

Public Hearing Testimony Regarding TENORM Management in ND

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INTRODUCTION

I am here today as a retired taxpaying citizen who loves ND. I am proud to be a North Dakotan and am grateful to have had the opportunity to serve in many professional capacities during my career here. My comments and opinions are based on 43 years' worth of accumulated professional experience and personal observations.

Geologists have known for decades that the Bakken Formation held oil but harvesting the resource remained elusive. My hat is off to the determined and persistent scientists and engineers who successfully met this challenge and changed the world energy paradigm. Imagine for a moment, the tremendous physical challenges involved with extracting oil from shale two miles underground. I believe their success is truly one of modern engineering's great achievements.

RADIOACTIVE WASTE aka TENORM

Radioactive waste is a byproduct of the oil industry's success in extracting oil from the Bakken Formation. It is the concentration of radionuclides dispersed naturally throughout oil-bearing strata where they have put little or no stress on life for tens of millions of years. These radionuclides produce ionizing radiation, an artifact of the physics of the universe. At one extreme gamma ray bursts from collapsing stars have been implicated in at least one of our planet's big extinction events. On the other hand, medicine has harnessed several forms of ionizing radiation to accomplish miraculous feats. Life evolved on Spaceship Earth in an equilibrium with environmental ionizing radiation. By default, we are exposed to low levels of ionizing radiation every moment of our lives. Now the scenario has changed and we have increased our exposure. Our experience with ionizing radiation is that it can be deleterious to human health and environmental quality even in small amounts and that we must be extremely cautious in managing it. We have now concentrated some of this stuff in our midst.

DREGS OF SUCCESS

Today we are haggling over how to prudently manage the dregs of success. Oil industry corporations own the radioactive waste which they have collected for various regulatory reasons because of its hazardous nature. If radioactive waste had any value it would be a marketable hazardous material and the oil industry could cash in on it and avoid any liability issues. But radioactive waste has no apparent value to anyone so we crossed a threshold when someone in the oil industry declared “We do not want this stuff anymore” at which point the radioactive waste went from being a simple hazardous byproduct to being a hazardous waste. That is a threshold where the rules change. No one, I repeat, no one wants to own hazardous waste because it’s management is an expense that impacts profitability. That is why the oil industry seeks to shed its responsibility for radioactive waste.

We should expect the oil industry to want to wash its hands of radioactive waste as cost effectively as possible. That would only be good business practice on their part. Their ultimate goal would be to “give” their radioactive waste and its associated risk and liability to someone else if they could find gullible recipients but virtually everyone knows radioactive waste is bad news so the list of potential recipients of such a gift is short. The only options are to get the public, the taxpayers, to take it or dump it illegally. In either case the public loses and it costs taxpayers significantly. Both options have occurred and both are unacceptable.

For all but the most recent half decade the state of the art in waste management was to throw whatever we did not want out the back door or in the most convenient hole, or in the ocean, or in the closest wetland or whatever “dump” was convenient. That sounds a lot like illegal dumping today. Today we can do much better in containment of landfilled wastes, but one must remember, it is FOREVER, for all practical purposes about the same as the half-life of some radionuclides. If ND chooses to accept radioactive waste disposal we should accept no less than vigorously enforced safe transport to, and safe entombment of radioactive waste forever with the industry retaining ownership and responsibility should problems arise.

KEY ISSUES

- 1 Based on information available to me it appears that the ND Health Council has been somehow left out of the loop when it should be the primary driver of the radioactive waste regulatory process.
- 2 There is disagreement regarding the “science” involved. It appears to me that most of this is noise because we already know that radioactive waste can be bad news for human health and environmental quality; we already know how to design, build, and manage protocols and facilities; and we already know how to enforce regulations. We just need to do it.
- 3 A common theme I have repeatedly encountered regarding radioactive waste is public concern about inadequate current enforcement combined with some sloppy housekeeping practices by some of the industry.
- 4 A common theme I have repeatedly encountered regarding radioactive waste is public doubt that regulators are committed to promulgating meaningful regulatory measures, and doubt that the regulators have the ability and commitment to enforce regulations.
- 5 A common theme I have repeatedly encountered regarding radioactive waste is public concern over the lack of transparency in government actions surrounding radioactive waste. The result of this lack of transparency is the conclusion by some that industry is driving the process.
- 6 A common theme I have repeatedly encountered regarding radioactive waste is public doubt that ND regulators are committed to protecting human health and environmental quality.

These issues need to be resolved to the satisfaction of the public, not to the satisfaction of the oil industry and/or the ND Health Department.

Specifically, a key issue in my opinion is whether ND should even allow the oil industry to transfer radioactive waste risk to the public. ND could decide against such a transfer of liability and demand that radioactive waste be subjected to cradle-to-grave ownership by the generator and that all of it be shipped out of state to existing secure facilities. Or, ND could decide to allow some degree of transfer and regulated safe disposal within the state. In either extreme the ND Health Council needs to rise to the occasion and present a bedrock standard for protection of human health and environmental quality, and to dictate management and disposal standards that satisfy the public’s concern over human health and environmental quality.

