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ACCESSION NBR: 8707240153      DOC. DATE: 87/07/17      NOTARIZED: NO      DOCKET #  
 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylva      05000387  
 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylva      05000388  
 AUTH. NAME      AUTHOR AFFILIATION  
 KAUFFMAN, J. T.      Pennsylvania Power & Light Co.  
 RECIP. NAME      RECIPIENT AFFILIATION  
 BUTLER, W. R.      Project Directorate I-2

SUBJECT: Forwards Rev 38 to facility FSAR. *Rev 38 8/2/87 m.m.* Current revs of design drawings, such as P&ID, also encl in rev however description of changes to each individual drawing not provided.

DISTRIBUTION CODE: A053D      COPIES RECEIVED: LTR 1 ENCL 13      SIZE: 8 + 450  
 TITLE: OR Submittal: Updated FSAR (50.71) and Amendments

NOTES: 1cy NMSS/FCAF/PM.      LPDR 2cys Transcripts.      05000387  
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	NRR/DEST/ADE	1 0	NRR/DEST/ADS	1 0
	<u>REG FILE</u> 01	1 1	RES/DE/EIB	1 1
	RGNI	1 1		
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NOTES:		3 3		

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Pennsylvania Power & Light Company

Two North Ninth Street • Allentown, PA 18101 • 215 / 770-5151

JUL 17 1987

John T. Kauffman  
Executive Vice President-Operations  
215 / 770-5043

Director of Nuclear Reactor Regulation  
Attention: Dr. W. R. Butler, Project Director  
Project Directorate I-2  
Division of Reactor Projects  
U.S. Nuclear Regulatory Commission  
Washington DC 20555

SUSQUEHANNA STEAM ELECTRIC STATION  
FINAL SAFETY ANALYSIS REPORT  
REVISION NO. 38  
PLA-2892                      FILE R41-2, A17-1

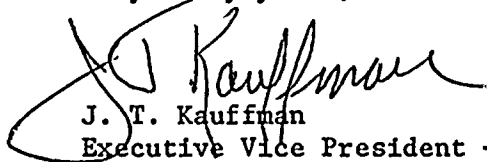
Dear Dr. Butler:

Pursuant to 10CFR50.71, under separate cover Pennsylvania Power & Light Company is submitting Revision No. 38 to the Susquehanna Steam Electric Station Final Safety Analysis Report (FSAR). The changes contained in Revision 38 were processed in accordance with 10CFR50.59, were required by NRC, were processed with a no significant hazards evaluation, or are administrative in nature.

Attachment 1 to this PLA provides a description of each change. Current revisions of design drawings, such as P&ID's, are also included in this revision however a description of the changes to each individual drawing is not being provided.

If you have any questions, please contact D. J. Walters at (215) 770-6536.

Very truly yours,



J. T. Kauffman  
Executive Vice President - Operations

Attachments

cc: NRC Document Control Desk (original)  
NRC Region 1  
Mr. M. Thadani - NRC Project Manager  
Mr. L. R. Plisco - NRC Resident Inspector

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1/13

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*[The text in this section is extremely faint and illegible due to low contrast and scan quality. It appears to be a multi-paragraph document.]*

11/11/2020

Attachment 1 to PLA-2892

<u>Section/Subsection/Table</u>	<u>Description</u>
Table 1.6-3	Table updated to include references to the reports which describe the results of the analyses associated with the Unit 1 Cycle 3 and Unit 2 Cycle 2 reloads.
2.1.3.5	Paragraphs and Table revised to incorporate the response to FSAR Question 312.2.
Table 2.1-22	
2.2.3.1.3	
2.2.3.1.4	
2.2.4	
Table 2.2-1	
2.5.1.2.3.4	New subsection added to incorporate response to Question 361.4.
2.5.4.1.2	Subsection revised by including response to Question 362.13.
2.5.4.5.3	Subsection revised by including response from Question 362.19.
2.5.4.14	Subsection revised by including response from Question 362.24.
2.5.5.2.2.1.1	Subsection revised by incorporating response from Question 371.30.
2.5.6	Incorporated references from Question 361.4.
3.1.2.2.5	Paragraph added to incorporate response from Question 005.6.
3.3.2.4	New subsection. Reflects response from Question 312.19.
3.5.2.2	Subsection expanded to include the response to Question 312.2.
Table 3.9-26	Table modified to include Reactor Water Cleanup (RWCU) valves 14182 A&B which were installed to serve as containment isolation valves. The existing F042 and F104 valves will be used as throttling valves for RWCU. The new valves will lower containment isolation valve leakage because their only purpose will be containment isolation with no throttling.
4.1.2.4	Administrative change. Subsection reworded for clarity.

