years. It will provide the scale of energy needed to supply the U.S. power grid whereas wind and solar power are not economically scalable to such an extent, although they have a role to play for rural areas. For additional information on this need, refer to the following article ([Here](#)).]

[Powertech is here to stay. The company plans to submit its permit applications in late 2008, and will continue to be a good corporate citizen and neighbor. The company anticipates a life-of-project investment of about \$230 million, with an anticipated tax infusion of \$44 million in tax dollars into the local and state economies.]

[The impact of the infusion of revenues in the general area on uranium mining should not be underestimated in such projects. Much of the cash flow associated with uranium mining goes to local businesses, schools, and for employment and other local functions.]

[Don't fall victim to the propaganda frenzy. Get educated about Powertech, uranium and recovery methods. Talk to unbiased third parties, such as regulators or scientists. Visit www.powertechuranium.com for information, science, updates and -- most importantly -- facts. If you have questions, call us at (877) 798-4240.]

[Readers should follow the advice above. Get the complete story.]

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[The author is part of CARD an adversarial group and associated group promoting alternative energy, especially wind.]

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