



NRC PUBLIC DOCUMENT ROOM

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

Docket No. 50-344

5 In the Matter of PORTLAND) (Proposed Amendment to Facility
6 GENERAL ELECTRIC COMPANY,) Operating License NPF-1 to Permit
7 et al (Trojan Nuclear Plant).) Storage Pool Modification

EXCEPTIONS OF INTERVENOR STATE OF OREGON
TO THE INITIAL DECISION
(Amendment to Operating License)

10 EXCEPTION 1: (Water Chemistry) The ASLB was incorrect when it
11 found that there was no advantage in imposing technical
12 specifications on spent fuel pool water chemistry:

13 Exception 1a: The ASLB erred when it found that Oregon implied
14 that water chemistry controls should be imposed as technical
15 specifications. (Page 7, Finding 4).

16 Exception 1b: The ASLB erred when it found that testimony
17 arguing against water chemistry control technical
18 specifications was not controverted. (Page 8, Finding 7).

19 Exception 1c: The ASLB erred when it found that water
20 chemistry could be adequately monitored through 10 CFR 50.59
21 and state surveillance of records. (Page 9, Finding 8).

22 Exception 1d: The ASLB erred when it found that components of
23 the SFP or fuel assemblies stored therein will not be subject
24 to adverse corrosion. (Page 14, Finding 16).

25 Exception 1e: In the absence of water chemistry control

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1 technical specifications, the ASLB erred when it found that
2 stress corrosion cracking in weld heat affected zones would be
3 precluded by proper water chemistry control. (Page 15, Finding
4 17).

5 Exception 1f: In the absence of water chemistry control
6 technical specifications, the ASLB erred when it found that the
7 SFP liner would not leak due to corrosion. (Page 20, Finding
8 31).

9 Exception 1g: In the absence of water chemistry control
10 technical specifications, the ASLB erred when it found that
11 corrosion would not result in significant off-site radiation
12 releases and occupational exposures due to the modifications.
13 (Page 45, Finding 73).

14 Exception 1h: The ASLB erred in its finding of similarity
15 between fuel stored for 18 years and 14 years and Trojan spent
16 fuel. (Page 12, Finding 12).

17 EXCEPTION 2: (Corrosion Coupons) The ASLB was incorrect when
18 it found that a technical specification requiring a corrosion
19 coupon program was not necessary:

20 Exception 2a: The ASLB erred by finding that the evidence does
21 not indicate the necessity for requiring a corrosion coupon
22 program. (Page 9, Finding 9).

23 Exception 2b: The ASLB erred in its interpretation of Oregon's
24 witness' position on use of coupons. (Page 9, Finding 10).

25 Exception 2c: In the absence of requiring a method to evaluate

1 abnormal water chemistry conditions, the ASLB erred in finding
2 that SFP components or fuel assemblies would not be subject to
3 adverse corrosion. (Page 14, Finding 16).

4 EXCEPTION 3: (Alternate Storage Cavaties) The ASLB was
5 incorrect when it found that a technical specification was not
6 required to prohibit spacing of freshly discharged fuel no
7 closer than every other cell in the new racks:

8 Exception 3a: The ASLB erred because it misinterpreted
9 Oregon's witness as Mr. Godard in fact relied upon alternate
10 storage cavaties in his analysis. (Page 30, Finding 45).

11 Exception 3b: The ASLB erred in finding that requiring use of
12 alternate storage cavaties would be an unjustifiably rigid
13 requirement. (Page 31, Finding 46, Footnote 8).

14 Exception 3c: In the absence of imposing a technical
15 specification requiring the use of alternative storage
16 cavaties, the ASLB erred when it found that the potential
17 consequences of projectile impacts are acceptable from the
18 standpoint of public health and safety. (Page 31, Finding 47).

