Letter/Attachment for GTCC EIS Scoping Comment #161

TO: James L. Joyce. Document Manager
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DEPARTMENT OF ENERGY
NOTICE OF INTENT TO PREPARE AN ENVIRONMENTAL IMPACT STATEMENT FOR
THE DISPOSAL OF GREATER-THAN-CLASS-C-LOW-LEVEL RADIOACTIVE WASTE

The following comments on this DOE Environmental Impact Statement Notice of Intent are submitted on behalf of, or supplemental to other comments that may have been submitted by, the National Sierra Club and Sierra Club Pennsylvania Chapter; Environmental Coalition on Nuclear Power (PA); New England Coalition (VT); Radiation and Public Health Project (NJ); and Nuclear Policy Research Institute/Beyond Nuclear (DC).

Background:
Greater-than-Class-C Low-Level Radioactive Waste (GTCC, LLRW) has long been treated as the radioactive waste family's dangerous and unloved child, to be ignored as much and as long as possible, and hidden away from public notice, because the extended family of nuclear weapons and power industries just didn't know what to do with it. Until GTCC was designated as "low-level" in the 1985 Low-Level Radioactive Waste Policy Amendments Act (LLRWPAA), much of it was, in fact, homeless, remaining in indefinite storage where it was generated or stored, waiting to be assigned a location for final disposal. Legally, if commercial in origin, it was subject to NRC regulation, or subject to DOE ownership if generated by DOE. The term "GTCC-like" was adopted more recently by DOE for its comparable highly radioactive LLRW. These wastes were (are) too radioactive for disposal at NRC-licensed commercial LLRW disposal sites or at DOE's LLRW sites. After Congressional designation of Yucca Mountain as the nation's repository for intensely irradiated "spent" fuel high-level wastes (HLW), the DOE, almost as an after-thought, began to describe its intent to dispose of both GTCC and GTCC-like wastes by tucking them into corners of the Yucca Mountain HLW repository. That has seemed to remain the intended solution for most of the last twenty years – until now.

Subsequent reports of flawed scientific research at Yucca, plus Native American tribal land claims, strong, unrelenting public and political opposition, and insufficient funding have combined to slow the Yucca Mountain repository project to a near halt and, potentially, abandonment as unsafe and unacceptable. Its basic safety suitability is now called into serious question, despite NRC's, EPA's, and DOE's continuing determination to complete Yucca licensing -- based in part on this proposed EIS and upon other agencies' pronouncements – prior to the end of the present Bush Administration.

Meanwhile, despite the lack of any proven means of safe or permanent disposal, GTCC quantities continue to increase, are piling up in storage at DOE sites, reactors and other industry locations, and – if DOE and NRC have their way – will be augmented by large amounts of additional GTCC and GTCC-like LLRW from the numerous new reactors that the industry hopes to build, despite the known hazards that reactors and radioactive wastes pose for human beings and other biological organisms.

Announcement of a newly developed Russian "vacuum bomb", said to be non-nuclear, and an earlier similarly non-nuclear American "thermobaric weapon" that was described in 2003, (New York Times and Associated Press, September 11, 2007), suggests that nuclear weapons might now be replaced in the U.S. arsenal by these new devices, hazardous as these new weapons may also be. Although they are capable of destroying human beings, all other forms of life, and our "built environment" structures, presumably these new weapons would pose a lesser radiation health and genetic hazard for those who might survive these latest methods of mass destruction. If so, DOE should end research on and production of additional nuclear bombs and other nuclear weapons and undertake their disassembly. There is, after all, no safe radiation exposure, according to the BEIR Reports of the National Academy of Sciences Committee(s) on the Biological Effects of Ionizing Radiation (1990, 2005).

Recommendation:

Therefore, the most important and best recommendation that DOE needs to adopt -- and adopt immediately -- is to halt those activities that are continuing to generate ever increasing amounts of low-level radioactive wastes, and particularly these "hottest" GTCC LLR wastes that may also have very long hazardous lives. A GTCC production moratorium would provide incentive, opportunity, time, and perhaps enough funding both to focus on sorely needed radwaste long-term disposal science and engineering, and to redirect substantial funding also to sorely needed energy efficiency, conservation techniques, and rapid implementation of these infinitely safer, cheaper renewable methods of meeting national (and world) future energy needs.

