



**Consumers
Power
Company**

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COPY

June 12, 1980

Director, Nuclear Reactor Regulation
Att Mr Dennis M Crutchfield, Chief
Operating Reactors Branch No 5
US Nuclear Regulatory Commission
Washington, DC 20555

DOCKET 50-155 - LICENSE DPR-6 - BIG ROCK
POINT PLANT - COMMITMENT TO ADDITIONAL
REQUIREMENTS RESULTING FROM TMI-2 ACCIDENT

NRC letter dated May 7, 1980 forwarded additional requirements resulting from review of the TMI-2 accident. Consumers Power Company was requested to review these requirements and provide, within 30 days, a commitment to meet them in accordance with the specified schedule.

Consumers Power Company will comply with the requirements promulgated by the May 7, 1980 letter as they apply to Big Rock Point, with the exception of Item I.A.1.3, "Shift Manning." With respect to this item, the May 7, 1980 letter stated that requirements for implementation would be provided by separate correspondence. These implementing requirements have not been received; accordingly, Consumers Power Company reserves judgment on our ability to comply with Item I.A.1.3 until the detailed requirements can be reviewed.

The attachment provides a complete tabulation of the requirements from the May 7, 1980 letter indicating which items are not applicable to Big Rock Point and providing a brief description of actions to be taken as a result of those which are applicable. Several inconsistencies exist among the various attachments to the May 7, 1980 letter regarding required schedules; the attachment, therefore, includes Consumers Power Company's interpretation of the required schedule for each applicable item.

David P Hoffman (Signed)

David P Hoffman
Nuclear Licensing Administrator

CC JGKepler, USNRC
NRC Resident Inspector

Attachment

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ACTIONS TO BE TAKEN AT BIG ROCK POINT
In Response to Requirements Promulgated
By NRC Letter Dated May 7, 1980

1. Item I.A.1.3, "Shift Manning."

Consumers Power Company reserves judgment on a commitment to this item pending promulgation of detailed requirements by NRC.

2. Item I.A.3.1, "Revised Scope and Criteria for Licensing Examinations." These requirements are applicable to licensing examinations given after May 1, 1980.

Consumers Power Company will comply with the requirements. Personnel recommended for licensing examinations in the future will have received the required training.

3. Item I.C.5, "Procedures for Feedback of Operating Experience to Plant Staff." Required actions must be implemented by January 1, 1981.

Procedures will be reviewed and revised as necessary to assure that operating information pertinent to plant safety is continually supplied to operators and is incorporated into training/retraining programs.

4. Item II.K.3.1, "Installation and Testing of Automatic PORV Isolation System."

This item is not applicable. Pilot-operated relief valves are not used at Big Rock Point.

5. Item II.K.3.2, "PWR Vendor Report on PORV Failure Reduction."

This item is not applicable.

6. Item II.K.3.3, "Reporting Safety and Relief Valve Failures and Challenges." Prompt reporting of valve failures is required effective immediately; annual reporting of valve challenges is required beginning January 1, 1981 and including challenges on or after April 1, 1980.

The required reports will be submitted.

7. Item II.K.3.5, "Automatic Trip of Reactor Coolant Pumps During LOCA."

This is a PWR requirement and is not applicable to Big Rock Point.

8. Item II.K.3.9, "Proportional Integral Derivative Controller Modification."

This item is not applicable.

9. Item II.K.3.10, "Proposed Anticipatory Trip Modification."

This item is not applicable.

10. Item II.K.3.12, "Confirm Existence of Anticipatory Trip Upon Turbine Trip."

This item is not applicable.

11. Item II.K.3.13, "Separation of HPCI and RCIC System Initiation Levels - Analysis and Implementation."

Big Rock Point has neither a reactor core isolation cooling system (RCIC) nor a high-pressure coolant injection system (HPCI). This item is, therefore, not applicable.

12. Item II.K.3.14, "Isolation of Isolation Condensers on High Radiation."

Consumers Power Company letter dated February 22, 1980 requested that implementation of this requirement be deferred pending completion of a proposed probabilistic risk assessment of Big Rock Point. The need for this modification will be considered in the risk assessment and will be the subject of future correspondence. No other action will be taken in response to this item at this time.

13. Item II.K.3.15, "Modify Break Detection Logic To Prevent Spurious Isolation of HPCI and RCIC Systems."

This item is not applicable.

