

AUDIT OF NUCLEAR PLANT TECHNICAL SPECIFICATIONS

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2

DOCKET NO. 50-388

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Prepared for the
U.S. NUCLEAR REGULATORY COMMISSION
Under DOE Contract No. DE-AC07-1D01570
FIN No. A6816

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EGG-EA-6541

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Docket No. 50-388
TAC No. --

Published March 1984

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Prepared for the
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
Under DOE Contract No. DE-AC07-76ID01570
FIN No. A6816

ABSTRACT

This report documents the review of the Susquehanna Steam Electric Station Unit 2 (Susquehanna-2) Technical Specifications (T/S) to determine if selected sections of the T/S are consistent with the Susquehanna Final Safety Analysis Report (FSAR) as amended and the Susquehanna Safety Evaluation Report (SER) as supplemented. Inconsistencies are listed in this report but no further evaluation was conducted to determine if the inconsistency was an indication of an error in any of the subject documents.

FOREWARD

This report is supplied as part of the "Audit of Nuclear Plant Technical Specifications" 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 authorization B&R 20 19 10 11 I FIN No. A6816.

CONTENTS

1.	INTRODUCTION	1
2.	REVIEW CRITERIA	1
3.	DISCUSSION	2
4.	CONCLUSIONS	7
5.	REFERENCES	7

TABLE

1.	Susquehanna-2 Technical Specification/FSAR/SER Consistency Summary	5
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AUDIT OF NUCLEAR PLANT TECHNICAL SPECIFICATIONS

1. INTRODUCTION

The Susquehanna Steam Electric Station, Unit 2 (Susquehanna-2) is a boiling water reactor (BWR) plant. It has been selected for an audit to determine if the Susquehanna-2 Technical Specifications (T/S)¹ are consistent with the Susquehanna-2 Final Safety Analysis Report (FSAR)² as amended and the Susquehanna-2 Safety Evaluation Report (SER)³ as supplemented. The specific sections of the T/S selected for audit and summary results are listed in Table I. Inconsistencies between these sections of the T/S and the FSAR and SER were identified but no further evaluation was conducted to determine if the inconsistencies were indications of error in any of the subject documents.

2. REVIEW CRITERIA

The T/S Limiting Conditions for Operation (LCOs) and Action Statements for each technical specification listed in Table I (Section 3) were compared to the FSAR and SER to determine if the T/S are consistent with the FSAR and SER. Emphasis was on the T/S Operational Mode 1, power operation, with exceptions noted in this report. Setpoints and lists of valves, instruments, overcurrent protective devices and electrical buses in the T/S were checked against tables in the FSAR and SER.

The SER was reviewed to ensure that requirements in the SER were addressed in the T/S.

The T/S bases and surveillance requirements were not reviewed in this audit of the T/S.

An explanation of each inconsistency between the T/S and the FSAR and SER is included in this report.

3. DISCUSSION

The following inconsistencies were identified:

1. T/S Section 3/4.3.2 (Isolation Actuation Instrumentation)

The completeness of T/S Table 3/4.3.3.2 (Isolation Actuation Instrumentation) cannot be verified by the FSAR Table 7.3-5 (Containment and Reactor Vessel Control System Instrumentation Specifications). A total listing/discussion of all instrument channels identified in T/S Table 3/4.3.3.2 are not addressed in FSAR Table 7.3-5.

2. T/S Section 3/4.6.2.1 (Suppression Chamber)

The FSAR Section 6.2 page 6.2.1-92 identifies a maximum allowable water volume of 131,550 ft³ in the suppression chamber. The T/S Limiting Conditions for Operation (LCO) 3.6.2.1 identifies a maximum allowable water volume of 133,540 ft³ in the suppression chamber.

3. T/S Section 3/4.6.3 (Primary Containment Isolation Valves)

T/S Table 3.6.3-1 (Primary Containment Isolation Valves), identifies isolation valve data (isolation timing and input signals) that cannot be matched with the isolation valve data in the FSAR Table 6.2-12 (Primary Containment Isolation Valve Summary). There is no correlation between the valve designations identified in the FSAR and in the T/S.

4. T/S Section 3/4.6.5.2 (Secondary Containment Automatic Isolation Dampers)

- a. T/S Table 3.6.5.2-1 (Secondary Containment Automatic Isolation Dampers) does not identify the supply dampers that are required to perform automatically to complete a secondary containment isolation. The exhaust dampers are identified.
- b. The FSAR does not address a maximum allowable isolation time for the secondary containment automatic isolation dampers listed in T/S Table 3.6.5.2-1.

5. T/S Section 3/4.8.1.1 (A.C. Sources--Operating)

T/S 3.8.1.1 LCO identifies the minimum allowable fuel level to determine operability; for the Emergency Diesel Generator (EDG) day fuel tank as 325 gallons, and the EDG fuel storage system as 47,570 gallons.