MEMORANDUM

TO: [Illegible]

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Section/Subsection/Table

Description

Page 2

5.2.5.1.2  
5.2.5.1.2.4.6

Paragraphs reworded to reflect the fact that the drywell equipment drain tank level probe is mounted to a non-seismic tank and therefore is not considered to be seismically qualified. Regulatory Guide 1.45 recommends the drywell leakage detection systems be qualified to operate following seismic events that do not provide operators with prompt and quantitative data. At Susquehanna, allowable identified and unidentified drywell leakage rates are governed by Technical Specifications, with allowable unidentified rates being more stringent. Should an OBE rupture the drywell equipment drain tank, the inventory would spill to the floor and be collected as identified leakage by the drywell sump which have seismically qualified level probes.

5.3.1.6.1

Paragraph reworded to show that each specimen holder contains iron and copper dosimeter wires.

5.3.1.6.4

Paragraph worded to indicate that dosimetry will be done when the first capsule is withdrawn. This change is the result of the original neutron dosimeter not being installed in Unit 2. However, dosimeter wires are available for testing when the specimen holders are withdrawn. Since the PT curve is highly conservative as determined by the Unit 1 neutron dosimeter test, brittle failure of the RPV during hydrotests will not occur.

Tables 5.3-1b  
5.3-2b

Administrative change. Tables updated to reflect correct FSAR subsection.

5.4.5.2

Paragraph expanded to include response from Question 312.16.

5.4.8.2  
(Page 5.4-45)  
Figure 5.4-17a

Paragraph revised to add a description of reactor water cleanup holding pumps starting due to an outboard isolation valve not fully open. This change is the result of a modification to the hold pump control circuitry to include an anticipatory start circuit. The start circuit will activate the pumps as soon as the outboard isolation valve starts to close. Activation of the pumps at this point allows the pumps to attain rated speed before low flow condition. This in turn prevents a loss of precoat on the vessel elements.





	<p>Paragraph and Figure revised to reflect a plant modification to the feedwater system, which installed a Class 1E motor operated gate valve in each of the reactor water cleanup return lines to feedwater. These valves are assigned the containment isolation function and the long term leakage control function.</p>
6.1.2	<p>Paragraph added to describe the coatings used for touch-up or small area repair within the primary containment. These coatings match original formulations qualified to ANSI N101.2 requirements.</p>
6.2.5.2 6.2.5.5.3	<p>Subsections revised by deleting references indicating that the H<sub>2</sub>O<sub>2</sub> analyzers will be used as a process monitor during normal operation. The analyzers will be operated as post accident monitors only, pursuant to NUREG 0737.</p>
Table 6.2-12	<p>Administrative change. Table revised to reflect a plant modification to the feedwater system which installed a Class 1E motor operated gate valve in each of the reactor water clean-up return lines to feedwater. These valves are assigned the containment isolation function and the long term leakage control function.</p> <p>Table revised to correctly identify the applicable General Design Criteria for penetration X-35A. Penetration X-35A (TIPS) goes through the RPV and therefore should be evaluated per General Design Criterion 55, not 56 which was reference previously.</p>
6.7.2.1.1	<p>Paragraph revised by changing the setpoint (from 0.5 to 1.0) that provides interlock control on valves in the line to the leakage control system blower suction when Main Steam Isolation Valve pressure is greater than that setpoint. This change makes the FSAR consistent with current Plant design.</p>
6.7.3.5 Table 6.7-1	<p>Paragraph and Table revised to reflect the replacement of four class 1E inboard MSIV-LCS high leakage flow bypass timers with equivalent timers having a range of 0-15 minutes instead of 0-5 minutes. The new timers are set at 13 minutes so as to avoid a premature and unnecessary trip to the system. This change will not result in overloading standby gas or unacceptable dose releases.</p>

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7.2.1.1.6.1.1  
7.2.1.1.6.1.2

Paragraphs revised to describe the fact that Units 1 and 2 have backup scram system indicators to show the status of their respective D. C. power supplies and that a loss of power will cause annunciation at the Unit operating benchboards.