19 EXCEPTION 4: (Water Temperature) The ASLB was incorrect when
20 it found that a technical specification was not required to
21 ensure that the spent fuel pool water would not exceed a
22 temperature of 140 degrees F:

23 Exception 4a: In the absence of imposing a technical
24 specification, the ASLB erred when it found that little
25 corrosion will occur at the temperature of the SFP water

1 because no enforceable temperature limit has been set. (Page
2 12, Finding 13).

3 Exception 4b: In the absence of imposing a technical
4 specification limiting water temperature, the ASLB erred in
5 finding that SFP components or fuel assemblies will not be
6 subject to adverse corrosion. (Page 14, Finding 16).

7 Exception 4c: In the absence of imposing a technical
8 specification limiting water temperature, the ASLB erred in
9 finding that the weld heat affected zone would not be subject
10 to corrosion. (Page 15, Finding 17).

11 Exception 4d: In the absence of imposing a technical
12 specification limiting water temperature, the ASLB erred in
13 finding that no liner corrosion is to be expected. (Page 20,
14 Finding 31).

15 Exception 4e: The ASLB erred when it found that no serious
16 consequences exist should water temperature exceed 140 degrees
17 F. The ASLB erred in concluding that a 140 degree F limit
18 would be rigid. Moreover, the ASLB erred by considering
19 "rigidity" as a test for imposition of a technical
20 specification. (Page 31, Finding 46, Footnote 8).

21 Exception 4f: In the absence of imposing a technical
22 specification limiting increases in water temperature, the ASLB
23 erred in finding that a small increase in temperature is not
24 detrimental to SFP equipment. (Page 37, Finding 61).

25 Exception 4g: In the absence of imposing a technical

1 specification limiting increases in water temperature, the ASLB
2 erred in finding that the SFP cooling equipment will not be
3 burdened. (Page 31, Finding 62).

4 Exception 4h: In the absence of imposing a technical
5 specification limiting increases in water temperature, the ASLB
6 erred in finding that temperature would not affect off-site
7 releases of radioactivity and occupational exposures. (Page
8 45, Finding 73).

9 EXCEPTION 5: (2000 ppm Boron) The ASLB was incorrect when it
10 found that a technical specification was not required to ensure
11 a continuous maintenance of 2,000 ppm of boron in the water in
12 the spent fuel pool:

13 Exception 5a: The ASLB erred when it found that the likelihood
14 of a projectile causing criticality will not increase as a
15 result of the proposed modification. Further, the ASLB erred
16 in relying on a "wedge mechanism" for causing criticality from
17 projectile impacts. The ASLB erred in finding that under
18 actual conditions, a substantial amount of refueling boron will
19 remain in the pool. Moreover, the ASLB erred when it assumed
20 only spent fuel will be stored in the SFP. (Page 30, Finding
21 46).

22 Exception 5b: The ASLB erred when it found that projectile
23 impacts on the spent fuel pool were acceptable from the
24 standpoint of public health and safety. (Page 31, Finding 47).

25 Exception 5c: The ASLB erred when it failed to note that if

1 2000 ppm boron was maintained in the SFP, criticality would be
2 precluded in all circumstances. (Page 32, Finding 49).

3 Exception 5d: In the absence of imposing a technical
4 specification requiring a 2000 ppm boron concentration, the
5 ASLB erred when it relied on a boron concentration in the pool
6 that may or may not actually exist. (Page 33, Finding 50).

7 Exception 5e: The ASLB erred when it found the likelihood of
8 projectiles causing criticality was extremely improbable.
9 (page 33, Finding 51).

10 Exception 5f: The ASLB erred in finding that a distinction
11 exists between the NRC staff proposal for 2000 ppm during
12 re-racking and Oregon's proposal for 2000 ppm at all times.
13 (Page 30, Finding 52).

14 Exception 5g: The ASLB erred in finding that criticality will
15 not occur for credible but unlikely off-normal conditions.
16 (Page 35, Finding 55).

17 Exception 5h: The ASLB erred in finding that the SFP will
18 remain subcritical in all likely circumstances. (Page 35,
19 Finding 58).