14. Item II.K.3.16, "Reduction of Challenges and Failures of Relief Valves - Feasibility Study and System Modification."

Big Rock Point's design differs from that of other BRWs in the area of overpressure control. Primary system relief valves do not exist. Overpressure protection is provided by the emergency condenser and spring-loaded safety valves. The emergency condenser serves to prevent challenges to the safety valves; a safety valve has never opened during reactor operation (in approximately 18 years of plant service). Accordingly, this requirement is not applicable.

15. Item II.K.3.17, "Report on Outage of ECC Systems - Licensee Report and Proposed Technical Specifications Changes." The evaluation is to be submitted by January 1, 1981.

A report detailing emergency core cooling (ECC) system outage dates and their length will be submitted by January 1, 1981.

16. Item II.K.3.18, "Modification of ADS Logic - Feasibility Study and Modifications for Increased Diversity for Some Event Sequences."

The Big Rock Point reactor depressurization (RDS) differs from the automatic depressurization system (ADS) of other BWRs. Initiation logic for automatic RDS does not include a need for coincident high containment pressure. Accordingly, although the capability of manual actuation is an RDS design feature, manual actuation is not required for any event sequence which threatens core uncover. This item is, therefore, not applicable.

17. Item II.K.3.19, "Interlock on Recirculation Pump Loops."

Consumers Power Company letter dated February 22, 1980 requested that implementation of this requirement be deferred pending completion of a proposed probabilistic risk assessment of Big Rock Point. The need for this modification will be considered in the risk assessment and will be the subject of future correspondence. No other action will be taken in response to this item at this time.

18. Item II.K.3.20, "Loss of Service Water for Big Rock Point." An evaluation of the consequences of loss of service water must be submitted by January 1, 1981.

The required evaluation will be performed and submitted by the specified date. This evaluation will not include effect of loss of service water or recirculating pump seals since this effect is separately addressed in Item II.K.3.25 (22 below).

19. Item II.K.3.21, "Restart of Core Spray and LPCI Systems on Low Level - Design and Modification."

Core spray at Big Rock Point can be stopped by turning a hand switch. This does not override an initiating signal; core spray would automatically restart if an initiating signal were still present or were to be received again. Manual action is thus not required to restart core spray after it has been stopped. Manual action might be needed if the hand switch were placed in the "pull-to-stop" position (a feature incorporated to facilitate system testing), but this position would not be used to stop core spray during operation. In addition, a modification currently being designed will incorporate visual indication and alarm for core spray hand switches placed in the "pull-to-stop" position. Accordingly, this item is determined to be not applicable.

20. Item II.K.3.22, "Automatic Switchover of RCIC System Suction."

This item is not applicable.

21. Item II.K.3.24, "Confirm Adequacy of Space Cooling for HPCI and RCIC Systems."

This item is not applicable.

22. Item II.K.3.25, "Effect of Loss of A-C Power on Pump Seals." An evaluation must be submitted by January 1, 1982.

Results of the required analysis will be submitted in accordance with the specified schedule.

23. Item II.K.3.27, "Provide Common Reference Level for Vessel Level Instrumentation."

Big Rock Point's design differs from newer BWRs in that an external steam drum is used. Water level indication available to the operator is thus of two distinct types, steam drum level and reactor vessel level. For either component, the indication available to the operator is already referenced to a single reference level within that component. Accordingly, no action is needed as a result of this requirement.

24. Item II.K.3.28, "Study and Verify Qualification of Accumulators on ADS Valves."

Big Rock Point RDS valves have no accumulators. This item is not applicable.

25. Item II.K.3.29, "Study To Demonstrate Performance of Isolation Condensers With Non-Condensibles."

Consumers Power Company letter dated December 27, 1979 committed to installation of remotely operable vent valves to vent non-condensable gases from either tube bundle of the emergency condenser. This installation will eliminate concern about the ability of the emergency condenser to function with non-condensable gases present. Accordingly, no action is needed in response to this requirement.

26. Item II.K.3.30, "Revised Small-Break LOCA Methods To Show Compliance With 10 CFR 50, Appendix K." Revised models must be submitted for staff approval by January 1, 1982.

