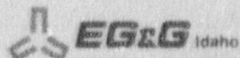




**Idaho
National
Engineering
Laboratory**

*Managed
by the U.S.
Department
of Energy*



*Work performed under
DOE Contract
No. DE-AC07-76ID01570*

EGG-NTA-7549
May 1987

INFORMAL REPORT

CONFORMANCE TO GENERIC LETTER 83-28, ITEM 2.2.2--
VENDOR INTERFACE PROGRAMS FOR ALL OTHER SAFETY-
RELATED COMPONENTS: DUANE ARNOLD

Alan C. Udy

Prepared for the
U.S. NUCLEAR REGULATORY COMMISSION

8706260272 870501
PDR ADDCK 05000331
P PDR

DISCLAIMER

This book 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, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product or process disclosed, or represents that its use would not infringe privately owned rights. References herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

TECHNICAL EVALUATION REPORT

CONFORMANCE TO GENERIC LETTER 83-28, ITEM 2.2.2,
VENDOR INTERFACE PROGRAMS (ALL OTHER SAFETY-RELATED COMPONENTS),
DUANE ARNOLD

Docket No. 50-331

Alan C. Udy

Published May 1987

Idaho National Engineering Laboratory
EG&G Idaho, Inc.
Idaho Falls, Idaho 83415

Prepared for the
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
Under DOE Contract No. DE-AC07-76ID01570
FIN No. D6001

ABSTRACT

This EG&G Idaho, Inc., report provides a review of the submittal from the Iowa Electric Light and Power Company for the Duane Arnold Energy Center regarding conformance to Generic Letter 83-28, Item 2.2.2.

Docket No. 50-331

TAC No. 53669

FOREWORD

This report is supplied as part of the program for evaluating licensee/applicant conformance to Generic Letter 83-28, "Required Actions Based on Generic Implications of Salem ATWS Events." This work is being conducted for the U.S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation, Division of PWR Licensing-A, by EG&G Idaho, Inc., NRR and I&E Support Branch.

The U.S. Nuclear Regulatory Commission funded this work under the authorization B&R No. 20-19-10-11-3, FIN No. D6001.

Docket No. 50-331

TAC No. 53669

CONTENTS

ABSTRACT	ii
FOREWORD	iii
1. INTRODUCTION	1
2. REVIEW CONTENT AND FORMAT	2
3. ITEM 2.2.2 - PROGRAM DESCRIPTION	3
3.1 Guideline	3
3.2 Evaluation	3
3.3 Conclusion	4
4. PROGRAM WHERE VENDOR INTERFACE CANNOT PRACTICABLY BE ESTABLISHED	5
4.1 Guideline	5
4.2 Evaluation	5
4.3 Conclusion	6
5. RESPONSIBILITIES OF LICENSEE/APPLICANT AND VENDORS THAT PROVIDE SERVICE ON SAFETY-RELATED EQUIPMENT	7
5.1 Guideline	7
5.2 Evaluation	7
5.3 Conclusion	7
6. CONCLUSION	8
7. REFERENCES	9

CONFORMANCE TO GENERIC LETTER 83-28, ITEM 2.2.2,
VENDOR INTERFACE PROGRAMS (ALL OTHER SAFETY-RELATED COMPONENTS),
DUANE ARNOLD

1. INTRODUCTION

On February 25, 1983, both of the scram circuit breakers at Unit 1 of the Salem Nuclear Power Plant failed to open upon an automatic reactor trip signal from the reactor protection system. This incident was terminated manually by the operator about 30 seconds after the initiation of the automatic trip signal. The failure of the circuit breakers was determined to be related to the sticking of the undervoltage trip attachment. Prior to this incident, on February 22, 1983, at Unit 1 of the Salem Nuclear Power Plant, an automatic trip signal was generated based on steam generator low-low level during plant startup. In this case, the reactor was tripped manually by the operator almost coincidentally with the automatic trip.

Following these incidents, on February 28, 1983, the NRC Executive Director for Operations (EDO), directed the NRC staff to investigate and report on the generic implications of these occurrences at Unit 1 of the Salem Nuclear Power Plant. The results of the staff's inquiry into the generic implications of the Salem unit incidents are reported in NUREG-1000, "Generic Implications of the ATWS Events at the Salem Nuclear Power Plant." As a result of this investigation, the Commission (NRC) requested (by Generic Letter 83-28 dated July 8, 1983¹) all licensees of operating reactors, applicants for an operating license, and holders of construction permits to respond to the generic issues raised by the analyses of these two ATWS events.

This report is an evaluation of the responses submitted by the Iowa Electric Light and Power Company, the licensee for the Duane Arnold Energy Center, for Item 2.2.2 of Generic Letter 83-28. The documents reviewed as a part of this evaluation are listed in the references at the end of this report.

