Rulemaking1CEm Resource

From: RulemakingComments Resource
Sent: Thursday, December 26, 2013 11:23 AM
To: Rulemaking1CEm Resource
Subject: FW: WCR
Attachments: 2013-12-19 UNITED STATES OF AMERICA.docx

DOCKETED BY USNRC—OFFICE OF THE SECRETARY
SECY-067

PR#: PR-51
FRN#: 78FR56775
NRC DOCKET#: NRC-2012-0246
SECY DOCKET DATE: 12/20/13
TITLE: Waste Confidence—Continued Storage of Spent Nuclear Fuel
COMMENT#: 00713

From: Raymond Shadis [mailto:shadis@prexar.com]
Sent: Friday, December 20, 2013 11:57 PM
To: RulemakingComments Resource
Subject: WCR

COMMENTS ATTACHED IN MsWORD. PLEASE FILE. THANK YOU. RAYMOND SHADIS 207-882-7801

Hearing Identifier: Secy_RuleMaking_comments_Public
Email Number: 739

Mail Envelope Properties (377CB97DD54F0F4FAAC7E9FD88BCA6D0014433C4A129)

Subject: FW: WCR
Sent Date: 12/26/2013 11:22:42 AM
Received Date: 12/26/2013 11:22:44 AM
From: RulemakingComments Resource

Created By: RulemakingComments.Resource@nrc.gov

Recipients:
"Rulemaking1CEm Resource" <Rulemaking1CEm.Resource@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	490	12/26/2013 11:22:44 AM
2013-12-19 UNITED STATES OF AMERICA.docx		23941

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE COMMISSION STAFF

In the Matter of a Remanded Waste Confidence Rulemaking And its Attendant Generic Environmental Impact Statement	December 20, 2010 Docket. NRC–2012–0246

By E-mail: Rulemaking.Comments@nrc.gov

Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
ATTN: Rulemakings and Adjudications Staff

FRIENDS OF THE COAST and NEW ENGLAND COALITION
COMMENTS REGARDING THE DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT
FOR A NEW WASTE CONFIDENCE RULE

Now comes Raymond Shadis[1], *pro se* representative for Friends of the Coast[2] , Maine and New England Coalition[3] (Vermont) to comment on behalf of these organizations regarding the U.S. Nuclear Regulatory Commission's Draft Generic Environmental Impact Statement ("DGEIS") in support of a new Waste Confidence Rule as mandated and remanded by the United States Court of Appeals for the District of Columbia Circuit Decision and Order, dated June 8, 2012.

[1] Raymond Shadis served on the NRC's Initial Implementation Evaluation Panel for the Reactor Oversight Program (ROP) and a follow-up workshop on Risk Significance Determination.. He was an invited presenter at NRC's Annual Regulatory Information Conferences on such topics as Corrective Action Programs, Voluntary Industry Initiatives, and Public participation in Reactor Decommissioning. Mr. Shadis, was a Maine Yankee Atomic Power Company sponsored participant providing public input and critique for NUREG-1738 "Spent Fuel Pool Accident Risk in Decommissioning Nuclear Power Stations. He was selected for presentations to the full-commission on both the ROP and NUREG-1738/

[2] Friends of the Coast – Opposing Nuclear Pollution is a non-profit founded in Maine in 1995, and represented by Mr. Shadis, was the sole activist organization directly participating in the decommissioning of Maine Yankee Atomic Power Station and the establishment of its isolated spent fuel pool storage unit (nuclear island) Independent Spent Fuel Storage Installation

[3] New England Coalition-on Nuclear Pollution is a non-profit headquartered in Brattleboro, Vermont and incorporated since 1971. New England Coalition was a litigant before the federal courts on waste confidence rulings in 1978 and 1984.

It is patently clear that NRC is only obtusely aware of, or minimally responsive to, the instructions of the Federal Court inasmuch as the Court effectively advised against warming over the assumptions of the past, but NRC Staff's first reaction to the Commission's assignment to produce a new, inclusive and technically defensible rule was to say, in effect, "no need to re-invent the wheel, we got plenty of good stuff in the work that we have already done." Besides ignoring the Court's attempt to throw the agency a credibility life ring, the Staff's knee-jerk approach of "Oh, we can answer that concern" doomed the new attempt to go back to the optimistic, definitely non-scientific, not technically defensible assumptions that bred and fed earlier illegitimate conclusions.

What, for example, could possibly have been the scientific or technical basis for assuming that Yucca Mountain or some other repository would be up and running in the 20th century? Or, now in the 21st century? NRC has not done a technical or licensing review.

When I visited the site on an ANS engineering tour in 2001, Stone and Webster contractors were plowing desert tracks leaving the site. No plan had been established for handling multi-purpose fuel canisters when they arrived via rail to the desert floor. It had not been decided if the peak temperature of storage casks would be above or below the boiling point of water. A super seal n' shield alloy had yet to be selected. A promising copper-21 that enduring years of beachfront exposure without blemish, fell apart in weeks when subjected to a theoretical storage vault environment. Engineers had just designed a bat (and guano) exclusive (loose-rubble-filled) cavern chimney, but it was untested; nor were engineers quite certain what other critters might set-up housekeeping in the storage vaults over time or whether they would piss alkali or acid. This is not a facetious remark when one is considering the response of materials to environment to which they are subjected over hundreds, thousands, or tens-of-thousands of years. Further the nuclear plume from two generations of nuclear weapons testing was known to pass beneath Yucca Mountain on its way to Death Valley, but it was as yet uncharacterized. So what comparisons, even theoretical, could be supported for the eventual plume from Yucca Mountain? I have seen no indication that these simple issues have been examined and resolved to this day.

