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RULEMAKINGS AND
ADJUDICATIONS STAFFUNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

| | |
|-----------------------|--------------------------------|
| In the Matter of |) Docket No. 72-22 |
| PRIVATE FUEL STORAGE |) ASLPB No. 97-732-02-ISFSI |
| L.L.C. |) DEPOSITION OF: |
| |) |
| (Private Fuel Storage |) <u>DR. WALTER J. ARABASZ</u> |
| Facility) |) |
| |) (Utah Contention I, Part B) |
| |) |

Wednesday, October 31, 2001 - 9:20 a.m.

Location: PARSONS, BEHLE & LATIMER
201 S. Main, Suite 1800
Salt Lake City, UT 84111Reporter: Vicky McDaniel
Notary Public in and for the State of Utah**CitiCourt, LLC**
THE REPORTING GROUP50 South Main, Suite 920
Salt Lake City, Utah 84144

ATOMIC ENERGY REGULATORY COMMISSION

Docket No. _____ Official File No. 889
In the matter of PB
Staff _____ RETURNED ☒
Applicant ☒ RECEIVED ☒
Intervenor _____ REJECTED _____
Other _____ WITHDRAWN _____
DATE 5/19/02 Witness _____
Clerk [Signature]

1 requirements for seismic design of new nuclear power
2 plants, correct?

3 A. Correct.

4 Q. And they have adopted a PSHA, probability
5 seismic hazard analysis, approach for new nuclear power
6 plants, correct?

7 A. As an allowable option, in my understanding.

8 Q. And the use of a PSHA -- well, strike that.
9 Are you aware generally that the NRC is moving towards
10 risk-informed regulation?

11 A. Yes, I am.

12 Q. And use of a PSHA would be in accordance
13 with the NRC's movement toward a risk-informed
14 regulation?

15 A. Correct.

16 Q. Isn't one of the advantages of using a PSHA
17 analysis for earthquakes as opposed to a deterministic
18 analysis that you're better able to incorporate risk
19 and uncertainty into your analysis?

20 A. Correct.

21 Q. How would you generally describe these
22 advantages in practical terms? Why -- I take it you
23 would favor the use of a PSHA generally as opposed to a
24 deterministic method?

25 A. I recall in my last deposition saying that

1 yes, because of my involvement in the evolution of PSHA
2 that I understand its benefits and agree to them.

3 Q. Therefore, as far as this contention is
4 concerned, the issue as far as you're concerned is what
5 the level of the return period should be for picking
6 the design level for ISFSIs with respect to a PSHA
7 analysis?

8 A. Yes. I think simply put, it would be
9 pinning down what are to be the applicable regulations
10 and standards.

11 Q. Insofar as use of the probability seismic
12 hazard analysis approach would be?

13 A. Correct.

14 Q. Now, you referred to the rulemaking plan,
15 and that is referenced in item 1 under Part B of Utah
16 L.

17 A. Correct.

18 Q. And the rulemaking plan that you're
19 referencing there is set forth in a SECY paper 98-126
20 dated June 4, 1998?

21 A. Correct.

22 Q. And what is your understanding of divisions
23 of the June 1998 rulemaking plan in terms of what are
24 provided for?

25 A. That's in -- first, that the staff presented

1 A. I don't take issue with that, no.

2 Q. And do you take issue with the second
3 sentence in that first statement or bullet where it
4 says, "In its Statement of Consideration accompanying
5 the rulemaking for 10 CFR Part 72, the NRC recognized
6 the reduced radiological hazards associated with dry
7 cask storage facilities and stated that the seismic
8 design-basis ground motions for these facilities may
9 not be as high as for commercial nuclear power plants"?
10 Do you agree with that statement, that the design-basis
11 ground motions for ISFSIs may not be as high as those
12 for commercial nuclear power plants, given their
13 reduced hazards?

14 A. It seems logical. I don't take great issue
15 with it, no.

16 Q. And generally do you agree with the graded
17 approach in terms of seismic design requirements for
18 facilities linked to their use or potential hazards?

19 A. It seems rational and needed, yes.

20 Q. So therefore I take it that with Basis 3 --
21 going back to graduated approaches, in fact doesn't the
22 Uniform Building Code, International Building Code
23 provide for graduated approaches for seismic design
24 requirements for structures?

25 A. Yes, they do.

1 Q. And similarly DOE 1020 provides for
2 graduated design requirements for structures?

3 A. Correct.

4 Q. And so your area of this disagreement with
5 the staff I take it concerns the second statement that
6 appears on Exhibit 3?

7 A. That's correct, the second and third.

8 Q. Second and third, okay. And there the staff
9 claims that the reference probability for nuclear power
10 plants as set forth in Reg Guide 1.165 of $1E^{-5}$ is
11 expressed as the median annual probability of
12 exceedance, and they claim that is the same as the --
13 as a mean annual probability of exceedance of $1E^{-4}$.

14 A. That's correct.

15 Q. And you take issue with that statement as
16 it's applied in the context here with respect to
17 Private Fuel Storage facility?

18 A. Yes.

19 Q. If I understand your position correctly,
20 it's that the statement that a median of $1E^{-5}$ is the
21 same as a mean annual probability of exceedance of $1E^{-4}$
22 is based on plants and experience in the central and
23 eastern United States?

24 A. That's correct.

25 Q. And it's your position that for plants in

1 A. Performance category 3, yes.

2 Q. And it had a performance objective of what?

3 A. 1×10^{-4} .

4 Q. And what do you understand that performance
5 objective to mean in practical terms?

6 A. It's the annual probability of exceedance
7 relating to some limits of acceptable behavior. I
8 think that's the type of wording that DOE uses to
9 define a seismic performance goal so that the annual
10 probability of not exceeding some defined consequence,
11 some adverse consequence would be 1×10^{-4} .

12 Q. And then you have performance category 4
13 facilities, and they have a 10^{-4} probability exceedance
14 hazard?

15 A. I believe that's correct, yes.

16 Q. And the 10^{-5} objective performance; is that
17 correct?

18 A. That's correct, to the best of my memory,
19 yes.

20 Q. As we talked about before, 10^{-4} corresponds
21 to nuclear -- excuse me -- performance category 4
22 corresponds to nuclear power plants?

23 A. Yes.

24 Q. And it would be appropriate in terms of DOE
25 Standard 1020 for ISFSIs to be under performance

1 category 3?

2 A. That's my general understanding.

3 Q. And you would agree with that classification
4 for ISFSIs under DOE Standard 1020?

5 A. I personally would, yes.

6 Q. So therefore under the 1994 version of the
7 DOE Standard 1020, that would provide for ISFSIs such
8 as the PSFS a use of a mean exceedance hazard of 5×10^{-4}
9 for design, correct?

10 A. Correct.

11 Q. With the objective goal of some consequence
12 not exceeding 10^{-4} ?

13 A. Correct.

14 Q. And if that approach were adopted, you would
15 find that approach acceptable?

16 A. I have to -- let's see. I guess I'm
17 speaking as an advisor to the state and as an expert.
18 Everything in my understanding would say yes, this is a
19 rational approach.

20 Q. From DOE Standard 1020, do you know how this
21 difference between the probability exceedance hazard,
22 for example, at 5×10^{-4} , and the ultimate objective
23 criteria for performance category 3 facilities is
24 achieved?

25 A. The document I think implicitly includes