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DEFINITION OF OPERABLE  
KEWAUNEE NUCLEAR POWER PLANT

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## DEFINITION OF OPERABLE, KEWAUNEE NUCLEAR POWER PLANT

### 1. INTRODUCTION

On April 10, 1980, the Nuclear Regulatory Commission (NRC) issued a generic letter to all Power Reactor Licensees which clarified the term OPERABLE and identified portions of the Model Technical Specifications (MTS) which are recommended to assure that safety systems remain OPERABLE within the limits of the single failure criterion.<sup>1</sup> In that letter the NRC requested that Licensees review their Technical Specifications (TS) and submit such proposed changes as were necessary to incorporate the requirements of the MTS.

On December 23, 1980,<sup>3</sup> May 24, 1983,<sup>4</sup> May 27, 1983,<sup>5</sup> and August 24, 1983,<sup>6</sup> Wisconsin Public Service Corporation (WPSC) responded to the generic letter. In the August 24, 1983, letter, WPSC proposed an amendment to the Kewaunee TS which would revise the Kewaunee Limiting Conditions for Operation (LCOs). EG&G Idaho, Inc., has reviewed the existing Kewaunee TS and the proposed amendment. This report provides an evaluation of those TS and the proposed amendment for conformance to the criteria established by the NRC.

### 2. REVIEW CRITERIA

The review criteria for this task are contained in NRC's April 10, 1980, letter and in Reference 2 and are summarized below.

#### Definition of OPERABLE

A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other

least HOT SHUTDOWN within the next 6 hours, and in at least COLD SHUTDOWN within the following 24 hours. This specification is not applicable in MODES 5 or 6.

### 3. DISCUSSION

WPSC has taken the position that the existing Kewaunee TS satisfactorily define the term OPERABLE and that no revision to that definition is necessary. The licensee has proposed that the review criteria can be met by revision of the Kewaunee LCOs, and has submitted proposed changes to the Kewaunee TS to so revise the LCOs.

The Kewaunee TS state:

A component or system is operable when it is capable of performing its intended function within the required range. The system or component shall be considered to have this capability when: (1) it satisfies the limiting conditions for operation defined in Specification 3, and (2) it has been tested periodically in accordance with Specification 4, and has met its performance requirements.<sup>5</sup>

This definition is less comprehensive than that in the MTS, as it does not explicitly address support equipment or electrical power sources.

The proposed revisions to the LCOs for the Essential Safety Features (ESF) and Auxiliary Systems require that, if operability is not restored to an inoperable ESF system within a specified time limit, action must be initiated within one hour to: achieve Hot Standby within the next six hours; achieve Hot Shutdown within the following six hours; achieve Cold Shutdown within an additional 36 hours. While the time allowed to attain Cold Shutdown from Hot Shutdown is greater than that specified in the MTS, the 48-hour period for transition to Cold Shutdown for Kewaunee has been previously reviewed and approved by the NRC for Kewaunee, and is therefore acceptable.<sup>7</sup>

The licensee may also want to add the following (from the NRC review criteria) to his TS:

When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided: (a) its corresponding normal or emergency power source is OPERABLE: and (b) all of its redundant system(s), subsystem(s), train(s), component(s) and device(s) are OPERABLE, or likewise satisfy the requirements of this specification. Unless both conditions (a) and (b) are satisfied, within two hours action shall be initiated to place the unit in at least HOT STANDBY within 6 hours, in at least HOT SHUTDOWN within the next 6 hours, and in at least COLD SHUTDOWN within the following 24 hours. This specification is not applicable in MODES 5 or 6.

Inclusion of the above will provide the licensee flexibility in complying with the constraints of the more comprehensive definition of OPERABLE, and will meet the NRC review criteria.

## 5. REFERENCES

1. NRC letter, D. G. Eisenhut, to All Power Reactor Licensees, dated April 10, 1980.
2. NRC internal memorandum, S. Miner to S. Varga, et. al., "Definition of Operability--Multi-Plant Item D-17," dated March 26, 1981.
3. Wisconsin Public Service Corporation Letter, E. R. Mathews, to NRC, D. G. Eisenhut, dated December 23, 1980.

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<b>16. ABSTRACT (200 words or less)</b> <p>This report reviews the extent of compliance of existing and proposed Kewaunee Technical Specifications with clarification of the definition and application of the term OPERABLE which have been required by the U. S. Nuclear Regulatory Commission.</p>					
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