## An Additional Review by M. D. Campbell and Associates, L.P.

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**Black = Original Article Content** 

**Yellow** = Particular Offending words or phrases

**Red** = C&A Mining Group Comments

Article in Question:

## **Uranium Rally Focuses on Water**

## Fighting the uranium company would be costly, county attorney says

July 29, 2007 By Sonny Long - *VICTORIA ADVOCATE* 

GOLIAD - A retired Marine with a booming voice, Pat Calhoun's pronouncement to those assembled at Saturday's uranium rally and conference came through loud and clear. "I strongly believe this is going to end up in the courthouse," Calhoun said as the nearly four-hour meeting drew near a close. About 70 people attended.

[ Nowhere is it stated in the article why this meeting was held. There were obviously no representatives from the mining company or from anyone with a technical background who could provide some context for the observations being offered by the attendees.]

"If you drink water in Goliad County, you're involved in uranium mining, whether you like it or not," said Calhoun, who serves on the county's Uranium Research and Advisory Committee and is president of the Goliad County Farm Bureau.

- [ 1. This is pure hyperbole, a figure of speech in which statements are exaggerated for an ulterior purpose...to oppose (or support) an agenda, usually political. Such language is used to evoke strong feelings or to create a strong impression, and is not meant to be taken literally. The quoted statement means that all ground water in the area may be damaged now or in the future. This fear tactic improves his chance of getting funding from those people located even some distance away from the area of uranium operations.
- 2. He states that the whole purpose of URAC is to get information to the public but apparently he has already made up his mind that this information is going to throw the question into the courts. This information gathering function is a misrepresentation. The purpose of URAC appears to be to organize folks to block the uranium permit whatever the cost.
- 3. Does he represent all of the members on the URAC? Why isn't the Chairman of URAC making these statements? What do the other members of the Committee have to say about these issues? What is the relationship between URAC and the Goliad Groundwater District? What are the backgrounds of the committee members of URAC?

"We are not a bunch of free-range radicals running around trying to raise hell about something," Calhoun said. "The whole purpose is to get accurate information to the public."

[ He speaks of accurate information here but hasn't bothered to provide any accurate information on the cause of the cloudy water. Only "anecdotal" information was provided by those involved in the controversy on ground-water samples taken without professional supervision, analysis, or interpretation of results. Where is the "accurate information"?]

County attorney Rob Baiamonte said fighting the uranium company would be costly.

[ But then any court proceedings for any reason, anywhere, is costly. The question arises now that attorneys are involved, what is the real reason for the opposition to uranium exploration drilling and ultimate in situ mining? Is there real-estate potential in the immediate area of uranium mining? What other possible agendi are driving this opposition?]

"It has been suggested to URAC it should contest the mining permit. This could cost \$150,000 to \$200,000 in legal fees. You have to decide if you want it stopped and how much money you want to spend to save your water."

[ Who suggested that they fight the permit? The implication here is that ground-water contamination is a foregone conclusion without providing evidence that damage has occurred or will. Again, where is the "accurate information?" Why should the reader want it, the mining permit, stopped? No apparent reason is provided.]

[The mining company], which has been drilling exploratory wells in Goliad County since May of last year and confirmed the presence of uranium, is expected to apply for a mining permit by the end of the month. The permitting process through the Texas Commission on Environmental Quality could take up to a year and will include opportunities for public input.

Roland Burrows of Yorktown, who formerly worked in the uranium mining industry, said, "You cannot let them mine here or you will lose your water."

[ What information does Mr. Burrows of Yorktown have on the quality of the ground water in the area? Or, is this just Mr. Burrows impression? This gentleman is presented as some kind of a local "expert" based on some unknown experience in the industry. What are his credentials? There are three basic forms of mining for uranium: open pit, underground and in-situ remediation. Which one is he familiar with? His opinion is not supported with any accurate, confirmable information. How do we know that this isn't just hearsay information?]

At one point, Calhoun held aloft a container of reddish water. "It may not contain one bit of radiation or contamination, but are you going to drink that?" he asked.

The water came from the well on the property of Craig and LuAnn Duderstadt, who live within several hundreds yards of uranium mining exploration. The Duderstadts have noticed differences in their water quality and water levels since the exploration began.

[ Assuming the water sample came from a well on the Duderstadt property, what is causing the reddish color? Has the water sample been analyzed to determine the cause? A cause is not identified, just vague accusations made. What evidence does he have that the uranium exploration drilling operations have anything to do with the cause of the cloudy water? Drilling mud is not red in color. Is the well beginning to silt in due to the extraordinary amount of rainfall in Texas this summer? How long has it been since the Duderstadt's have conducted maintenance on the well sampled? When was the well installed? If it has been some time, the reddish color may indicate that iron bacteria has infected the well, which when such occurs in other wells, reddish-brown water is a common result. Notice that the author curiously only gives vague descriptions on the distance from the actual drilling operations.

In addition, the Texas Railroad Commission conducted a study on this subject and concluded that the uranium exploration activities had nothing to do with the change in water quality and water levels in this well. Why isn't this fact mentioned in this article?]

