

UNITED STATES ATOMIC ENERGY COMMISSION

COMMENTS OF THE DIRECTOR OF REGULATION
ON REQUESTS FOR EXEMPTIONS FROM THE
REQUIREMENTS OF 10 CFR SECTION 50.46

On January 4, 1974, the Commission published in the Federal Register an amendment of 10 CFR Part 50, (39 FR 1001). This amendment added a new § 50.46 to 10 CFR Part 50. This section sets forth the acceptance criteria for emergency core cooling systems (ECCS) for light water nuclear power reactors and requires that each light-water nuclear power reactor fueled with uranium oxide pellets within cylindrical zircalloy cladding shall be provided with an acceptable ECCS, determined in accordance with an acceptable evaluation model. The required and acceptable feature of such models are set forth in 10 CFR Part 50, Appendix K. The new regulation also provided that, with respect to reactors for which operating licenses have previously been issued and for which operating licenses may issue on or before December 28, 1974, the time for which actions by affected licensees are required or permitted under the new regulation shall begin to run 30 days after publication of the regulation in the Federal Register. Within six months of that date each affected licensee was required to submit to the Director of Regulation an evaluation of the ECCS performance capability for the reactor involved and prepared changes in technical specifications or license amendments as may be necessary to bring reactor operation in conformity with the new regulation and to thereafter operate the reactor in accordance thereto. Also provided in the new regulation were procedures to be followed for licensees

to seek extensions of time from the Director of Regulation to achieve compliance with 10 CFR § 50.46 or to seek exemption from the Commission from the operating requirements of 10 CFR § 50.46. With respect to requests for exemptions from the requirements, the procedure established under 10 CFR § 50.46 called for the licensee to submit such requests to the Commission at least 45 days prior to the date that compliance would otherwise be required. Compliance was required upon submission of the evaluation, on August 5, 1974, or, if such date were extended by the Director of Regulation, in accordance with such extension. Public notice of the receipt of the exemption request was to be provided by publication in the Federal Register and members of the public invited to submit comments on the request within fourteen days of such publication. Within five days following the expiration of the comment period the Director of Regulation is required to submit his views as to the exemption request to the Commission.

In accordance with the above procedures the Director of Regulation has reviewed the exemption requests of the nine licensees which submitted them to the Commission and herewith submits his views with respect to these exemption requests as required by 10 CFR § 50.46(a)(2)(vi). The nine licensees to which these comments are directed are:

<u>Licensee</u>	<u>Reactor</u>	<u>Docket No.</u>
Metropolitan Edison Co.	Three Mile Island 1	50-289
Virginia Electric & Power Co.	Surry 1 & 2	50-280/ 50-281
Consolidated Edison Co. of NY	Indian Point 2	50-247
Florida Power & Light Co.	Turkey Point 3 & 4	50-250/ 50-251
Power Auth. of the State of NY	Fitzpatrick	50-333
Nebraska Public Power District	Cooper	50-298
Iowa Electric Light & Power Co.	Duane Arnold	50-331
Jersey Central Power & Light Co.	Oyster Creek 1	50-219
Consumers Power Co.	Big Rock Point	50-155

It should be noted at the outset that each of the foregoing licensees has filed with the Director of Regulation a request for an extension of time, in accordance with 10 CFR § 50.46(a)(2)(iii), to submit the evaluations and proposed changes in technical specifications required by 10 CFR § 50.46. These requests are under consideration by the Director of Regulation. In addition Consumers Power Company has also requested a variance from the requirements of the Commission's Interim Acceptance Criteria for Emergency Core Cooling Systems (36 F.R. 12248, as amended 36 F.R. 24082).

If the requested extensions of time are granted for the minimum time necessary to enable these licensees to furnish the evaluations and proposed technical specifications, in accordance with § 50.46(a)(2)(iii),

these licensees may not have 45 days available before such evaluations are submitted within which to request an exemption, in accordance with § 50.46(a)(2)(vi), if the evaluations indicate a need for an exemption. These exemption requests were submitted principally to preserve the licensee's opportunity to subsequently request an exemption, without a restriction on such requests due to the requirement that exemption requests be submitted 45 days prior to the submission of the evaluation. There is no certainty at this time that an exemption will, in fact, be needed by these licensees, since the evaluations, which will indicate whether or not modifications or operating restrictions will be required to meet the requirements of the final acceptance criteria, have not yet been completed.

Several of the requests for an extension of time submitted to the Director of Regulation, (which were not accompanied by a request for exemption) specifically included the 45-day period required to allow for the submittal of an exemption request, if required. Such time is not included in the requests for extensions of time under consideration by the Director of Regulation.