2. REVIEW CONTENT AND FORMAT

Item 2.2.2 of Generic Letter 83-28 requests the licensee or applicant to submit, for the staff review, a description of their programs for interfacing with the vendors of all safety-related components including supporting information, in considerable detail, as indicated in the guideline section for each case within this report.

These guidelines treat cases where direct vendor contact programs are pursued, treat cases where such contact cannot practically be established, and establish responsibilities of licensees/applicants and vendors that provide service on safety-related components or equipment.

As previously indicated, the cases of Item 2.2.2 are evaluated in a separate section in which the guideline is presented; an evaluation of the licensee's/applicant's response is made; and conclusions about the programs of the licensee or applicant for their vendor interface program for safety-related components and equipment are drawn.

3. ITEM 2.2.2 - PROGRAM DESCRIPTION

3.1 Guideline

The licensee or applicant response should describe their program for establishing and maintaining interfaces with vendors of safety-related components which ensures that vendors are contacted on a periodic basis and that receipt of vendor equipment technical information (ETI) is acknowledged or otherwise verified.

This program description should establish that such interfaces are established with their NSSS vendor, as well as with the vendors of key safety-related components such as diesel generators, electrical switchgear, auxiliary feedpumps, emergency core cooling system (ECCS) pumps, batteries, battery chargers, and valve operators, to facilitate the exchange of current technical information. The description should verify that controlled procedures exist for handling this vendor technical information which ensure that it is kept current and complete and that it is incorporated into plant operating, maintenance and test procedures as is appropriate.

3.2 Evaluation

The licensee for the Duane Arnold Energy Center responded to these requirements with a submittal dated February 29, 1984.² This submittal includes information that describes their past and current vendor interface programs. In the review of the licensee's response to this item, it was assumed that the information and documentation supporting this program is available for audit upon request. We have reviewed this information and note the following.

The licensee states that they rely on GE Customer Services to obtain vendor information on the systems within the General Electric (the NSSS vendor) scope of supply. The disseminated information is in the form of letters, Service Information Letters, Service Advice Letters, Turbine Information Letters, Operation and Maintenance Manuals, Application Information Documents, Field Disposition Instructions and Field Deviation

Disposition Requests. This information is handled by the licensee in accordance with Nuclear Generating Division (NGD) procedure 102.1, "Review of Industry-related Documents."

The licensee is also maintaining an onsite vendor library in accordance with NGD procedure 106.9, "Control of Vendor Technical Information." The licensee has committed to determine that their vendor information is kept current and complete by formal contact with equipment vendors. On receipt of vendor information it is reviewed in accordance with NGD procedure 104.3, "Review of Supplier Technical Documents." Further, the licensee states that all applicable procedures will be modified per DAEC procedure 1406.3, "Revision of Procedures and Instructions." NGD procedure 102.1, "Review of Industry-related Documents," determines the applicability of industry information to enter this process of procedure and instruction revision.

Additionally, the licensee states that they are a functional part of the INPO Nuclear Utility Task Action Committee (NUTAC) on the Vendor Equipment Technical Information Program (VETIP).

3.3 Conclusion

We conclude that the licensee's response regarding program description is complete and, therefore, acceptable.

4. PROGRAM WHERE VENDOR INTERFACE CANNOT PRACTICABLY BE ESTABLISHED

4.1 Guideline

The licensee/applicant response should describe their program for compensating for the lack of a formal vendor interface where such an interface cannot be practicably established. This program may reference the NUTAC/VETIP program, as described in INPO 84-010, issued in March 1984. If the NUTAC/VETIP program is referenced, the response should describe how procedures were revised to properly control and implement this program and to incorporate the program enhancements described in Section 3.2 of the NUTAC/VETIP report. It should also be noted that the lack of either a formal interface with each vendor of safety-related equipment or a program to periodically contact each vendor of safety-related equipment will not relieve the licensee/applicant of his responsibility to obtain appropriate vendor instructions and information where necessary to provide adequate confidence that a structure, system or component will perform satisfactorily in service and to ensure adequate quality assurance in accordance with Appendix B to 10 CFR Part 50.

4.2 Evaluation

In Reference 2, the licensee provided a brief description of the vendor interface program. Their description references the NUTAC/VETIP program. The licensee states that plant instructions and procedures are currently in place to assure that the VETIP program is properly controlled and implemented.

VETIP is comprised of two basic elements related to vendor equipment problems; the Nuclear Plant Reliability Data System (NPRDS) and the Significant Event Evaluation and Information Network (SEE-IN) programs. VETIP is designed to ensure that vendor equipment problems are recognized, evaluated and corrective action taken.