The FSAR Section 9.5.4 identifies design volumes for the Emergency Diesel Generators Day Tank and Fuel Storage System. The minimum levels that determine operability are not specified.

6. T/S Section 3/4.8.2.1 (D.C. Sources Operating)

The T/S 3.8.2.1 LCO identifies the Division I and Division II 125VDC sources, 125VDC sources, full capacity chargers, and half capacity chargers required to determine D.C. Source operability.

The FSAR Section 8.3.2 does not identify the Unit 2 125VDC and 250VDC sources on Fig. 8.3.5. Also, the number of half chargers required for the LCO are not specified. Therefore, the completeness of T/S 3.8.2.1 listing cannot be verified.

7. T/S Section 3/4.8.3.1 (Distribution Operating)

T/S 3.8.3.1 LCO identifies the 480VAC buses, 125VDC and 250VDC fuse boxes required to determine operability for Distribution-Operating.

The FSAR does not identify specific designations for the 480VAC buses, the 125VDC and 250VDC fuse boxes. Therefore, the completeness of the T/S 3.8.3.1 cannot be verified.

8. T/S Section 3/4.8.4.1 (Primary Containment Penetration Conductor Overcurrent Protective Devices)

T/S Table 3.8.4.1-1 (Primary Containment Penetration Conductor Overcurrent Protective Devices) identifies the overcurrent protective devices required to determine electrical equipment operability.

The FSAR does not identify any of the overcurrent protective devices listed in T/S Table 3.8.4.1-1. Therefore, the completeness of T/S Table 3.8./4.1-1 cannot be verified.

Table I contains a summary of the Susquehanna-2 T/S sections reviewed; consistencies and inconsistencies with the FSAR and/or the SER are shown.

TABLE I. SUSQUEHANNA-2 TECHNICAL SPECIFICATION/FSAR/SER CONSISTENCY SUMMARY

<u>SECTION</u>	<u>CONSISTENT/INCONSISTENT</u>
<u>3/4.3 INSTRUMENTATION</u>	
3/4.3.2 ISOLATION ACTUATION INSTRUMENTATION	Inconsistent
3/4.3.3 EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION	Consistent
<u>3/4.5 EMERGENCY CORE COOLING SYSTEMS</u>	
3/4.5.1 ECCS - OPERATING	Consistent
3/4.5.3 SUPPRESSION CHAMBER	Consistent
<u>3/4.6 CONTAINMENT SYSTEMS</u>	
3/4.6.1 PRIMARY CONTAINMENT	
Primary Containment Integrity	Consistent
Primary Containment Leakage	Consistent
Primary Containment Air Locks	Consistent
MSIV Leakage Control System	Consistent
Primary Containment Structural Integrity	Consistent
Drywell and Suppression Chamber Internal Pressure	Consistent
Drywell and Suppression Chamber Purge System	Consistent
3/4.6.2 DEPRESSURIZATION SYSTEMS	
Suppression Chamber	Inconsistent
Suppression Pool Spray	Consistent
Suppression Pool Cooling	Consistent
3/4.6.3 PRIMARY CONTAINMENT ISOLATION VALVES	
	Inconsistent

TABLE I. (Continued)

<u>SECTION</u>	<u>CONSISTENT/INCONSISTENT</u>	
3/4.6.5	SECONDARY CONTAINMENT	
	Secondary Containment Automatic Isolation Dampers	Inconsistent
	Standby Gas Treatment System	Consistent
3/4.6.6	PRIMARY CONTAINMENT ATMOSPHERE CONTROL	
	Drywell and Suppression Chamber Hydrogen Recombiner Systems	Consistent
	Drywell and Air Flow Systems	Consistent
	Drywell and Suppression Chamber Oxygen Concentration	Consistent
<u>3/4.8</u>	<u>ELECTRICAL POWER SYSTEMS</u>	
3/4.8.1	A.C. SOURCES	
	A.C. Sources-Operating	Inconsistent
3/4.8.2	ONSITE POWER DISTRIBUTION SYSTEMS	
	Distribution - Operating	Inconsistent
	D.C. Sources - Operating	Inconsistent
	Primary Containment Penetration Conductor Overcurrent Protective Devices	Inconsistent

4. CONCLUSION

As shown in Table I, 24 technical specifications sections were compared with information in the FSAR and SER for Susquehanna-2. Inconsistencies were identified in eight sections of the technical specification shown in Table I. This review did not determine the significance of the inconsistency or which of the documents was in error.

5. REFERENCES

1. Susquehanna-2 Technical Specifications Rev. January 1984
2. Susquehanna-2 FSAR up to Amendment No. 33
3. Susquehanna-2 SER up to Supplement No. 6