None of the nine exemption requests identify specific modifications or operating restrictions which are required to achieve compliance with the ECCS acceptance criteria and for which the licensee seeks a specific exemption. Rather, all of the requests seek an exemption at this time for the purpose of preparing a specific exemption request, if needed. We recognize that it is not possible for a licensee to provide detailed

justification for not complying with as yet unknown operational restrictions, and that the extensions of time for submittal of evaluations which are under consideration would foreclose the opportunity of submitting revised requests for exemption, if required, 45 days before submittal of evaluations. Accordingly, consistent with the alternative proposed in the notices published by the Commission concerning receipt of the exemption requests, the Director of Regulation recommends that the Commission decline to act on the requests for exemption at this time, without prejudice to the submission of an exemption request concurrently with the ECCS evaluation. If a request for exemption is subsequently submitted together with the ECCS evaluation, the Director of Regulation recommends that action on such request be taken as soon as possible, but not later than 45 days after the date of the request. During the pendency of any request for exemption, it is recommended that compliance with the operating requirements of 10 CFR § 50.46 not be required.

This same approach would also be appropriate in the event that an exemption request is subsequently filed with the ECCS evaluation for other facilities which have thus far only requested extensions of time to file required evaluations, and for those other licensees which have requested extensions that include an additional 45-day period for requesting an exemption, but which additional period may not be authorized in the extensions under consideration by the Director of Regulation.

The foregoing represent comments of the Director of Regulation as to the nine pending requests for exemption. With respect to two of these requests, there are additional factors on which comments are warranted.

Oyster Creek Reactor

For the Oyster Creek reactor the analyses required to be performed by the licensee to evaluate ECCS performance are quite complex and will take an extended period to complete since they entail significant differences from the majority of the boiling water reactor plants. Oyster Creek is a non-jet pump reactor which requires significant modifications to the ECCS evaluation models developed for jet-pump reactors. In addition, Oyster Creek contains fuel from two vendors (General Electric and Exxon) with Exxon relying on the blowdown analysis, to be supplied by General Electric, before completing its evaluation. For this reason, the licensee has requested an extension of time until December 23, 1974, to complete these analyses and to submit its evaluation to the Director of Regulation.

However, in view of this extended period of time, the licensee intends to perform by August 5, 1974, a preliminary evaluation based upon calculations using very conservative assumptions. The licensee proposes to operate in conformity with any restrictions necessary to comply with the acceptance criteria specified in 10 CFR § 50.46, based on such preliminary evaluation, unless an exemption is granted by the Commission. The Director of Regulation believes that the licensee's

approach of providing a preliminary evaluation at the earliest feasible date, is a significant step toward achieving prompt compliance with the requirements of § 50.46. Accordingly, the Director of Regulation is considering, in connection with the licensee's request for an extension of time to submit a final evaluation, a requirement that such preliminary evaluation be submitted by August 22, 1974, along with proposed operating limits, if any, required to bring the reactor into conformity with the Commission's acceptance criteria during the interim period before the complete evaluation is submitted. On submission of the preliminary evaluation and accompanying operating restrictions, if any, on August 22, 1974, the licensee would, of course, have the opportunity to submit to the Commission a request for an exemption from these operating restrictions in the interim period before the complete evaluation is submitted to the Director of Regulation in conformity with 10 CFR § 50.46.

The Director of Regulation recommends, with respect to the presently pending request for exemption for this reactor, that the Commission decline to act on the request at this time, without prejudice to the submission of an exemption request concurrently with the preliminary ECCS evaluation, to be submitted on August 22, 1974. If a request for exemption for the interim period is submitted along with the preliminary evaluation, the Commission should act upon the request within 45 days. During the pendency of the request, compliance with the operating requirements of 10 CFR § 50.46 should not be required.

Big Rock Point Reactor

For the Big Rock Point reactor, the Director of Regulation has under consideration, both a request for extension of time to submit an evaluation in accordance with 10 CFR § 50.46 until March 31, 1975, and a request for a variance from the requirements of the Interim Acceptance Criteria until November 15, 1975. It should be noted that the facility is presently the subject of a hearing in accordance with the Commission's Notice of Hearing dated April 6, 1973 (38 F.R. 9104, April 10, 1973). In the hearing the question of compliance with the Commission's requirements with respect to ECCS performance, has been raised as an issue by the intervenors. With respect to the request for a variance from the Interim Acceptance Criteria, which is presently under consideration by the Regulatory staff, the Commission should be aware of the facts set forth below.

The basis for the request for a variance from the requirements of the Interim Acceptance Criteria, is the time required for the installation of necessary equipment to provide automatic depressurization (ADS) of the core in the event of small breaks has extended substantially. This is estimated to take until approximately March 1976. For design basis loss of coolant accidents (largest pipe breaks below the core) the licensee has proposed technical specification changes and system modifications which will achieve compliance with the Interim Acceptance Criteria for breaks of this size. For small breaks, in the interim before the AD system can be installed, the reactor will rely on the availability of feedwater pumps to provide cooling water to the core in

the event of breaks of this size. However, the system does not fully conform to single failure criteria of the evaluation models required by the Interim Acceptance Criteria and by the acceptance criteria of 10 CFR § 50.46.