Speaking on the Duderstadts' behalf, Art Dohmann, president of the local groundwater district, said, "When the exploratory activity slows down, their water clears up. Whether it's coincidence or tells a story, their problems seem to cycle with the exploration activity."

[ What do the Duderstadts' have to say about the issues? How deep is their well? Do they have a treatment system (a water-softening unit)? Their well should be sampled and analyzed by an independent professional geoscientist over a few months period while the company is drilling and when they are not. This will be the type of "accurate information" needed to evaluate the veracity of any such claims of impaired drinking water.]

Mary Anklam, who, along with husband Tony, raises Boer goats near the uranium exploratory area, also addressed the conference. She said she is getting questions from goat buyers about the safety of her livestock. She also showed two water filters that clogged with what she described as "red, slimy water."

[Unfortunately, Ms. Anklam is suffering from fallout from bad press. It is not unusual, nor unexpected, that people would question the safety of a food supply when a report comes out that presents questions. Her water filters indicate that the problem is more likely a microbial accumulation rather than a result of the drilling operations. In the sound byte attached to this article, she mentions that they put in a filtration system because of the red staining they were seeing (prior to exploration, I assume). She stated that the filters were supposed to last three months but hers only lasted two. Is this proof of impact from the exploration activity? No, this implies how badly she needed the filtration system in the first place to treat ground water already likely contaminated with iron biofouling of the well. See link below: <a href="http://www.wellowner.org/awellmaintenance/ironbiofouling.shtml">http://www.wellowner.org/awellmaintenance/ironbiofouling.shtml</a>].

"And this is just exploration mining," Anklam said. "What is our water going to look like when they actually start the mining?"

- [ 1. This assumes that exploration drilling caused the problem with the water. Again, the Texas Railroad Commission has studied the problem and concluded that the uranium exploration is not the cause.
- 2. Public meetings and public hearings are an important part of the development process so the community can understand the project and its safeguards, and the mining companies can address issues that develop and provide sound, professional explanations or options for correcting any problems. The media play their role as well by printing all points of view, sometimes without making a judgment on the merits of any viewpoint, valid or not. The media do not serve in the role of Sergeant Friday when he once entertained the TV audience by exclaiming to a witness, "just the facts Ma'am, just the facts". The media often attempt to strike a middle ground, as on the case of the Goliad uranium project, see: http://www.texasobserver.org/article.php?aid=2587.

The facts regarding uranium are a good case to the point. For example, the South Texas geology is host to many uranium deposits stretching from Goliad to Brownsville. Every Texas county south of San Antonio contains uranium deposits, of various sizes and concentrations ranging from those of economic value to minor, natural occurrences within the aquifers of the area. The industry is highly regulated to ensure safety for employees, neighbors and the environment. Financial surety - money put aside by the companies to ensure proper restoration and closure of uranium mining areas - is a requirement before any mining can occur. The Texas Railroad Commission, the regulatory authority that oversees mineral exploration in the state of Texas, has issued two separate letters, one to the Goliad County Groundwater Conservation District, and another to the Goliad County Commission, regarding concerns that groundwater contamination might have resulted from exploration drilling in the Goliad area. The Railroad Commission stated:

'To date, the Commission's investigation of your complaint has not revealed any practice or activity at [the mining company's] Uranium Exploration Permit No. 123 that is out of compliance with the Texas Uranium Mining Regulations or the Uranium Surface Mining and Reclamation Act. We consider this investigation to be closed.'

The mining company involved confirms that it is in compliance with Texas Railroad Commission (RRC) surface drill-hole site restoration procedures. As reported in the Company's release dated May 16, 2007, the RRC had issued a notice of violation to the Company regarding surface restoration procedures. A visit to the project site by RRC inspectors during the summer confirmed that all drill-hole sites are now in compliance with existing requirements. Minor violations in industry practices can and often do occur in any industry but the notice of violation is an indication that the regulatory system is working.

The mining company has committed to the Texas Railroad Commission and Goliad County officials and to the involved community, that:

"it will operate in a transparent manner, and be a good steward of the environment. The development of the Goliad Project will provide an important economic engine for Goliad County, and will enhance the county's tax base, creating new revenue for the county's school district and other county and municipal agencies."

Since acquiring the Goliad project, the mining company has drilled over 360 holes and completed extensive sampling, mapping and reporting by experienced independent and internal technical staff in generating a number of studies for permitting applications. The mining company plans to develop an in-situ uranium recovery facility, following the completion of further resource definition and engineering studies, that must meet the stringent review and analysis of the Texas Commission on Environmental Quality (TCEQ) for air, water, and radiation emissions before permits and licenses are granted. In-situ recovery is a mining process developed in South Texas over the past 30 years. The process is well understood and has been applied successfully at other South Texas mining projects. Issues will develop from time-to-time but with cooperation between the mining company, the regulatory agencies and the community, all will benefit. The mining operations only continue for a few years and then any surface evidence of past operations is removed and the land is restored to the conditions encountered when the company first leased the land. The ground water samples from monitoring wells located in and around the areas mined are obtained and analyzed by independent professional geoscientists for any changes from the original background conditions. In the event any significant changes are noted in the background ground water, the State will evaluate the potential cause and relative significance, and the State will pursue remedies from the company, if indicated.

