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MCGAUGHY,R.W. Iowa Electric Light & Power Co.
RECIP.NAME RECIPIENT AFFILIATION
DENTON,H. Office of Nuclear Reactor Regulation, Director

SUBJECT: Forwards Duane Arnold Energy Ctr Plant-unique analysis rept, Vol 6,Rev 0, "Torus Attached Piping & Suppression Chamber Penetrations Analyses," per 820119 order.Corrected pages to Vols 1,2,5 & App A also encl.

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Iowa Electric Light and Power Company
June 30, 1983
NG-83-2281

Mr. Harold Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License No: DPR-49
Transmittal of Volume 6 of the Duane Arnold Energy Center Plant Unique Analysis Report for Mark I Containment

Dear Mr. Denton:

Pursuant to the January 19, 1982 order of the Nuclear Regulatory Commission, Iowa Electric Light and Power Company herewith submits Volume 6 of the Plant Unique Analysis Report (PUAR) for the Duane Arnold Energy Center. Twenty copies are being submitted.

Volumes 1 through 5 of the DAEC PUAR were submitted by letter of December 30, 1982. This submittal of Volume 6 completes our submittal of the Plant Unique Analysis Report for the Duane Arnold Energy Center.

Also included with this submittal are 20 copies of corrected pages for Volumes 1, 2 and 5 and Appendix A. These pages reflect minor editorial changes and correct typographical errors in our previous submittal.

Very truly yours,

Richard W. McGaughy
Manager, Nuclear Division

RWM/BWR/dmh*
Attachment

cc: B. Reid
L. Liu
S. Tuthill
F. Apicella
NRC Resident Office
Commitment Control No. 83-0179

A025
1/20

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June 17, 1983
IOW-40-156

Mr. H. W. Shearer
Iowa Electric Light & Power Co.
Post Office Box 351
Cedar Rapids, Iowa 52406

Subject: DAEC Plant Unique Analysis Report, Volume 6, Revision 0

References:
1) AE Associates Letter No. CKE-83-017, C. K. Eagle to H. J. Sund, dated June 14, 1983, "Notes of AE Associates/ NUTECH Meeting of 5/26/83"
2) Letter No. IOW-40-126, H. J. Sund to H. W. Shearer, dated March 24, 1983, "Schedule for Submittal of Design Reports and Volume 6 of the DAEC PUA Report"
3) NUTECH Letter No. IOW-40-128, H. J. Sund to H. W. Shearer, dated April 11, 1983, "Status of Outstanding Generic Mark I Program Issues"

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Dear Harry:

Enclosed are thirty (30) copies of Volume 6, Revision 0, of the DAEC Plant Unique Analysis Report (PUAR). This provides twenty (20) copies to be forwarded to the NRC and ten (10) copies for internal distribution within Iowa Electric. The comments from AE Associates that were listed in their letter of June 14, 1983 (Reference 1) have all been addressed and included in this volume. Submittal of this last volume of the DAEC PUAR is in accordance with the schedule set forth by NUTECH in their March 24, 1983 letter (Reference 2).

Per your request at our April 26, 1983 meeting, we will be forwarding to you within the next few days an annotated copy of this Volume 6, indicating the differences between the Revision A and Revision 0 issues. This is intended to help expedite Iowa Electric's review of the volume.

In addition to the transmittal of Volume 6 of the DAEC PUAR, we have made appropriate corrections and/or clarifications to various pages of the first five volumes of the DAEC PUAR. These changes were a result of Iowa Electric's comments plus additional corrections by NUTECH resulting from detailed Design Report preparations. Forty (40) copies of these revisions are also being transmitted for your submittal to the NRC and for insertion into the Iowa Electric internal volumes.

As an update to the status provided to Iowa Electric on outstanding generic Mark I program issues in our April 11, 1983 letter (Reference 3), the following information is presented.

