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Dated at Rockville, Maryland, this 7th day of November 1996.

For the Nuclear Regulatory Commission.
Charles J. Haughney,

*Acting Director, Spent Fuel Project Office,
Office of Nuclear Material Safety and
Safeguards.*

[FR Doc. 96-30153 Filed 11-25-96; 8:45 am]

BILLING CODE 7590-01-P

[Docket No. 50-305]

**Wisconsin Public Service Corporation,
Wisconsin Power & Light Co., Madison
Gas & Electric Co. (Kewaunee Nuclear
Power Plant); Exemption**

I

The Wisconsin Public Service Corporation, Wisconsin Power and Light Company, and Madison Gas and Electric Company (the licensee), are the holders of Facility Operating License No. DPR-43 which authorizes operation of the Kewaunee Nuclear Power Plant (KNPP). The license provides, among other things, that it is subject to all rules, regulations, and orders of the Nuclear Regulatory Commission (the Commission) now and hereafter in effect.

The facility consists of a pressurized water reactor located at the licensee's site in Kewaunee County, Wisconsin.

II

The Code of Federal Regulations, paragraph I.D.3, "Calculation of Reflood Rate for Pressurized Water Reactors [PWRs]," of Appendix K to Part 50 of Title 10 of the Code of Federal Regulations (10 CFR) requires that the refilling of the reactor vessel and the time and rate of reflooding of the core be calculated by an acceptable model that considers the thermal and hydraulic characteristics of the core and of the reactor system. In particular, paragraph I.D.3 requires, in part, that, "The ratio of the total fluid flow at the core exit plane to the total flow at the core inlet plane (carryover fraction) shall be used to determine the core exit flow and shall be determined in accordance with applicable experimental data." The purpose of this requirement is to assure that the core exit flow during the post-loss-of-coolant accident (LOCA) refill/reflood phase is determined using a model that accounts for appropriate experimental data.

Paragraph I.D.5, "Refill and Reflood Heat Transfer for Pressurized Water

Reactors," of Appendix K to 10 CFR Part 50 requires that: (1) for reflood rates of 1 inch per second or higher, the reflood heat transfer coefficients be based on applicable experimental data for unblocked cores, and (2) for reflood rates less than 1 inch per second during refill and reflood, heat transfer calculations be based on the assumption that cooling is only by steam.

By letter dated July 23, 1996, the licensee requested an exemption from the requirements of 10 CFR Part 50, Appendix K, paragraphs I.D.3 and I.D.5, as they apply to an evaluation model (EM) for the LOCA analysis for two-loop Westinghouse plants such as Kewaunee (WCAP-10924-P, Revision 1, Volume 1, Addendum 4).

The specific provision of paragraph I.D.3 from which the licensee requested an exemption, is the calculation of core exit flow based on carryover fraction. The licensee stated that the prescriptions for this calculation given in paragraph I.D.3 were based on data for a bottom-flooding configuration design. The Kewaunee design relies on upper plenum injection (UPI) for the ECCS injection during the reflood phase of a large-break LOCA. UPI is not a "lower flooding design;" its ECCS flow patterns, flow magnitudes, core cooling mechanisms, and, in fact, the meanings and impacts of the terms "inlet" and "exit" are different than those of bottom flooding plants. The EM is described in WCAP 10924-P, Revision 1, "Westinghouse Large-Break LOCA Best-Estimate Methodology, Volume 1: Model Description and Validation, Addendum 4: Model Revisions," dated August 1990, which was generically approved in a staff SER dated February 8, 1991. The EM determines core flow, including flow "exiting" the core, flow "entering" the core, and flow within the core and elsewhere within the reactor coolant system (RCS) in accordance with applicable experimental data. The data are different than that referenced in paragraph I.D.3, however, they were found acceptable because they are specifically applicable to UPI designs. Because of the differences between UPI design considerations and those for bottom flooding designs mentioned above, the "carryover fraction" as defined in paragraph I.D.3 is not calculated in the approved EM and would not have the same technical significance if it were. The licensee, therefore, concludes that, in using the approved UPI model for Kewaunee, it will not comply with paragraph I.D.3. The staff SER of February 8, 1991, finds that the WCAP-10924-P EM contains an empirically verified model, more directly applicable to top flooding

situations, to calculate core exit flow, which satisfies the technical purpose of the Appendix K, paragraph I.D.3 requirement to determine the core exit flow, but does not comply with the letter of the requirement.