The licensee has also requested an extension of time until March 31, 1975, to file an evaluation of ECCS performance under the revised acceptance criteria in accordance with 10 CFR § 50.46. No specific modifications or operating restrictions are identified in the exemption request. Rather, the licensee requests an exemption at this time for the purpose of preparing a specific exemption request, if needed, as a result of the evaluations to be submitted in accordance with its request to the Director of Regulation for an extension of time.

In view of the very long period of time before an evaluation of ECCS performance in full conformity with Appendix K would be available, the Director of Regulation believes that a preliminary evaluation based on conservative assumptions, but not necessarily including all of the detail and documentation called for by Appendix K, should be provided as promptly as practicable, along with proposed operating limitations, if any, required to bring the reactor into conformity with the Commission's acceptance criteria. Accordingly, the Director of Regulation is considering, in connection with the licensee's request for an extension of time to submit a final evaluation, a requirement that such preliminary evaluation be submitted by October 31, 1974 along with proposed operating limits, if any, required to bring the reactor

into conformity with the Commission's acceptance criteria during the interim period before the complete evaluation is submitted. On submission of the preliminary evaluation and accompanying operating restrictions, if any, the licensee would, of course, have the opportunity to submit to the Commission a request for an exemption from these or operating restrictions in the interim period before the complete evaluation is submitted to the Director of Regulation in conformity with 10 CFR § 50.46.

The Director of Regulation recommends, with respect to the presently pending request for exemption for this reactor, that the Commission decline to act on the request at this time, without prejudice to the submission of an exemption request concurrently with the preliminary ECCS evaluation to be submitted on August 22, 1974. If a request for the exemption for the interim period is submitted along with the preliminary evaluation, the Commission should act upon the request within 45 days. During the pendency of the request, compliance with the operating requirements of 10 CFR § 50.46 should not be required.

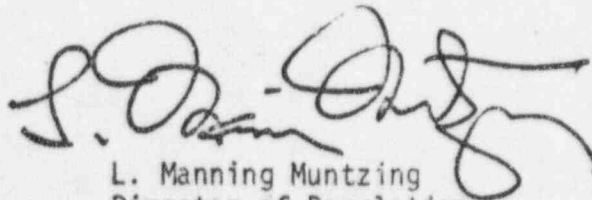
Vermont Yankee Reactor

Although a specific exemption request was not submitted by Vermont Yankee Nuclear Power Corporation, there are factors involved which are related to those involved in the exemption requests discussed above.

By a letter dated June 17, 1974, the Vermont Yankee Nuclear Power Corporation (licensee) requested an extension of 90 days after August 5, 1974, for compliance with the Commission's acceptance criteria. This request was made to the Directorate of Licensing and was made pursuant to 10 CFR § 50.46(a)(2)(iii), not pursuant to § 50.46(a)(2)(vi) to the Commission itself. In its request the licensee indicated that it will submit proposed technical specifications changes reflecting necessary modifications, to assure full compliance with the requirements of 10 CFR § 50.46 using a new 8 X 8 fuel configuration, which will be installed at the next scheduled outage estimated to commence at the end of September 1974, but which may be extended due to severe electrical generation deficiencies. The licensee is apparently under the misapprehension that evaluations, or requests for extensions and exemption requests, for the core that would be installed by the end of September, were required by August 5, 1974. This is incorrect. Evaluations and/or compliance requirements for a future core, would be required before such future core could be authorized by the Regulatory staff.

However, evaluations for the present core are required by August 5, 1974. Apparently, the licensee has certain preliminary evaluations available from the General Electric Company, since the licensee included preliminary linear heat generation rate limits (MAPLHGR Curves) for compliance with the new criteria. It appears also from the licensee's request that no further restrictions on operating limits beyond those presently applicable to the reactor, would be required to comply with

the Commission's acceptance criteria, based on the licensee's preliminary evaluation. Since the preliminary evaluation has not been submitted, this cannot be verified by the staff. Accordingly, the Director of Regulation is considering, in connection with the licensee's request for an extension of time, a requirement that a preliminary evaluation be submitted along with proposed operating limits, if any, required to bring the reactor into conformity with the Commission's acceptance criteria during the interim period before the complete evaluation is submitted or before the next scheduled outage at which the reactor modifications to achieve full compliance are proposed to be made. On submission of the preliminary evaluation and accompanying operating restrictions, if any, on August 22, 1974, the licensee would, of course, have the opportunity to submit to the Commission a request for an exemption from these operating restrictions in the interim period before the complete evaluation is submitted in full conformity with 10 CFR § 50.46, or may request an exemption from the requirement for submission of an evaluation of the present core in full conformity with Appendix K, in view of the pending core changes which are intended to achieve full compliance with the requirements of 10 CFR § 50.46 at full power.



L. Manning Muntzing
Director of Regulation

Dated at Bethesda, Maryland
this 29th day of July, 1974.