Generic Containment Piping Fatigue Evaluation

Still awaiting favorable acceptance by the NRC of the generic position taken by the Mark I Owners relative to piping fatigue. No new response commitment date has been made by the NRC. Piping fatigue was not addressed by NUTECH on the Mark I Program other than to make reference in the PUAR to the MPR Associates Report and to the generic position established. It is recommended that Iowa Electric no longer consider this item as an open issue pending receipt of the NRC letter.

The NRC raised the piping fatigue issue again in response to their review of the DAEC PUAR, Volumes 1 through 5. NUTECH provided Iowa Electric with a response to this question by identifying results of piping fatigue evaluations on DAEC piping systems and similar BWR piping systems which were contained within the generic evaluation (MPR-751).

DW/WW Vacuum Breaker Analytical Methodology

The NRC has expressed further concern relative to the analytical procedure by which the Mark I Full Scale Test Facility vacuum breaker forcing function was modified for plant unique application. Consequently, Continuum Dynamics, Inc., who prepared the initial report submitted to the NRC (Technical Note 82-31), is now in the process of revising their report in an attempt to address these new NRC concerns. Following this update, a meeting is tentatively planned with the NRC in early Fall 1983 to formally present this new information.

However, NUTECH did not address the operability of these vacuum breakers in the DAEC PUAR as Iowa Electric and other utilities have taken the position that this issue is outside the Mark I Program. Hence, Iowa Electric has identified modifications needed to the vacuum breakers and will implement the changes during the next refueling outage. Any further discussions or changes relative to this subject will be handled outside the scope of the Mark I Containment Program.

SRV Low-Low Set Logic

The NRC has formally approved the low-low set logic and lower MSIV water level trips for BWRs (NRC Letter D. B. Vassallo to H. C. Pfefferlen, "Acceptability of Low-Low Set Logic and Lower MSIV Water Level Trip", dated April 26, 1983).

TPOOL Suppression Pool Temperature Analytical Model

Despite GE's claim that this issue was accepted by the NRC during their presentation in December 1983, the NRC stated in their April 28, 1983 letter, relative to the questions on the Cooper PUAR, that this local pool temperature model has not been accepted. Current plan is for GE to appeal the position to higher authorities in the NRC.

NUTECH has utilized this model as a part of their Mark I Program analyses. Consequently, Iowa Electric, along with the other BWR owners, are currently still at risk on this matter. The present approach of continuing to pursue acceptance by the NRC on this issue by GE and others is considered appropriate.

Downcomer Chugging Lateral Loads

A presentation was made to the NRC on this issue at Bethesda, Maryland on March 11, 1983. Basically, the NRC has accepted the current design load as being conservative. Formal documentation of the presentation data was prepared by GE and submitted as a report to the NRC in June 1983. Therefore, formal closure of this issue will not occur until after the NRC's review of this report. However, favorable acceptance is anticipated. NUTECH has utilized the current design load in their analyses and has little margin left for load increases.

These are currently the only issues still outstanding on the Mark I Containment Program. NUTECH has assumed what we feel to be the best position for Iowa Electric on each of these issues. It is recommended that the DAEC PUAR be submitted as presented and any further effort to address these outstanding issues be handled on a generic basis or via any plant unique questions arising as a result of the NRC's review of the DAEC PUAR. It is not felt necessary for Iowa Electric to restate their position on each of these issues in their transmittal letter to the NRC as the PUAR defines the analytical approaches used.

The status of the other non-Mark I issues discussed in the April 11, 1983 letter (Reference 3) is basically unchanged. We will keep you appraised of any developments in these areas as they occur.

This Volume 6 submittal, along with the revisions to Volumes 1 through 5, essentially completes the DAEC Plant Unique Analysis Report. We will assist you with any other questions which may arise from the NRC as a result of your transmittal of this information. In the meantime, should you have any questions on this information, please feel free to contact me.

Sincerely,

Howard J. Sund
Project Manager

rm
Enclosure

cc: H. W. Rehrauer