In more detail, the intent of the Appendix K, paragraph I.D.3, requirement is to assure that the calculation of core exit flow is performed using an EM which has been verified against appropriate experimental data for LOCA accident analyses. The Westinghouse COBRA/TRAC code (WCOBRA/TRAC) consists of: (1) Westinghouse Large-Break LOCA Best Estimate Methodology, Volume 1: Model Description and Validation, WCAP-10924-P-A, Rev. 1, and Addenda 1, 2, and 3, December 1988, and (2) a Westinghouse Large-Break LOCA Best-Estimate Methodology, Volume 2: Application to Two-Loop PWRs Equipped with Upper Plenum Injection, WCAP-10924-P-A, Rev. 2, December 1988.

To assess WCOBRA/TRAC's capability for predicting the correct thermal-hydraulic behavior for upper plenum injection situations, WCOBRA/TRAC has been compared to the Japanese Cylindrical Core Test Facility data which models the interaction effects of upper plenum injection in a large scale test facility. WCOBRA/TRAC predicts the thermal-hydraulic effects of the upper plenum injection such that the carryover of steam and water into the hot legs is more realistically calculated.

The staff finds that the exemption from the paragraph I.D.3 requirement is acceptable because the licensee has provided an acceptable method to satisfy the underlying purpose of the requirement that appropriately models heat transfer mechanisms in UPI designs, and application of the regulation is not necessary to achieve the underlying purpose of the rule.

Paragraph I.D.5, dealing with refill and reflood heat transfer for PWRs, provides heat transfer prescriptions for refill, reflood with a flooding rate of less than 1 inch per second, and reflood with a flooding rate of more than 1 inch per second for bottom-flooding PWRs. The purpose of the paragraph is to assure that heat transfer in the core is appropriately calculated in the refill and reflood phases of post-LOCA recovery.

Paragraph I.D.5.a requires that "New correlations or modifications to the FLECHT [full length emergency cooling heat transfer] heat transfer correlations are acceptable only after they are demonstrated to be conservative, by comparison with FLECHT data, for a range of parameters consistent with the

transient to which they are applied." The licensee requested an exemption from the prescriptions of this paragraph because the FLECHT data do not portray UPI core heat transfer mechanisms as realistically as the more recent data upon which the models in WCAP-10924 were based. The licensee also indicates that the Kewaunee design is not lower flooding, and that technical considerations are different between bottom flooding designs and UPI design similar to those discussed above for paragraph I.D.3. The licensee identified that the WCAP-10924-P EM contains an empirically verified model which accounts for refill and reflood heat transfer, which satisfies the purpose of the paragraph I.D.5.a requirement. The heat transfer models in the approved UPI EM are based on comparisons to data other than the FLECHT data cited in paragraph I.D.5.a, and comparisons to the applicable data demonstrate acceptable conservatism (as identified in the staff SER of February 8, 1991). Because of the differences in bases, it is not clear that the licensee can demonstrate monotonic conservatism with respect to FLECHT data.

Further, to meet the intent of Appendix K, paragraph I.D.5, which is to use the most applicable data for LOCA accident analyses to appropriately calculate heat transfer during the refill and reflood phases; the WCOBRA/TRAC code has been verified against two independent sets of experimental data which model the upper plenum injection flow and heat transfer situation.

The first series of tests which have been modeled by WCOBRA/TRAC are the Westinghouse G-2 refill downflow and counterflow rod bundle film boiling experiments (Westinghouse G-2, 17x17 Refill Heat Transfer Tests and Analysis, WCAP-8793, August 1976).

These experiments were performed as a full length 17x17 Westinghouse rod bundle array which had a total of 336 heated rods. The injection flow was from the top of the bundle and is scalable to the UPI injection flows. The pressures varied between 20-100 psia which is the typical range for UPI top flooding situations. Both concurrent downflow film boiling and countercurrent film boiling experiments were modeled using WCOBRA/TRAC. Both of these flow situations are found in the calculated core response for a PWR with UPI.

In addition to modeling these separate effects tests, WCOBRA/TRAC has been used to model the Japanese Cylindrical Core Test Facility experiments with upper plenum injection. The tests which have been modeled included (1)

a symmetrical UPI injection with maximum injection flow, (2) minimum injection flows with a nearly symmetrical injection pattern, (3) a minimum UPI injection flow with a skewed UPI injection, and (4) a cold leg injection reference test for the UPI tests.

The results of these comparisons are documented and show that WCOBRA/TRAC does predict heat transfer behavior for these complex film boiling situations as well as the system response for upper plenum injection situations.

