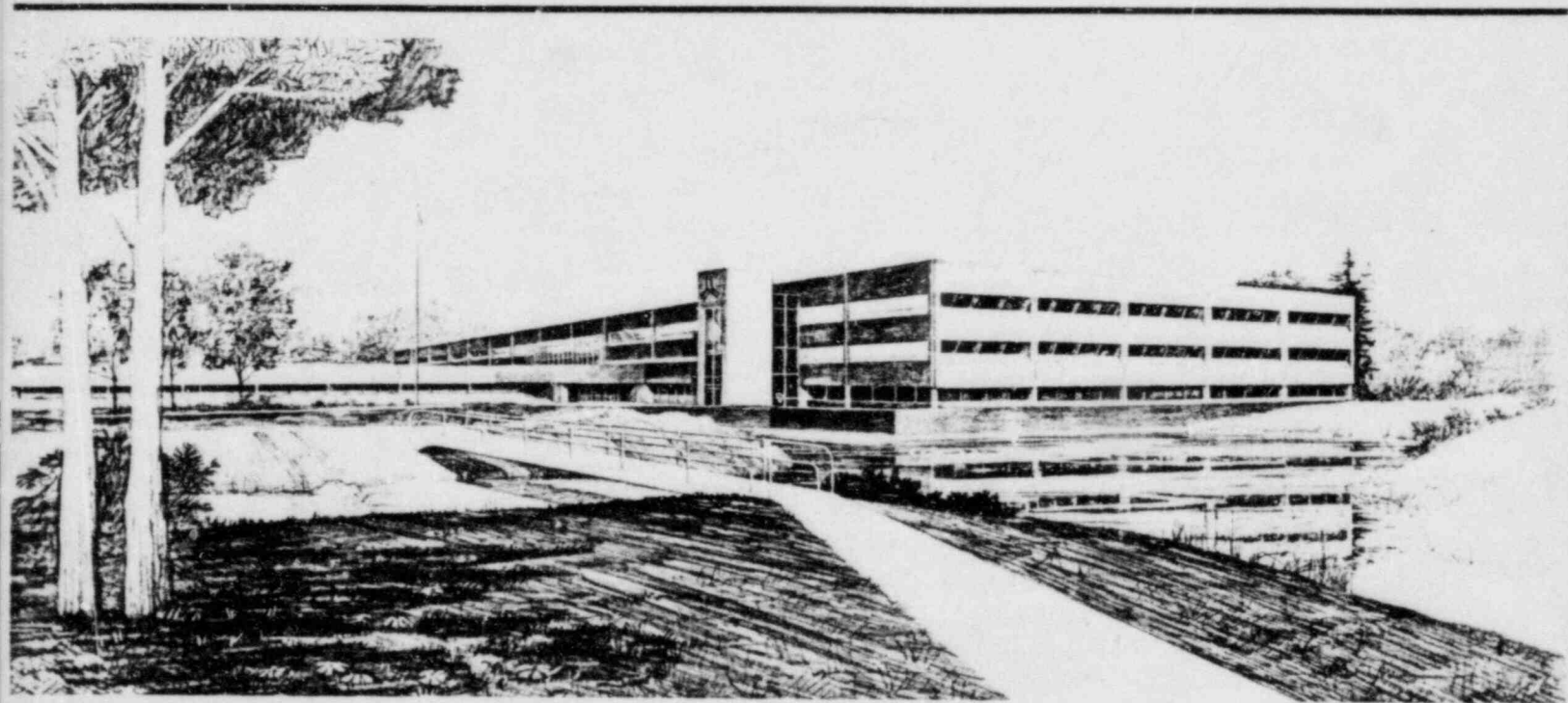


EGG-EA-6480
JANUARY 1984

DEFINITION OF OPERABLE
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

F. G. Farmer

Idaho National Engineering Laboratory
Operated by the U.S. Department of Energy



This is an informal report intended for use as a preliminary or working document

8409060026 840828
PDR ADOCK 05000333
P PDR

Prepared for the
U. S. NUCLEAR REGULATORY COMMISSION
Under DOE Contract No. DE-AC07-76ID01570
FIN No. A6429



EGG-EA-6480

DEFINITION OF OPERABLE
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

Published January 1984

F. G. Farmer

EG&G Idaho, Inc.
Idaho Falls, Idaho 83415

Responsible NRC Individual and Division:
H. Abelson/Division of Licensing

Docket No. 50-333
TAC No. 43019

Prepared for the
U.S. Nuclear Regulatory Commission
Under DOE Contract No. DE-AC07-76ID01570
FIN No. A6429

ABSTRACT

This report reviews the extent of compliance of proposed changes to the James A. FitzPatrick Nuclear Power Plant Technical Specifications with clarifications of the definition and application of the term OPERABLE which have been required by the U.S. Nuclear Regulatory Commission.