Based on directives in the 2005 Energy Policy Act, responsibility for development of this GTCC EIS has been assigned to DOE's Office of Environmental Management. In the two years since that Congressional action, both the American people and members of Congress have finally begun to comprehend the nature and severity of global climate change and our human responsibility for the changes -- and the rapidity of climate warming events. However, the language and framework of agency bureaucratic thinking are slower to perceive the implications of these warming changes. It is suggested that DOE is not competent to "manage" the environment. It never has been.. The Office and its purpose are mis-named. Had the agency's way of thinking

about our human actions as what need to be "managed", the DOE long ago would, should, have assigned such tasks to an Office of Human Management of GTCC Radwaste -- and perhaps Post-human Management.

Recommendation:

Therefore, the next recommendation is that DOE should recast its framework for consideration of the long-term management of GTCC. DOE should immediately move to advanced creative thinking about future energy needs and amounts for humans: the types compatible with promoting the biological safety and wellbeing of people and the biosphere; necessary (no longer wasteful) energy uses; and those sources with sustainable availability. I suggest that this is the way the GTCC issue should be framed.

For comparison, consider DOE's current proposals for National Interest Electric Transmission Corridors (NIETC). The DOE has projected a "need" for these new power lines that was based on its analysis of *past* growth rates of energy consumption in the eastern megalopolis -- not based on real need and availability in the energy-constrained future. DOE appears not to question the common societal assumption that "growth" is a "good" and should continue, or that rates of consumption of energy and other natural resources can continue to rise indefinitely on a finite planet. Yet this apparent failure to recognize that "infinite growth" cannot be sustained results also in failure to recognize that our energy policies for the future must account for the anticipated consequences of planetary global warming combined with sustainable population and consumption levels.

Recommendation:

The GTCC EIS must therefore take into consideration such issues as depletion of the materials that will be required to sequester far into the future the GTCC wastes with long hazardous lives. The DOE must factor into its EIS the biological consequences of partitioning GTCC wastes in order to deregulate and recycle the contaminated metals into reuses and consumer products as is now increasingly being permitted in the United States and worldwide. The small additive exposures to a consumer using and exposed to recycled contaminated materials cannot be detected or measured by the recipient and therefore cannot be avoided or totaled. DOE must give high priority in this EIS to such impacts on humans, their health and genetic integrity.

Moreover, being reported as these comments are being composed, nuclear bombs were being shipped by plane from the Minot, ND, military base to another military site in Louisiana. DOE may consider a repeat of the infamous 9/11 attacks on these bombers in transit would be a "highly improbable event," but such unlikely and unanticipated occurrences, and many others that could release GTCC wastes, contaminate near or distant environment, and contaminate people must also be addressed in this EIS.

Recommendation:

In our experience with the federal agencies involved with nuclear power and weapons, we have found a reluctance of the regulators to give credence to what they term "highly improbable events" and instead ignore or dismiss them. These very terms were stated by the NRC licensing board in TMI-2 operating license proceedings in 1977. My colleague and I, *pro se* intervenors, were barred from questioning issues so labeled by the board. Accidents "more severe than considered by staff engineers" were deemed to be "beyond the scope of the proceedings." That was NRC. DOE must not make similar mistakes in its GTCC EIS.

Environmental Issues identified in the NOI are indeed important ones. Among these and many other environmental issues to be considered in this EIS, special attention must be paid to the future condition of ground water when the DOE's disposal methods inevitably fail. Water is essential to life. Our culture does not treat it with appropriate respect. Already relict water is being contaminated and depleted by human activities. In many parts of the world, and increasingly in the United States, potable water is diminishing. Water is essential. The potential GTCC disposal sites mentioned in this NOI include numerous arid regions where water shortages are already severe. The sites in humid regions are densely populated. Recent publicity of the continued tritium leakage at the Barnwell LLRW facility must be a precaution about disposal in areas of high population and high rainfall. Intense storms appear to be becoming substantially more frequent and more destructive: another evidently global warming factor.

Recommendation:

The DOE has another particularly important responsibility to assure in its EIS that the alpha-emitting transuranic GTCC-like wastes DOE has generated are given special consideration, due to health and genetic hazards of alphas.