7.3.1.1a.1.6.5

Section revised to provide a description of the Unit 1 to Unit 2 RHR interlocks which were installed to assure proper response of both Units RHR pumps during various accident/non-accident conditions.

7.3.1.1b.6.4

Section revised by adding a description of the newly installed HVAC isolation bypass switches. These switches were installed to facilitate the method of removing Zones I and II from the secondary containment boundary during planned maintenance.

7.4.1.2.5.2

Deleted reference '(Unit 1 only)'. Redundant standby liquid control system tank solution level instrumentation has been installed in Unit 2.

Figure 7.7-12

Figure updated in recognition that the core size of the History Processor has been increased from 32K to 64K.

Table 8.1-1

Table updated to include valves added to the ESW system. These valves were installed as part of the license condition to mitigate the effects of ESW water hammer.

8.3.1.4.2  
8.3.1.4.12,  
Items 4),5)&6)

Administrative change. Paragraphs reworded for clarity.

8.3.1.4.12  
Item 2)

Wording changed to clarify the as-designed controls for diesel generator overspeed shutdown. An overspeed sensor is provided for each diesel generator. Activation of any one switch from the sensor is alarmed but will not prevent the diesel from starting or running.

9.2.3.2

Paragraph and revised to reflect the administratively controlled setpoint range, which is acceptable and within the operating range of the affected heat exchangers.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures that the financial statements are reliable and can be audited without issue.

In the second section, the author details the various methods used to collect and analyze data. This includes both primary and secondary research techniques. The primary research involves direct observation and interviews, while secondary research involves analyzing existing data sources.

The third section focuses on the statistical analysis of the collected data. It describes the use of various statistical tests to determine the significance of the findings. The results of these tests are then used to draw conclusions about the research objectives.

Finally, the document concludes with a summary of the key findings and recommendations. It highlights the areas where further research is needed and provides practical advice for implementing the results of the study.

The second part of the document provides a detailed overview of the company's financial performance over the past year. It includes a breakdown of revenue, expenses, and profit margins. The author also discusses the challenges faced by the company and the strategies used to overcome them.

The third part of the document is a comprehensive list of references used in the research. It includes books, articles, and online sources that provided valuable information and insights into the subject matter.

The final part of the document is an appendix containing additional data and information that supports the main text. This includes raw data tables, detailed calculations, and supplementary figures.

Section/Subsection/Table

Description

Page 5

9.4.2.1.2  
Table 9.4-3

Paragraph and Table revised to reflect modifications to the CRD repair room HVAC system. A cooling coil was added along with additional air flow to the room. These changes allow the CRD repair room to be maintained at 75°F.

Table 9.4-2

Table revised to reflect reduced flow rates in the control room HVAC. Heat load evaluations of the control room indicate excess capacity in the cooling system. The flow rate has been reduced to decrease HVAC generated noise in the control room.

9.5.1.2.29

Paragraph revised to indicate that the condensate and refueling storage tanks are within range of the Unit 2 yard hydrant hose. Modification to the S&A building made these tanks inaccessible to the Unit 1 yard hydrant hoses.

9.5.6  
9.5.6.1

Administrative change. Paragraphs reworded for clarity.

10.2.3.6

Administrative change. Paragraphs reworded for clarity.

Table 11.3-6

Table updated to reflect the removal of HEPA filters from the charcoal offgas system.

11.4.2.2

Paragraph revised by removing the word 'sonic' from the wasting mixing tank level detector description. The sonic detectors have been replaced with a more reliable level detection system.

