RulemakingComments Resource

From: Bruce Campbell <madroneweb@aol.com>
Sent: Monday, April 20, 2015 9:59 PM
To: RulemakingComments Resource
Subject: Docket ID NRC-2014-0275 (new variety of Holtec radwaste canister)

April 20, 2015

Bruce Campbell
[redacted]

Secretary, U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
Attn.: Rulemakings and Adjudications Staff

To whom it may concern at the Nuclear Regulatory Commission and elsewhere:

These are my comments on the Holtec HI-STORM Flood/Wind System; Certificate of (alleged) Compliance No. 1032, Amendment No. 1, Revision 1.

My primary concerns about the Holtec canister are that a Holtec canister has a crack after about two years of storing some radwaste from the Diablo Canyon nuclear power facility, Dr. Singh of Holtec says that a crack will work its way through the Holtec cask in about 16 years, and that it could release millions of curies of radioactivity.

It is pretty clear that this comparatively flimsy cask doesn't even do well sitting there on the California coastline even without a moderate wind, flood, tsunami, or quake event.

The NRC must distinguish relative safety or danger between traditional radwaste generated at nuclear power facilities, and the high burn-up waste produced in California and elsewhere during the 21st century.

I also have strong concerns that Holtec says that its canisters cannot be repackaged. And I hear any patching effort would be expected to last temporarily, but then soon deteriorate because the non-smooth surface related to the welding or other patching effort will attract its own further deterioration.

I am furthermore concerned that there is a plan to get rid of the spent fuel pools at San Onofre once the spent fuel rods are in dry casks. That would essentially negate the chances of repackaging any casks leaking radionuclides without another major construction effort anyway.

I want to point out the likely planned timing that the NRC proposed zero emergency evacuation planning even within ten miles of the San Onofre nuclear power facility on the morning after the "Community Engagement Panel" met in San Juan Capistrano. I shall also point out that someone of that panel (it may have been the convener from SCE) said that the Holtec canisters will be approved in September.

As I pointed out in my public comments (the final one) at the CEP, it was mentioned that Holtec canisters will be approved in September. While I was not surprised to hear this because I have enough experience to know that the NRC rubber-stamps almost anything, but still it is very disturbing. Not only because the Holtec canisters seems to be the worst option available, but because it was declared that the Holtec canisters would be approved rather than going through the process and letting facts indicate whether or not the canisters should be approved, it is clear that it is a

back-scratching game and the canisters will likely be approved just because it is the sleazy conniving utility's preference to do so. If a process was transparent and truly pondering different alternatives, then they would not declare like it is a fait accompli that the canisters that SCE hopes to load San Onofre radwaste into will be approved in September. The behavior of the fairly similar casks at Diablo Canyon should not give one much faith in a sham process to foist comparatively flimsy casks compared to German, French, and perhaps other varieties of radwaste storage canisters.

Please do a full Environmental Impact Statement on this matter, and have the Holtec canister as one alternative, have a German cask as another alternative, and a French cask as a third alternative, and perhaps another alternative.

I understand that a fairly similar Holtec canister is already cracked at Diablo Canyon even though it has only contained the radwaste for about two years. Please detail the distinctions between what I understand is the fairly similar Holtec MPC thin canister which is already exhibiting serious chloride-induced stress corrosion cracking.

Also, there is woefully lacking information which could be used to reach a sound determination as to whether the Holtec casks could withstand the ground acceleration (vertical and horizontal) as well as significant ground displacement which could occur from a sizable quake on the Newport – Inglewood Fault, other nearby faults, or a huge quake on the San Andreas Fault. I do not believe that the NRC has adequately digested and responded to the U.S. Geological Survey's concerns pointed out as part of the "Fukushima Lessons Learned" process – and residents, farmland, and the built environment in central and southern California will be the guinea pigs since the NRC cannot resist the rubber-stamp no matter how inadequate a dry cask or steam generator is.

Does the seismic analysis and formula predict any damage to the unrepairable Holtec cask upon a sizable seismic event at San Onofre or at Diablo Canyon? Please release this alleged data immediately!

I would hope that in seismically active areas (certainly including the areas around the San Onofre and Diablo Canyon nuclear power facilities)

I am disturbed, but not surprised, to see this sentence in the proposed rule: "The NRC has not made any changes to the proposed rule as a
result of the public comments the NRC has received."

Don't let serious comments derail the nuclear regulatory and utility back-scratching gravy train!!!

It is disgraceful that the NRC has its ostrich-head in the sand, and figures it is alright to allow a comparatively flimsy cask prone to leakage even before 20 years to be approved for twenty years. This despite admissions that the canister cannot be repackaged, and the plan is to destroy the spent fuel pool areas after the spent fuel rods are moved into the canister.

"Inspection Access

Several comments also questioned the ability of the underground storage system to be adequately inspected and potentially repaired if necessary during the initial certification period of 20 years, especially if the system was being used in a coastal environment where stress corrosion cracking could be an issue.

Response

The NRC is treating this comment as a significant adverse comment warranting clarification of the record. The NRC has evaluated the design of the HI-STORM UMAX Canister Storage System and has determined that the design is robust, and contains numbers of layers of acceptable confinement systems in compliance with 10 CFR part

[[Page 12075]]

72 requirements. In addition, the staff is not aware of empirical evidence that supports a finding that surveillance would be required in the initial certification period of the proposed CoC."
****

If indeed the HI-STORM UMAX Canister Storage System has a robust design, then why does the fairly similar Holtec thin cask model have a crack after two years, with Dr. Singh of Holtec stating that a crack will work its way through the cask in 16 years. I was not a mathematics major, but that means that it is likely that millions of curies of radiation will leak within a 20 year period for Holtec casks on the central or southern California coast.