Recommendation:

Constant monitoring must be required for all ultimate GTCC disposal sites far into the future. The wastes must be required to be retrieved in the event of leakage. All releases must be followed by prompt and complete decontamination of the affected areas.

Recommendation:

The principle of precaution must be adhered to in all aspects of the proposed EIS. This has never been formally required of DOE or, to our knowledge, of any other generator of hazardous materials. It is not required of DOE in this instance. The Secretary may have, and should exercise, discretionary authority to include precaution in his or her directives to DOE staff.

Recommendation:

DOE states it will investigate a deep geologic repository, intermediate depth borehole disposal, and near-surface disposal "enhanced with special processing or design," or perhaps at-surface sites. At-surface isolation has the advantage of being able to be monitored constantly and closely; the disadvantages include susceptibility to attack. At- surface disposal is not a wise choice, particularly at reactor sites located in river flood plains or lake and ocean shores.

Recommendation:

We humans like to consider burial appropriate for "disposal" of corpses and unwanted wastes. But dumping GTCC underground, out of sight, out of mind, is not adequate or acceptable. (These siting issues have been the subject of numerous prior conferences and panels – with the same issues discussed and the same failures to settle on acceptable disposal methods.) Especially for long-lived GTCC, DOE must take into consideration the continuation of necessary hazard control far into the future, beyond existence of those who dispose of the wastes. But we know eventual failure will occur. The most applicable principle to offer is to urge that the control must be sufficient to protect future populations at least to levels equal to the protection provided for the current residents of the affected areas. Retrievability must be provided for in the disposal design in a manner that assures future peoples at risk are able to recover and re-containerize the wastes for ongoing protection for the full hazardous life of the wastes.

Recommendation:

Most of the Department's existing weapons and production sites are mentioned as possible disposal locations. Those are communities already subject to unwanted exposures due to the failings of DOE; they and their descendants would be required to accept more radioactive hazards. This is an equity issue. There is a serious, essentially insoluble, conflict between exposing resident populations that have long been receiving excess radiation exposures (large or small), from DOE's nuclear facilities without any benefit to these recipients. It is an issue of equity. On the other hand, dumping and spreading contaminants into uncontaminated locations and exposing unaffected populations is equally wrong and unacceptable. Weighing these unwanted tradeoffs will be one of the most wrenching measures DOE will face. It must be faced, and those affected, in all potential locations, must be involved and their recommendations given full regard in the ultimate decisions, especially for those future individuals who had no role in the thoughtless decisions to generate these vast quantities of radioactive wastes in the first place.

Recommendation:

Almost as an after-thought, DOE adds to potential sites "…or a commercial facility should such a facility be identified in the future." In short, GTCC and GTCC-like wastes could be disposed of virtually any where DOE proposes or NRC approves. Essentially anywhere, everywhere. This alternative will be unwise because unsafe, creating perhaps the greatest and most likely risks for both current and future populations. If DOE and other generators could be depended on to provide complete decontamination in the aftermath of releases or facility decommissioning, this option would still be unwise.

Despite DOE's acknowledgement of the hazards of GTCC and GTCC-like LLRW and the failures of control already experienced at various storage or disposal sites, the NOI states that DOE will consider any "method(s) and location(s)…or combination of disposal methods and locations…[that DOE deems] appropriate based on the characteristics of the waste and other factors." It is troubling that DOE appears to make the frequent mistake of believing that it *can* "dispose" of trash, junk, wastes – for that matter, "dispose" of -- anything. The Department and its decision-makers must recognize fully that we are incapable of "disposing" of anything. In truth, all we can do with what we deem "waste" is to change the form of matter or its location. This is a basic reason for continuing opposition to activities that generate ever more radioactive wastes.

Recommendation:

That simple truth should govern all decisions of the agency. It doesn't. The intractable radioactive wastes that are the subject of this geographic exercise are the result of our societal failure to understand the holistic nature and interrelated impacts of all we do. This point takes us back to the wisdom of the Principle of Precaution: "When in doubt, don't."

The American people, who must then live or die with the consequences of DOE's processes and decisions, may be forgiven if they do not wish or choose to trust their health, safety, and their children's children's cildren's genetic future to this agency.

Submitted by Judith H. Johnsrud, Ph.D.

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