The pending regulations governing radioactive waste look like an industry wish list designed to transfer the maximum amount of ownership and liability to the citizens of ND. I admonish the advisory committee to go back to the drawing board and start by demanding a total cradle to grave management system that requires the industry to retain ownership and liability of radioactive waste disposed in a fully secure and monitored facility. In my opinion this should be the default starting point in radioactive waste management. In my opinion if the state assumes ownership and liability the state should assess adequate fees to cover all associated costs in perpetuity. The industry can then choose whether to use in state or out of state facilities. If the state is in the dire financial situation professed by current state government the state cannot afford to do anything else.

CREDIBILITY

We must realize that many corporations have little or no credibility with respect to doing things that are in the best interest of human health and environmental quality. However, that does not keep them from telling us otherwise at every opportunity and they persistently attempt to influence legislation, rules, and regulations. One has to assume that corporations will tell us whatever it takes to reduce their expenses and maximize their profit margin. We must be extremely skeptical when corporations tell us what is good for us, particularly regarding human health and environmental quality. My confidence level that corporations will do the right thing on their own initiative is far less than 50%.

During my nine years as an enforcement inspector with the US EPA I learned that corporations will readily follow established rules as long as they are the same for everyone everywhere because it levels the playing field. What makes corporations do the right thing is having their feet held to the fire of meaningful laws, rules, and regulations. Because corporations have no inherent moral compass, we, the citizenry, have to dictate the laws, rules, and regulations that govern corporate behavior through the legislative process. We would like to believe that the governments we established are looking out for our interests. Sadly, that is not often the case because corporations have found willing listeners in government agencies we have relied upon to protect us. Integrity is easily compromised. We do not often expect much from our government agencies and often that is exactly what we get if we are not vigilant.

The growth and productivity of government agencies is somewhat analogous to the thermodynamic description of entropy. Both continually increase while producing less. After watching government behavior for half a century I have concluded that the first mission of any government agency is to not to do its job, but rather to survive and grow like a parasite. I began working for the US EPA the year the agency was created by President Nixon issuing an executive order. In nine years I witnessed the agency's conception, birth, childhood, adolescence, vigorous productive adulthood, and rapid decline into perpetual senility. My confidence level that government agencies will do the right thing without increased and constant scrutiny is less than 50%.

The US Department of Energy and its associated national labs all have their roots in the WWII Manhattan Project, which provided us with nuclear weapons and nuclear power. The DoE is the repository of everything nuclear in the US, including the tremendously lethal nuclear messes made at the national labs and elsewhere. They own those messes and they will probably never be able to adequately clean them up. Their nuclear messes are exceeded only by those of the former Soviet Union. After nine years of being close to several DoE programs, and considering their track record, I remain highly skeptical anytime anyone from DoE tries to assure me of anything, especially when they expect me to take it on faith that they know what they are talking about. The glimmer of hope emanating from DoE is that there are many exceptionally competent people within DoE but they continue struggling in a bureaucracy that has yet to prove itself trustworthy.

States often rush to make concessions to developers in the quest for economic development. South Dakota's concessions to gold developers in the Black Hills is a prime example. Citizens of SD saw very little benefit but were left with a staggering legacy of irreversible environmental degradation that the taxpayers will have to bear indefinitely. Such requests often come in the form of requests for exemptions such as the oil and gas exemption and in my opinion they are a bad idea.

SUMMARY/RECOMMENDATIONS

It is clear that radioactive waste is produced and owned by oil industry corporations and they want to transfer ownership, liability, and responsibility associated with it to the public.

I see no compelling reason for the public to accept the ownership, liability, and responsibility of radioactive waste.

I encourage the citizens of ND to realize that they are under no obligation whatsoever to accept responsibility for the long term disposition of radioactive waste and that they can refuse to accept any such responsibility.

I recommend that industry corporations be held responsible for the perpetual safe disposition of radioactive waste in secured facilities as is the case with other hazardous wastes. I do not believe it is logical to distribute radioactive waste across the landscape in small unregulated deposits when it has already been collected and concentrated.

I encourage the citizens of ND be vigilantly skeptical of regarding anything government agencies and industrial corporations tell us. I know that the ND Health Council gives the human health and environmental quality the priority it deserves. I admonish them to more vigorously advance that cause.

I encourage everyone to demand transparency in government and to remain aware of the continually evolving risks across our landscape because everyone is ultimately responsible for their own well-being.

If ND chooses to accept radioactive waste disposal we should accept no less than vigorously enforced safe transport to, and safe entombment of radioactive waste forever with the industry retaining ownership and responsibility should problems arise.

We already know how to do everything we need to do regarding radioactive waste.
WE JUST NEED TO DO IT!