General Electric, working directly with the NRC staff, will address this requirement. Consumers Power Company will work with GE to the extent that staff concerns are applicable to nonjet pump BWRs with external steam separation. Consumers Power Company does not consider, however, that it would be useful for our fuel vendor (Exxon Nuclear Company) to submit revised small-break LOCA models for Big Rock Point. Previous analyses by GE have shown that the small-break LOCA is definitely nonlimiting and that core thermal power limits (the sole area in which our fuel vendor has been involved) are completely defined by the large-break LOCA. Further, fuel characteristics are of secondary importance in determining plant response to a small-break LOCA. In the unlikely circumstance that the small-break LOCA should become limiting, either due to discovery of previously unknown phenomena or as a result of requirements for additional analytical conservatisms it would, of course,

become necessary for our fuel vendor to provide suitable documentation of methods for Big Rock Point.

27. Item II.K.3.31, "Plant Specific Calculations To Show Compliance With 10 CFR 50.46." Analyses are to be submitted by January 1, 1983 or one year after approval of revised models.

Analyses will be provided on the required schedule unless resolution of Item II.K.3.30 (26 above) shows no modifications to Big Rock Point small-break analysis methods are required.

28. Item II.K.3.44, "Evaluation of Anticipated Transients With Single Failure To Verify No Fuel Failure." An evaluation must be submitted by January 1, 1981.

The evaluation will be submitted by the required date. This evaluation will consist of a review of all anticipated transients combined with single active failures in control or protection systems to ascertain whether or not any such events could result in significant, uncontrolled losses of primary coolant inventory. If any such events are discovered, they will be compared to previous small-break LOCA analyses to determine the degree of core uncovering (if any) and verify fuel integrity.

29. Item II.K.3.45, "Evaluation of Depressurization With Other Than ADS." An evaluation must be submitted by January 1, 1981.

An evaluation will be completed as required. It should be noted that little flexibility exists in means to depressurize Big Rock Point; Big Rock Point has a dry containment, and thus any depressurization using RDS tends to expose equipment inside containment to an adverse environment. In addition, Big Rock Point has no high-pressure ECCS system, and this makes slower depressurization appear undesirable on initial evaluation. These differences between Big Rock Point and other BWRs appear to make depressurization with other than the full RDS system undesirable. However, the advisability of such depressurization will be evaluated further and results will be provided to NRC.

30. Item II.K.3.46, "Response to List of Concerns From ACRS Consultant." An evaluation must be submitted by July 1, 1980.

An evaluation of the applicability of GE's responses to Big Rock Point will be submitted by the required date.

31. Item II.K.3.57, "Identify Water Sources Prior To Manual Activation of ADS." Verification that procedures have been appropriately revised must be submitted by October 1, 1980.

Revisions to plant procedures have been approved and published to ensure that fire system (ECCS) pressure is available prior to manual initiation of RDS. This item is complete.

32. Item III.D.3.4, "Control Room Habitability Requirements." A review of control room habitability must be completed and results submitted by January 1, 1981. Modifications determined necessary must be completed by January 1, 1983.

Control room habitability will be reviewed as part of the probabilistic risk assessment discussed in Consumers Power Company letters dated February 22, 1980 and April 2, 1980. Results of this assessment should be submitted to NRC prior to January 1, 1981. Modifications which are necessary to address concerns which might be identified by the risk assessment and the schedule for performing these modifications will be the subject of additional correspondence after completion of the assessment.

SUMMARY OF SPECIFIC COMMITMENTS RESULTING
FROM MAY 7, 1980 NRC LETTER

<u>Item No</u> (From May 7, 1980 Letter)	<u>Commitment</u>	<u>Due Date</u>
I.A.3.1	Revise training for licensing candidates.	Next NRC Examination
I.C.5	Review procedures for operating experience feedback. Revise as necessary.	Jan 1, 1981
II.K.3.3	Prompt report of safety/relief valve failures. Annual report of valve challenges.	Immediate Jan 1, 1981
II.K.3.17	Report on ECC system outages for the last five years.	Jan 1, 1981
II.K.3.20	Evaluate loss of service water.	Jan 1, 1981
II.K.3.25	Evaluate effect of loss of a-c power on recirculating pump seals.	Jan 1, 1982
II.K.3.30	Assist GE in addressing concerns on small-break modeling.	Jan 1, 1982
II.K.3.31	Submit revised small-break analysis, if needed.	Jan 1, 1983 or One Year After Approval of Models
II.K.3.44	Evaluate effect of anticipated transients with single failures on fuel.	Jan 1, 1981
II.K.3.45	Evaluate alternate depressurization.	Jan 1, 1981
II.K.3.46	Report applicability of GE answers to ACRS consultant concerns.	July 1, 1980
III.D.3.4	Evaluate control room habitability.	Jan 1, 1981 as Part of Risk Assessment