The effect of flow blockage due to cladding burst is explicitly accounted for in WCOBRA/TRAC with models which calculate cladding swelling, burst, and area reduction due to blockage. These models are based on previously approved models used in current evaluation models and on flow blockage models determined to be acceptable by the staff. The effect of flow blockage is accounted for from the time burst is calculated to occur. The fluid models in WCOBRA/TRAC calculate flow diversion as a result of the blockage and take into account the blockage from the time the cladding burst is calculated to occur. Thus, the heat transfer behavior is predicted for these complex film boiling situations and, thus, the intent of Appendix K, paragraph I.D.5, which requires flow blockage effects be taken into account, is met.

The staff finds that the exemption from the paragraph I.D.5.a requirement is acceptable based on the provision of an acceptable method to satisfy the purpose of the paragraph that requires appropriate calculation of core reflood rates and heat transfer during a large break LOCA.

Paragraph I.D.5.b requires that "During refill and during reflood when reflood rates are less than one inch per second, heat transfer calculations shall be based on the assumption that cooling is only by steam, and shall take into account any flow blockage calculated to occur as a result of cladding swelling or rupture as such blockage might affect both local steam flow and heat transfer." The EM approved for UPI plants which the licensee proposes to reference does base heat transfer on cooling other than steam if other regimes are calculated to occur. The bases of acceptability, including data comparisons, for this are discussed in the generic SER for the EM. By using this methodology, the licensee does not comply with this requirement, since the methodology recognizes that for a top flooding design, the preponderance of cooling water falls down into the core from above and may or may not be vaporized. Because the

licensee's model does not meet the "steam cooling only" requirement of I.D.5.b, but provides an approved alternate methodology (which does consider the thermal and hydraulic effects of cladding swelling and rupture, as also required in paragraph I.D.5.b) for calculating heat transfer, the staff finds the exemption from the requirement of I.D.5.b acceptable, as compliance is demonstrated not to be necessary to achieve the underlying purpose of the rule.

III

Section 50.12 of 10 CFR permits the granting of an exemption from the regulations under special circumstances. According to 10 CFR 50.12(a)(2)(ii), special circumstances are present whenever application of the regulation in question is not necessary to achieve the underlying purpose of the rule.

The staff finds that the requested exemptions for Kewaunee are acceptable, since compliance with the literal requirements of the paragraphs cited is not necessary given that the approved EM is based upon appropriate experimental data, the approved EM satisfactorily accounts for the cooling mechanisms in the Kewaunee UPI design for calculations of core reflood rates and heat transfer during a large break LOCA, and that the approved EM satisfies the purpose of the exempted requirements.

Thus, using the best-estimate thermal-hydraulic approved large break LOCA EM, the underlying purpose of the Appendix K, paragraphs I.D.3 and I.D.5 requirements can be achieved.

IV

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, this exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security.

Therefore, the Commission hereby grants an exemption from 10 CFR Part 50, Appendix K, paragraphs I.D.3 and I.D.5. The staff also finds that the large break LOCA EM described in any approved version of WCAP-10924-P incorporated by Kewaunee may be used in licensing analyses, and that further exemptions will not be necessary unless the updated approved versions of the EM do not meet other requirements of 10 CFR 50.46 and/or Appendix K.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of the exemption will have no significant impact on the quality of the human environment (61 FR 42447).

This exemption is effective upon issuance.

Dated at Rockville, Maryland this 19th day of November 1996.

For the Nuclear Regulatory Commission.
Frank J. Miraglia,

Acting Director, Office of Nuclear Reactor Regulation.

[FR Doc. 96-30154 Filed 11-25-96; 8:45 am]

BILLING CODE 7590-01-P

Sunshine Act Meeting

AGENCY HOLDING THE MEETING: Nuclear Regulatory Commission.

DATES: Weeks of November 25, December 2, 9, and 16, 1996.

PLACE: Commissioners' Conference Room, 11555 Rockville Pike, Rockville, Maryland.

STATUS: Public and Closed.

MATTERS TO BE CONSIDERED:

Week of November 25

Wednesday, November 27

11:30 a.m.

Affirmation Session (Public Meeting) (if needed)

Week of December 2—Tentative

Friday, December 6

9:30 a.m.

Meeting with Advisory Committee on Reactor Safeguards (ACRS) (Public Meeting)

(Contact: John Larkins, 301-415-7360)

11:00 a.m.

Affirmation Session (Public Meeting) (if needed)

Week of December 9—Tentative

Thursday, December 12

3:30 p.m.

Affirmation Session (Public Meeting) (if needed)

Week of December 16—Tentative

Monday, December 16

2:00 p.m.

Briefing on Inspection Criteria, Evolution of Assessment, and SALP System (Public Meeting)

Tuesday, December 17

2:00 p.m.