Through participation in the NRPDS program, the licensee submits engineering information, failure reports and operating history for review under the SEE-IN program. Through the SEE-IN program, the Institute of Nuclear Power Operations (INPO) reviews nuclear plant events that have been reported through the NRPDS programs and Nuclear Network and NRC reports. Based on the significance of the event, as determined by the screening review, INPO issues a report to all utilities outlining the cause of the event, related problems and recommends practical corrective actions. These reports are issued in Significant Event Reports, and Significant Operating Experience Reports and as Operations and Maintenance Reminders. Upon receipt of these documents, the licensee evaluates the information to determine applicability to the facility. This evaluation is documented and corrective actions are taken as determined necessary.

The licensee's response states that procedures exist to review and evaluate incoming equipment technical information and to incorporate it into existing procedures.

4.3 Conclusion

We find that the licensee's response to this concern is adequate and acceptable. This finding is based on the understanding that the licensee's commitment to implement the VETIP program includes the implementation of the enhancements described in Section 3.2 of the NUTAC/VETIP program to the extent that the licensee can control or influence the implementation of these recommendations.

5. RESPONSIBILITIES OF LICENSEE/APPLICANT AND VENDOR THAT PROVIDE SERVICE ON SAFETY-RELATED EQUIPMENT

5.1 Guideline

The licensee/applicant response should verify that the responsibilities of the licensee or applicant and vendors that provide service on safety-related equipment are defined such that control of applicable instructions for maintenance work on safety-related equipment are provided.

5.2 Evaluation

The licensee, in Reference 2, committed to implement the NUTAC/VETIP program. They further state that their present and planned future practices and activities adequately implement this program. The VETIP program includes implementation procedures for the internal handling of vendor services.

5.3 Conclusion

We find the licensee's commitment to implement the VETIP recommendations acceptable, with the understanding that the licensee's commitment includes the objective for "Internal Handling of Vendor Services" described on page 23 of the March 1984 NUTAC report.

6. CONCLUSION

Based on our review of the licensee's response to the specific requirements of item 2.2.2 for Duane Arnold, we find that the licensee's interface program with its NSSS supplier, along with the licensee's commitment to implement the NUTAC/VETIP program, is acceptable. This is based on the understanding that the licensee's commitment to implement the NUTAC/VETIP program includes the objective for "Internal Handling of Vendor Services" described on page 23 of the March 1984 report and includes the enhancements described in Section 3.2 of the report to the extent that the licensee can control or influence such enhancements.

7. REFERENCES

1. Letter, NRC (D. G. Eisenhut), to all Licensees of Operating Reactors, Applicants for Operating License, and Holders of Construction Permits, "Required Actions Based on Generic Implications of Salem ATWS Events (Generic Letter 83-28)," July 8, 1983.
2. Letter, Iowa Electric Light and Power Company (R. W. McGaugby) to NRC (H. Denton), "Generic Letter 83-28: "Required Actions Based on Generic Implications of Salem ATWS Events," February 29, 1984, NG-84-0825.
3. Vendor Equipment Technical Information Program, Nuclear Utility Task Action Committee of Generic Letter 83-28, Section 2.2.2, March 1984, INPO 84-010.

BIBLIOGRAPHIC DATA SHEET

EGG-NTA-7549

SEE INSTRUCTIONS ON THE REVERSE

2 TITLE AND SUBTITLE

CONFORMANCE TO GENERIC LETTER 83-28, ITEM 2.2.2--
VENDOR INTERFACE PROGRAMS FOR ALL OTHER SAFETY-
RELATED COMPONENTS: DUANE ARNOLD

J LEAVE BLANK

4 DATE REPORT COMPLETED

MONTH

YEAR

May

1987

6 DATE REPORT ISSUED

MONTH

YEAR

May

1987

5 AUTHOR(S)

Alan C. Udy

7 PERFORMING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code)

EG&G Idaho, Inc.
P. O. Box 1625
Idaho Falls, ID 83415

8 PROJECT/TASK/WORK UNIT NUMBER

9 FUNDING OR GRANT NUMBER

D6001

10 SPONSORING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code)

Division of PWR Licensing - A
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

11a TYPE OF REPORT

b PERIOD COVERED (Inclusive dates)

12 SUPPLEMENTARY NOTES

13 ABSTRACT (200 words or less)

This EG&G Idaho, Inc., report provides a review of the submittals from the Iowa Electric Light and Power Company regarding conformance to Generic Letter 83-28, Item 2.2.2, for the Duane Arnold Energy Center.

14 DOCUMENT ANALYSIS a KEYWORDS/DESCRIPTORS

b IDENTIFIERS/OPEN ENDED TERMS

15 AVAILABILITY STATEMENT

Unlimited
Distribution

16 SECURITY CLASSIFICATION

(This page)

Unclassified

(This report)

Unclassified

17 NUMBER OF PAGES

18 PRICE