3. Regarding any health issues that may be of concern to the communities, a comprehensive study was conducted of the health records of individuals who lived in counties where uranium was once mined by surface methods in the 1960s through the early 1980s. This report indicates that this no health anomalies in the uranium mining counties when compared to counties located away from surface uranium mining. To evaluate the report, see: <a href="http://www.mdcampbell.com/jr3302.pdf">http://www.mdcampbell.com/jr3302.pdf</a>.

Such studies go a long way to relieving the communities' concerns of past mining impacts. For concerns of the future, in situ mining combined with increased regulatory oversight (relative to the 1970s) should further reduce concerns for any impact on local communities. The new method of underground mining reduces impact on surface owners and regulatory agencies will see that the ground water will be monitored for any excursions from the areas mined for years to come.

4. We read in the media that the Goliad County Groundwater District hired an independent consultant to conduct studies on ground-water samples (see: <a href="http://www.texasobserver.org/article.php?aid=2587">http://www.texasobserver.org/article.php?aid=2587</a>). This article indicates that Mr. Art Dohmann, chairman of the group and president of the Goliad County Groundwater District, participated in well testing:

"As president of the groundwater district, Dohmann has participated in many of the 250 or so well tests conducted so far by the organization. He said the tests have come back showing mostly potable, "very good quality water." His concern, and that of other county residents, is: What happens once mining begins?"

The article doesn't indicate who took the samples or what sampling protocol was applied to the sampling program. The following questions need to be addressed:

- 1) were the samples taken from the well's water pipe or from the kitchen tap?
- 2) if from the kitchen tap, does the house have a cistern and/or a water softening system?
- 3) how long was the well pumped before samples were taken?
- 4) were field parameters measured at the time of sampling?
- 5) was the physical appearance of the sample described at the time of sampling?
- 6) where any duplicate samples taken?
- 7) were the samples transported to the laboratory under a chain-of-custody?
- 8) what laboratory was used for the analyses and is it accredited?
- 9) what constituents were analyzed for by the laboratory?
- 10) who has the laboratory results and when will they be made public?

Without answers to these questions, the verbal report by Mr. Dohmann has no credibility or reliability because, unless he provides a credible basis for his statements on the ground-water quality, he is not qualified to issue a professional opinion on this subject and may be in violation of State law for practicing geology or engineering without a license. This is confirmed in the following video: http://www.youtube.com/watch?v=JjlWUXG4P-Y

The article cited above goes on to state:

"Dohmann, however, said his group isn't reflexively opposed....Our judgment is that in situ uranium mining cannot be done safely in Goliad," Dohmann said, based on the conditions of the aquifer on which the county sits."

Here again Mr. Dohmann appears to be practicing geology and/or engineering by expressing an opinion on aquifer conditions without a professional license. Of course he has the right to express an opinion but he should cite his source for arriving at the opinions expressed, especially since he is representing a public entity, Goliad County Groundwater District. What are the aquifer conditions that have been damaged by the drilling? By implication, the red, cloudy water reported by Ms. Luann Duderstadt seems to be the basis for the concerns. Further investigations need to be conducted on her well because these conditions are more likely related to microbial infestation than to drilling located at least 1,300 feet away from the well.

Furthermore, making certain assumptions about the local hydrogeological conditions of the aquifers used by the residents near the drilling activities, and assuming the direction of ground-water flow is toward all the residents' wells (which is not likely), a typical rate of horizontal ground-water flow in the aquifer could be as much as 215 feet per year. The vertical flow of ground water from the uranium mineralized zones would likely be one third that of the horizontal flow because of the intervening clay zones separating the sands for a vertical flow rate of about 65 feet per year. This suggests that for the red ground water to reach Ms. Duderstadt's water well, and only flowing horizontally, the water would have had to depart the drilling area some six years ago. Needless to say, ground-water flow in aquifers essentially consisting of sand is very slow. That is why monitoring wells surrounding the mining operations are so important. They are located between the operations and the residents. They act as sentinels for detecting contaminants that may have escaped capture from the operations' closing activities required by the State well after the in situ mining has been completed.

Therefore, the red water is not likely related to drilling activities but to some other, well-related cause, as indicated previously. And, without the "accurate information" promised by Mr. Art Dohmann, we are left with having to believe that he has no other agenda and that his opinion is credible and reliable that "in situ uranium mining cannot be done safely in Goliad". We are waiting for the information supporting his views and so should the author (the reporter) of this article and especially the readers living in Goliad County and elsewhere.

Fortunately, these issues, as well as others involving uranium exploration and nuclear power development in general, are now being discussed in the light of reason without fear (see: <a href="http://www.assuranceonline.us/articles.html">http://www.assuranceonline.us/articles.html</a>), and especially a recent review of Goliad issues by the industry-sponsored group, *Assurance OnLine* (here). Although prepared by the uranium company, we have reviewed the latter and have determined that the Goliad review has merit and is well founded.]

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