72

Ex. 6 Personal Privacy (PP)

May 8, 2017

EPA D-B Hearing Board
Best Western Ramkota Inn

Dear Sirs,

Yesterday I printed off the 151 page EPA summation entitled "Draft Cumulative Effects Analysis of the Dewey-Burdock Uranium in-situ Recovery, Underground Injection Control Area Permits" and took most of the day to read it because I wanted to be as fair as I could be about this process. The report painted a rather benign picture of the mining process ending with kudos for the small carbon footprint left by the power plants that produced the electricity from the enriched uranium. Not mentioned was the enormous amounts of electricity required to isolate U234, U235 from U238 generated by coal or gas fired power plants but more importantly the toxic products of this process that we are creating with no safe place to put them. The entire nuclear industry has left behind a toxic nightmare that has to be dealt with and has been systematically ignored and made the responsibility for a future generation.

With regard to the ISR mining operation, many people might be concerned that sedimentation ponds will leak and contaminate ground water (which they have in other ISR locations), migratory birds will land in these ponds, insects will obtain water from them to become food for birds, West Nile virus will become more prevalent because of the breeding opportunities for mosquitoes among other things. Another concern is the in-situ mining process itself which uses a lixivient solution to release and suspend uranium in solution but also does the same for a number of other toxic heavy metals including arsenic, vanadium, selenium, et.al that are withdrawn with the uranium and wind up being precipitated out in the settlement pond or sprayed onto fields or sent to a class V deep well. But another concern is that even with numerous sweeps in the restoration phase they remain in solution and without the reducing field formerly provided by the mined out ore body will migrate down gradient within the aquifer to find at some point a breccia column, unplugged bore hole, fracture, mining tunnel or fissure. We are told that TVA did a wonderful job of plugging the bore holes but alas there are some that weren't. The radioactive remains like thorium, radium and presumably non-radioactive elements like lead, arsenic and selenium, products of the RO process that weren't disposed of by spraying on the land or placed in a deep disposal well are sent to White Mesa even though they are trying to detoxify that site as well. Another issue is water consumption where the water is poisoned beyond any future use, although according to EPA report that might be kept to a minimum in the mining process by stripping the lixivient by RO and reinjecting most of that water back into the Inyan Kara aquifer to repeat the cycle. The restoration phase might be another matter though where multiple pore volumes are required to bring concentrations of these toxic elements even close to baseline levels which has never occurred in any ISR mining operation.

What I see is the worst part of this question though is that the mining phase is just the start of a horrifying development that results in ever more toxic next phases of the uranium story. The UF6 leaks in the separation phase, the electrical generation using the enriched/blended U235, the military uses that have poisoned countless people worldwide from the fallout and bio-accumulation of radioactive nuclides especially Cs137, Sr90, I131, Pu239 et.al. producing cancers; such as, lymphoma/leukemia,

bone, pancreatic, liver, lung, brain, colon, skin and breast which has seen dramatic increases after the 1300 open air nuclear tests. Exploding nuclear power plants like Three Mile Island, Chernobyl and now Fukushima which is an ongoing disaster that won't be stabilized for 40 to a 100 years and continues to gush 100's of tons of radioactive water into the Pacific every day ultimately biologically magnifying into the fish and the humans that eat them. Cancer rates in Japan are just now becoming apparent as we see children being affected by what is referred to as Chernobyl heart disease caused by cs137. We have our own Fukushima potentially waiting for us at the Indian Point reactor just above NY City also subject to the effects of an earthquake. Given the artificially extended lives of our aging nuclear power plants are more such events going to happen? It is just a matter of time before we find out. And now we have high level nuclear waste with no place to go. Oh, yes of course we have Yucca Mountain which will be a disaster because it is not sealed off from water incursions. But we would have to have dozens of Yucca Mountains to take care of all the waste sitting around just the 104 nuclear reactors in the United States. And then it has to be safely transported. The American build sheet metal casks that last about 30 years but the German build cast iron ones seem to last much longer and don't seem to crack with age for on-site storage. And don't leave out the military uses of course. The Nagasaki/Hiroshima experiment is still with us as are the depleted uranium (U238 without the U235) particulates being enjoyed by the Iraqi people to the point where they are afraid to have children in some places. The high level waste from WWII is still sitting in giant pools and with time leaking into the Columbia River. And now "we" want to invest a trillion dollars in making nuclear weapons over a 30 year program to make them more user friendly. We have made a Faustian bargain with the Devil by creating problems no one will be able to solve and in the process engaged in a collective death wish that might be granted earlier than we thought with the present administration filling agencies at the top with administrators who are ignorant and hostile to their missions.

Like the people on the trains to Auschwitz we have to ask ourselves "where are we going?" before it is too late.

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