11.5.2.1.2  
11.5.2.1.3

Subsection updated to include a description of the Post-Accident Vent Stack Sampling and Monitoring System. This system will be used during post-accident conditions and will normally be isolated during non-accident conditions. Following initiation of this system, the normally operating system will be isolated.

12.5.2.1  
12.5.2.1.1

Paragraphs revised to reflect facility changes resulting from the expansion of the chemistry laboratory.

13.0

The entire chapter has been revised to reflect organizational changes.

10/10/50

MEMORANDUM

TO: SAC, NEW YORK

FROM: SA [Name], NEW YORK

SUBJECT: [Subject]

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Section/Subsection/Table

Description

Page 6

17.2

This section has been revised to reflect organizational changes. Pursuant to 10CFR50.54(a)(3), PP&L has determined that these changes do not reduce commitments described in the FSAR.

18.1.30.3.1  
Table 18.1-5

Subsection updated to include a description of the Post-accident Vent Stack Sampling and Monitoring System. This system will be used during post-accident conditions and will normally be isolated during non-accident conditions. Following initiation of this system, the normally operating system will be isolated.

18.1.69.3

Response clarified. The standby gas treatment system testing frequency has been revised to be consistent with the Technical Specifications - which are correct. Also, the method for obtaining actual leak rates has been revised to allow quantifying steam leaks based on empirical data.

Table 18.1-10

Table updated to reflect a plant modification to the feedwater system, which installed a Class 1E motor operated gate valve in each of the reactor water cleanup return lines to feedwater. These valves are assigned the containment isolation function and the long term leakage control function.

Question 005.6

Revised to indicate responses have been transferred to appropriate Subsections of the FSAR.

Question 040.90

Question response revised to reflect filters will be provided - may be commercial grade.

Question 312

All 312 Series Question have been reviewed and as appropriate their responses have been incorporated into the FSAR text.

Question 331.16

Question response revised to reflect correct location of the resume.

Question 361.4  
362.2  
362.5  
362.13  
362.16  
362.19  
362.20  
362.22  
362.24  
371.2  
371.21  
371.30

Revised to indicate responses have been transferred to appropriate Subsections of the FSAR.

10/10/50

CONFIDENTIAL

CONFIDENTIAL

The following information was obtained from a confidential source who has provided reliable information in the past.

On 10/10/50, the source advised that [redacted] had been observed at [redacted] in the vicinity of [redacted].

[redacted] was observed in the company of [redacted] and [redacted] at [redacted] on 10/10/50.

The source further advised that [redacted] had been observed at [redacted] on 10/10/50.

[redacted] was observed at [redacted] on 10/10/50.

[redacted] was observed at [redacted] on 10/10/50.

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[redacted] was observed at [redacted] on 10/10/50.

[redacted] was observed at [redacted] on 10/10/50.

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Section/Subsection/Table

Description

Question 421.2

Question response revised to correct grammatical error.

Question 421.5  
421.14

Revised to indicate responses have been transferred to appropriate Subsections of the FSAR.

Question 421.20  
421.24

Response revised for correctness.

Question 441.11

Response revised to correct grammatical errors.

Question 441.13

Revised to indicate response has been transferred to appropriate Subsections of the FSAR.

Advertisement

Advertisement

The first part of the advertisement discusses the importance of maintaining accurate records for business operations. It highlights the benefits of using a reliable accounting system to track expenses and income, ensuring compliance with tax regulations and providing a clear overview of the company's financial health.

The second part of the advertisement introduces a new software solution designed to streamline the accounting process. This user-friendly platform offers automated data entry, real-time reporting, and secure cloud storage, making it an ideal choice for small to medium-sized businesses looking to optimize their financial management.

The advertisement also mentions the availability of a free trial period, allowing potential users to explore the software's features and benefits without any financial commitment. For more information, interested parties are encouraged to visit the company's website or contact their sales representative.

Finally, the advertisement provides contact details for the software provider, including a phone number and an email address, to facilitate inquiries and purchases. The overall tone is professional and informative, aimed at attracting business owners who value efficiency and accuracy in their financial reporting.