Has NRC looked at any of this?

It is not evident in the GEIS and it ignores NRC's long-standing advice to its licensees, " Always consult operating experience." NRC must understand that barber chair confidence and affirmation are different than scientifically and technically defensible determinations.

Further, how is it ethical or legal for the Commission to pronounce on the outcome of a licensing proceeding (Yucca Mountain) even before it has heard any evidence?

Indeed, has NRC ever found any difficulties in any approach to waste handling and storage insurmountable? Now, really, not even the part where Wiley Coyote pushes the Volkswagen bus full of nuclear waste over the cliff, but Roadrunner catches it al in a hot tub full of ginger ale? Sorry, but in the face of NRC's insult to the intelligence approach thus far, I couldn't help this comparison.

I would ask the Commission in a sober moment of reflection to consider if an uninformed, evasive, cynical, and lacking in intellectual integrity, approach to regulation such as the waste confidence DEIS is not a disservice to the United States of America; driving a public that has already lost confidence in government even further afield in its allegiances.

You make nuclear regulation look ridiculous. For shame, NRC.

Why not pay heed to what the Court ordered?

The Court said,

> Even though the Commission engaged in a more substantial analysis of fires than it did of leaks, that analysis is plagued by a failure to examine the consequences of pool fires in addition to the probabilities. Petitioners, citing *Limerick Ecology Action, Inc. v. Nuclear Regulatory Commission*, 869 F.2d 719, 739 (3d Cir. 1989), argue that the Commission could only avoid conducting an EIS if it found the risk of fires to be "remote and speculative." The Commission, citing *Carolina Environmental Study Group v. United States*, 510 F.2d at 799, argues that it did not need to examine the consequences of fires because it found the risk of fires to be very low.
>
> We disagree with both parties. As should be clear by this point in our opinion, an agency conducting an EA generally must examine both the probability of a given harm occurring *and* the consequences of that harm if it does occur. **Only if the harm in question is so "remote and speculative" as to reduce the effective probability of its occurrence to zero may the agency dispense with the consequences portion of the analysis**. *See Limerick Ecology Action, Inc.*, 869 F.2d at 739. But, contra petitioners, the finding that the probability of a given harm is non-zero does not, by itself, mandate an EIS: after the agency examines the consequences of the harm in proportion to the likelihood of its occurrence, the overall expected harm could still be insignificant and thus could support a FONSI. *See Carolina Envtl. Study Grp.*, 510 F.2d at 799 ("Recognition of the minimal

> probability of such an event is not equatable with non-recognition of its consequences.”). Here, however, the Commission did not undertake to examine the consequences of pool fires at all. **Depending on the weighing of the probability and the consequences,** an EIS may or may not be required, and such a determination would merit considerable deference. *C.f.*, *City of New York*, 715 F.2d at 751–52 **(deferring to an agency’s weighing of a “catastrophic” harm against an “infinitesimal probability”). But unless the risk is “remote and speculative,” the Commission must put the weights on both sides of the scale before it can make a determination.**

NRC chooses to declare that spent fuel pool storage are equally(that is presumably beneath regulatory concern) "safe", therefore, says NRC, there is no urgency whatsoever in moving spent fuel from over-packed spent fuel pools to dry cask storage.

At the same time, an NRC taskforce is grimly engaging in recalculating the risk of criticality accidents should neutron absorbing materials required in over-packed spent fuel pools fail.

I would ask NRC to consult with NUREG – 1738 – Spent Fuel Pool Accident Risk in Decommissioning Nuclear Power Plants and the NRC studies that precede it and feed into it.

NUREG-1738 advises in reference tables that as many as 25,000 latent fatalities out to a distance of 500 miles may result from a spent fuel pool fire –even if the emergency planning zone is 95% evacuated.

NUREG-1738 advises a rapid oxidation reaction may occur no matter how long fuel has cooled.

NUREG-1738 advises that a BWR Mark I containment would present no substantial obstacle to aircraft penetration (these being commercial aircraft of modest weight and speed).

NUREG-1738 advises that the probabilities of acts of terror or sabotage are incalculable.

NUREG-1738 advises that BWR Mark I spent fuel pools (Vermont Yankee, in particular, could under severe seismic shock tear open laterally corner to corner. Or, in a most severe event, the entire bottom could simply drop out. I say, the intense radiation from a mass of unshielded fuel would then preclude adding water until robotic equipment could be brought to play; by then too late to stop an exothermic reaction.

NUREG-1738 advises that an exothermic reaction in a spent fuel pool could, if uninterrupted, propagate through the entire mass of fuel – in many reactors-the equivalent of five or more full reactor cores. No such propagation capability exists for dry cask storage. How then can NRC credibly equate risk for wet and dry storage?

An NRC technical expert, working on NUREG-1738, averred that a cask drop in a Mark I spent fuel pool would not be significantly slowed by passage through water and that a drop from as little as four feet from the bottom would result in complete cask penetration. That would be an approximately 11 foot/diameter hole with potentially several tons of spent fuel crushed and punched through to ground level.

Shock waves affecting elevated spent fuel pools need not be limited to natural seismic shock. The Murraugh/ Oklahoma City Federal Building was destroyed by ground shock waves from a truck bearing low-grade explosives and parked more than 75 feet away. At Vermont Yankee, just a few years ago, an ice truck entered the security zone with no search or security challenge. It is clear that NRC has chosen to look the other way on all of these challenges to spent fuel security to the detriment of its credibility and the public's risk of health, safety and security.

Respectfully submitted,

Raymond Shadis
for New England Coalition
And Friends of the Coast
Post Office Box 76,
Edgecomb, Maine 04556
207-882-7801

.