FORWARD

This report is supplied as part of the "Selected Operating Reactors Issues Program (III)" being conducted for the U.S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation, Division of Licensing, by EG&G Idaho, Inc., NRC Licensing Support Section.

The U.S. Nuclear Regulatory Commission funded the work under the authorization, B&R 20 19 10 11 1, FIN No. A6429.

NOTICE

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, or any of their employees, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for any third party's use, or the results of such use, of any information, apparatus, product or process disclosed in this report or represents that its use by such third party would not infringe privately owned rights.

CONTENTS

1.	INTRODUCTION	1
2.	REVIEW CRITERIA	1
3.	DISCUSSION	3
4.	CONCLUSIONS	3
5.	REFERENCES	4

DEFINITION OF OPERABLE, JAMES A. FITZPATRICK 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 (Reference 1). 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 February 20, 1981, the Power Authority of the State of New York (PASNY) responded to the generic letter, proposing changes to the FitzPatrick Technical Specifications (Reference 3). EG&G Idaho, Inc., has reviewed the proposed changes to the FitzPatrick TS. This report provides an evaluation of the proposed TS changes 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 sea water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).

Limiting Condition for Operation

When a Limiting Condition for Operation is not met because of circumstances in excess of those addressed in the specification, except as provided in the associated ACTION requirements, within one hour action shall be initiated to place the unit in a MODE in which the Specification does not apply by placing it, as applicable, in:

1. At least STARTUP within the next 6 hours,
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours.

Where corrective measures are completed that permit operation under the ACTION requirements, the ACTION may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation. Exceptions to these requirements are stated in the individual Specifications.

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 STARTUP 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.

3. DISCUSSION

The proposed amendment (Reference 3) to the FitzPatrick TS provides a new definition of the term OPERABLE which is extracted verbatim from the MTS. This proposed definition complies with the review criteria.

The licensee's proposed amendment includes changes to the FitzPatrick Limiting Conditions for Operation (LCOs) which add these conditions:

In the event a Limiting Condition for Operation and/or associated ACTION requirements cannot be satisfied because of circumstances in excess of those addressed in the specification, the unit shall be placed in COLD SHUTDOWN within the following 24 hours unless corrective measures are completed that permit operation under the permissible ACTION or until the reactor is placed in an OPERATIONAL CONDITION (mode) in which the specification is not applicable. Exceptions to these requirements shall be stated in the individual specifications.

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: (1) its corresponding normal or emergency power source is OPERABLE; and (2) 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 (1) and (2) are satisfied, the unit shall be placed in COLD SHUTDOWN within the following 24 hours. This specification is not applicable when in Cold Shutdown or Refuel Mode.

These constraints are more stringent than the MTS and are thus in conformance with the review criteria.

4. CONCLUSION

The licensee's proposed redefinition of the term OPERABLE and the revised LCOs meet the NRC requirements for providing adequate clarification of the term OPERABLE as it applies for Essential Safety Features systems to support system outages or multiple outages of redundant components.

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. Power Authority of the State of New York letter, J. P. Bayne to NRC, Director, NRR, dated February 20, 1981.

NRC FORM 335 <small>(11-81)</small>		U.S. NUCLEAR REGULATORY COMMISSION BIBLIOGRAPHIC DATA SHEET		1. REPORT NUMBER (Assigned by DDC) EGG-EA-6480	
4. TITLE AND SUBTITLE Definition of Operable, James A. FitzPatrick Nuclear Power Plant		2. (Leave blank)		3. RECIPIENT'S ACCESSION NO.	
7. AUTHOR(S) F. G. Farmer		5. DATE REPORT COMPLETED MONTH YEAR January 1984		DATE REPORT ISSUED MONTH YEAR January 1984	
9. PERFORMING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code) EG&G Idaho, Inc. Idaho Falls, ID 83415		6. (Leave blank)		8. (Leave blank)	
12. SPONSORING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code) Division of <u>Licensing</u> Office of <u>Nuclear Reactor Regulation</u> U.S. Nuclear Regulatory Commission Washington, DC 20555		10. PROJECT TASK WORK UNIT NO.		11. FIN NO. A6429	
13. TYPE OF REPORT		PERIOD COVERED (Inclusive dates)			
15. SUPPLEMENTARY NOTES		14. (Leave blank)			
16. ABSTRACT (200 words or less) <p>This report reviews the extent of compliance of proposed changes to the James A. FitzPatrick Nuclear Power Plant Technical Specifications with clarifications of the definition and application of the term OPERABLE which have been required by the U.S. Nuclear Regulatory Commission.</p>					
17. KEY WORDS AND DOCUMENT ANALYSIS			17a. DESCRIPTORS		
17b. IDENTIFIERS OPEN ENDED TERMS					
18. AVAILABILITY STATEMENT Unlimited		19. SECURITY CLASS (This report) Unclassified		21. NO. OF PAGES	
		20. SECURITY CLASS (This page) Unclassified		22. PRICE \$	