I just read Holtec's Safety Doctrine, and everything it says is negated by its comparatively flimsy product.

(3) The general license for the storage of spent fuel in each cask fabricated under a Certificate of Compliance shall commence upon the date that the particular cask is first used by the general licensee to store spent fuel, shall continue through any renewals of the Certificate of Compliance, unless otherwise specified in the Certificate of Compliance, and shall terminate when the cask's Certificate of Compliance expires. For any cask placed into service during the final renewal term of a Certificate of Compliance, or during the term of a Certificate of Compliance that was not renewed, the general license for that cask shall terminate after a storage period not to exceed the length of the term certified by the cask's Certificate of Compliance. Upon expiration of the general license, all casks subject to that general license must be removed from service.

It defies common sense and at least the spirit of regulation. Please explain how one can remove a cask from service after its 20-year license if it contains still-hot radioactive waste, and given the fact that Holtec canisters according Dr. Singh are not capable of being repackaged? Would removing such cask from service after twenty years be any easier if the radwaste created more traditional spent fuel, rather than spent fuel from the high burn-up fuel used this century in California reactors and elsewhere?

"(ii) Cask storage pads and areas have been designed to adequately support the static and dynamic loads of the stored casks, considering potential amplification of earthquakes through soil-structure interaction, and soil liquefaction potential or other soil instability due to vibratory ground motion; and"

I'd like to see a 40 to 50-page report with plenty of linked references to ascertain how the NRC could reach the conclusion (likely because your attorneys told you to do so….) that cask storage pads and areas can withstand intense ground motion (including vertical as well as horizontal ground acceleration). Even if this is the proper conclusion for most areas of the U.S., remember that perhaps the largest quake the country has had besides Alaska and occasional giant Cascadia Subduction Zone earthquakes was on the New Madrid Fault in the Mississippi River area. Certainly, "(ii)" above should not apply to the two areas which contain the two largest coastal area faults in southern and central California – the Newport – Inglewood as well as the Hosgri Fault (of the Hosgri – San Simeon – San Gregorio fault system). Besides those major identified faults, there is another major fault line further to sea than the Newport-Inglewood Fault which has been active in recent years and, of course, new faults have been discovered near Diablo Canyon which is in the midst of 13 earthquake faults.

"(v) For the purpose of this general license, the licensee is exempt from requirements to interdict and neutralize threats in § 73.55 of this chapter; and". I just read the section 73.55, and came across this part of it: "(2) To satisfy the general performance objective of paragraph (b)(1) of this section, the physical protection program must protect against the design basis threat of radiological sabotage as stated in § 73.1.

(3) The physical protection program must be designed to prevent significant core damage and spent fuel sabotage. Specifically, the program must:

(i) Ensure that the capabilities to detect, assess, interdict, and neutralize threats up to and including the design basis threat of radiological sabotage as stated in § 73.1, are maintained at all times."

Thus, the similar Holtec canister proved that it has a crack after two years, and the crack is likely to go all the way through the cask 16 years after a crack is discovered. Is the NRC in essence saying that while there must be a physical protection program in the case of possible radiological sabotage, yet it does not need to assure that the canister storing radioactive waste does not leak radioactivity in that 20-year period?

"(10) Review the reactor emergency plan, quality assurance program, training program, and radiation protection program to determine if their effectiveness is decreased and, if so, prepare the necessary changes and seek and obtain the necessary approvals."

"In addition, the staff is not aware of empirical evidence that supports a finding that surveillance would be required in the initial certification period of the proposed CoC. This evaluation is documented in the NRC staff's SER under Docket ID NRC-2014-0120."

In response to that claim above, simply look at the fairly similar cask storing radwaste at Diablo Canyon. It has developed a crack in about two years, and Dr. Singh says that after 16 years, the crack will go all the way through the cask. Two (years) plus sixteen (years) equals eighteen years. EIGHTEEN YEARS IS LESS THAN THE 20-YEAR PERIOD FOR WHICH THE CASK IS LICENSED. That sounds like empirical evidence which would necessitate the need for inspection even of an underground radwaste storage facility within the 20-year license period!

Once again I will point out, that despite rubber-stamping traditions within the AEC and NRC, that the agency is supposed to be assessing the quality and integrity of this new slight variation of Holtec canister, rather than simply approving / rubber-stamping such a license because the nuclear corporations have to stick together to make a financial (and dare I say, living cell) killings.

Check out this quote: "The seismic design levels of the HI-STORM UMAX Canister Storage System as provided in this CoC are acceptable for most areas in the continental U.S. For locations that have potential seismic activity beyond those analyzed for this system, additional evaluations and certifications may be required before the system may be used in those locations."

Note that the cask does not necessarily need to be stronger or bolstered in an area that can deliver a serious seismic punch. The issue merely has to undergo "additional evaluations and certifications". Do you want to lay out exactly how such evaluations and certifications are judged. Note that evaluations and certifications alone do NOTHING physical to the canister which could possibly increase its strength or durability. It is a bureaucratic play of words that is meaningless and a prelude to yet another NRC rubber-stamp.

And if Holtec makes such a poor cask, are we supposed to have faith in their modular reactors?

Please clearly reject Holtec's lousy equipment and thus drop the proposed "§ 72.212 Conditions of general license issued under § 72.210" amendment process. Thank you for your consideration.

Sincerely yours,

Bruce Campbell