20 Exception 5i: In the absence of a technical specification
21 precluding criticality by requiring 2000 ppm of boron, the ASLB
22 erred when it found that releases of radioactivity and
23 occupational exposures are insignificant. (Page 45, Finding
24 73).

25 EXCEPTION 6: (Full Core Reserve) The ASLB was incorrect when

1 it found that a technical specification was not required to
2 maintain a full core reserve:

3 Exception 6a: The ASLB erred in finding that SFP liner leaks
4 can be repaired in the absence of a full core reserve. (Page
5 15, Finding 18).

6 Exception 6b: The ASLB erred when it found that the proposed
7 modification will facilitate potentially needed repairs in the
8 spent fuel pool or reactor. (Page 23, Finding 34).

9 Exception 6c: The ASLB erred when it did not find that
10 shipping cask availability is important in performing pool or
11 reactor repairs. (Page 23, Finding 35).

12 Exception 6d: The ASLB erred in finding that the conditions
13 before and after SFP modification are acceptable for performing
14 reactor and SFP repairs. (Page 24, Finding 36).

15 Exception 6e: The ASLB erred because it failed to find that a
16 50 percent chance exists that a full core reserve will be
17 needed during a three-year period. (Page 23, Finding 34).

18 EXCEPTION 7: (Utilization of SFP) The ASLB was incorrect when
19 it found that use of the spent fuel pool expanded capacity
20 beyond 1 and 1/3 cores was acceptable prior to completion of a
21 generic environmental impact statement on the subject of
22 handling of spent fuel:

23 Exception 7a: The ASLB erred when it found that Trojan may be
24 required to shut down in 1979 and that, therefore, substantial
25 harm to the public interest would result if restrictions were

1 placed on the proposed modification. (Page 56, Finding 86).

2 Exception 7b: The ASLB erred when it found that the NRC staff
3 had adequately analyzed, weighed and balanced the five factors
4 in the NRC Policy Statement. (Page 57, Finding 87).

5 Exception 7c: The ASLB erred when it represented Oregon's
6 position. Oregon does not object to rack installation of use
7 thereof up to 4/3 cores. (Page 57, Finding 88).

8 Exception 7d: The ASLB erred when it found that NRC staff had
9 successfully withstood cross-examination on cumulative
10 environmental impacts. (Page 53, Finding 83).

11 Exception 7e: The ASLB erred when it found that the NRC staff
12 did not necessarily testify that once racks are installed,
13 there will be a strong disincentive to do anything other than
14 use the racks until they are filled. (Page 55, Finding 86).

15 Exception 7f: The ASLB erred when it found that cumulative
16 environmental impacts had not been overlooked. (Page 55,
17 Finding 86).

18 Exception 7g: The ASLB erred when it found that NEPA does not
19 require a GEIS. (Page 58, Finding 90).

20 Exception 7h: The ASLB erred when it found that a
21 consideration of need for the SFP modification, or alternatives
22 thereto, was not necessary. (Page 65, Finding 98).

23 EXCEPTION H: (Miscellaneous) The ASLB erred when it found
24 that the test to be applied when adopting a technical
25 / / /

1 specification is whether it burdens the operator. (Page 18,
2 Finding 25).

3 II.

4 EXCEPTIONS TO THE CONCLUSIONS OF LAW

5 EXCEPTION 1: The ASLB's Conclusions of Law, pages 72 and 73,
6 Conclusions (1) through (4) are incorrect in that they are
7 based on the incorrect and invalid Finding of Fact excepted to
8 by Intervenor, State of Oregon, in Part I of these Exceptions
9 and that therefore there is no basis for the ASLB's Conclusions
10 of Law.

11 EXCEPTION 2: The ASLB's Conclusions of Law relating to the
12 need for technical specifications violate NRC policies.

13 EXCEPTION 3: In any event, the ASLB's Conclusions of Law (1),
14 (2), (3), and (4) are incorrect.

15 Respectfully submitted,

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