Meeting with Chairman of Nuclear Safety Research Review Committee (NSRRC) (Public Meeting)

(Contact: Jose Cortez, 301-415-6596)

By a vote of 5-0 on November 13, the Commission determined pursuant to U.S.C. 552b(e) and 10 CFR Sec. 9.107(a) of the Commission's rules that "Affirmation of EMERICK S. McDANIEL (Denial of Application for Reactor Operator License) LBP-96-17, Docket No. 55-21849-OT" be held on November 13, and on less than one week's notice to the public.

The schedule for Commission meetings is subject to change on short notice. To verify the status of meetings call (Recording)—(301) 415-1292.

CONTACT PERSON FOR MORE INFORMATION: Bill Hill (301) 415-1661.

The NRC Commission Meeting Schedule can be found on the Internet at:
<http://www.nrc.gov/SECY/smj/schedule.htm>

This notice is distributed by mail to several hundred subscribers; if you no longer wish to receive it, or would like to be added to it, please contact the Office of the Secretary, Attn: Operations Branch, Washington, D.C. 20555 (301-415-1661).

In addition, distribution of this meeting notice over the internet system is available. If you are interested in receiving this Commission meeting schedule electronically, please send an electronic message to wmh@nrc.gov or dkw@nrc.gov.

Dated: November 22, 1996.

William M. Hill, Jr.,

SECY Tracking Officer, Office of the Secretary.

[FR Doc. 96-30390 Filed 11-22-96; 3:00 pm]

BILLING CODE 7590-01-M

[Docket No. 50-309]

Maine Yankee Atomic Power Company; Maine Yankee Atomic Power Station; Issuance of Director's Decision Under 10 CFR 2.206

Notice is hereby given that the Acting Director, Office of Nuclear Reactor Regulation, has acted on a Petition for action under 10 CFR 2.206 received from Ms. Anne D. Burt, on behalf of Friends of the Coast—Opposing Nuclear Pollution, dated January 20, 1996, for the Maine Yankee Atomic Power Station.

The Petition requests that the Commission take expedited action to (1) suspend the operating license of Maine Yankee pending resolution of the Petition; (2) examine and test by plug sampling—or other methods approved by the American Society of Mechanical Engineers—all large piping welds that may have been susceptible to micro-fissures at the time of construction; (3) reanalyze the Maine Yankee containment as one located in an area where seismic risk is not "low"; (4) reduce the licensed operating capacity of Maine Yankee to a level consistent with a flawed containment and/or flawed reactor coolant piping welds; (5) hold an informal public hearing in the area of the plant regarding the Petition; and (6) place the Petitioner on service and mailing lists relevant to the group's

interests in safety at Maine Yankee and intention to participate in all public forums opened by the Nuclear Regulatory Commission (NRC).

By letter dated May 13, 1996, the Director, Office of Nuclear Reactor Regulation (NRR), NRC, acknowledged the NRC's receipt of the Petition, and, for the reasons stated in the letter, denied Petitioner's request for immediate action suspending the operating license or reducing the licensed operating capacity of Maine Yankee (Requests 1 and, in part, 4). In addition, for reasons stated in the May 13, 1996, letter, the Director denied the Petitioner's request for an informal hearing (Request 5). The Director also stated in the May 13, 1996, letter that Petitioner's request that the NRC place Petitioner on service and mailing lists relevant to its interests in safety at Maine Yankee and its intention to participate in all public forums opened by the NRC (Request 6) was moot, as Petitioner's attorney had already been added to the Maine Yankee service list.

The Acting Director of the Office of Nuclear Reactor Regulation has now determined that no basis exists for taking any action in response to Requests 2, 3, and 4 of the Petition dated January 20, 1996. Accordingly, Requests 2, 3, and 4 have been denied for the reasons stated in the "Director's Decision Under 10 CFR 2.206" (DD-96-20), the complete text of which follows this notice and which is available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C. 20555, and at the local public document room located at the Wiscasset Public Library, High Street, P.O. Box 367, Wiscasset, Maine 04578. A copy of this Decision will be filed with the Secretary for the Commission's review in accordance with 10 CFR 2.206. As provided by the regulation, the Decision will constitute the final action of the Commission 25 days after the date of issuance of the Decision unless the Commission on its own motion institutes a review of the Decision within that time.

Dated at Rockville, Maryland, this 20th day of November 1996.

For the Nuclear Regulatory Commission.
Frank J. Miraglia,
Acting Director, Office of Nuclear Reactor Regulation.

I. Introduction

By letter dated January 20, 1996, Ms. Anne D. Burt filed a Petition with the U.S. Nuclear Regulatory Commission (NRC), pursuant to 10 CFR 2.206, on behalf of the Friends of the Coast—