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DAEC Plant Support Center
Operated by Nuclear Management Company, LLC

August 21, 2001
NG-01-0995

Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station 0-P1-17
Washington, DC 20555-0001

Subject: Duane Arnold Energy Center (DAEC)
Docket No: 50-331
Op. License No: DPR-49
Response to Request for Additional Information (RAI) to Technical Specification Change Request TSCR-042 – Extended Power Uprate.
(TAC # MB0543)

References: 1) NG-01-0909, "Response to Request for Additional Information (RAI) to Technical Specification Change Request TSCR-042 – Extended Power Uprate. (TAC # MB0543)," dated August 16, 2001.
2) NG-00-1900, "Technical Specification Change Request (TSCR-042): 'Extended Power Uprate'," dated November 16, 2000.

File: A-117, SPF-189

Dear Sir(s):

In the Reference 1 letter, we provided a partial response to the Staff's Request for Additional Information (RAI) pertaining to our Reference 2 license amendment request. The Attachment to this letter provides the residual information from the Staff's original RAI.

Please contact this office should you require additional information regarding this matter.

A001

3313 DAEC Road • Palo, Iowa 52324-9646
Telephone: 319.851.7611

This letter is true and accurate to the best of my knowledge and belief.

NUCLEAR MANAGEMENT COMPANY, LLC

By Rob Anderson for
Gary Van Middlesworth
DAEC Site Vice-President

State of Iowa
(County) of Linn

Signed and sworn to before me on this 21st day of August, 2001,

by Rob Anderson.

Nancy S. Franck
Notary Public in and for the State of Iowa

NANCY S. FRANCK
Commission Number 011041
MY COMMISSION EXPIRES
7-28-01

Commission Expires

Attachment: DAEC Response to NRC Reactor Systems Branch Requests for Additional Information Regarding Proposed Amendment for Power Uprate

cc: T. Browning
R. Anderson (NMC) (w/o Attachment)
B. Mozafari (NRC-NRR)
J. Dyer (Region III)
D. McGhee (State of Iowa)
NRC Resident Office
Docu

DAEC Response to NRC
Reactor Systems Branch Requests for Additional Information
Regarding Proposed Amendment for Power Uprate

2. Maximum Extended Load Line Limit Analysis (MELLLA):

(a) Discuss the specific analyses needed to verify the safety of operation within the MELLLA domain in the power/flow map. Indicate which MELLLA were not performed, if any, as part of the EPU safety analysis process and why. Also, provide a cross-reference to the section in the submittal where the analyses are discussed.

DAEC Response:

a) MELLLA is not a stand-alone evaluation program. When implemented without power uprate, MELLLA is usually coupled with the APRM/RBM Technical Specifications (ARTS) program. Thus, there is no "standard" list of analyses/evaluations for MELLLA alone. However, establishment of acceptable fuel operating limits to accommodate all Anticipated Operational Occurrences (AOOs), as well as acceptable performance for all postulated accidents, is as essential for the MELLLA operating range as it is for the pre-MELLLA range of operation. As discussed in the DAEC EPU submittal (PUSAR, Section 1.2), MELLLA is an integral part of the EPU implementation plan, consistent with the generic EPU program in NEDC-32424P-A (ELTR1). The following is the tabulated listing of the analyses/evaluations that would "typically" be performed to confirm the adequacy of operation in the MELLL domain. All were evaluated as part of the DAEC's EPU, with their corresponding sections in the PUSAR provided.

It should also be noted that at the EPU conditions, the difference between the "rated load line" and the "MELLLA load line" is very small, i.e., 100% vs. 100.6% load line; and, there is only a 1.0% window in core flow at the uprated power. Consequently, there is essentially no "EPU without MELLLA" range of operation for DAEC. Consequently, for some evaluations, only the rated power/flow condition is specifically discussed, as this small difference due to MELLLA would not have any noticeable impact on the results.

MELLL Analyses	PUSAR Section
Reactor Heat Balance	1.3.1 Table 1-2
Power/Flow Map	2.3.1 Figure 2-1
Thermal-Hydraulic Stability	2.4
Reactor Pressure Vessel Internals Structural Evaluations	3.3.4
Reactor Internal Pressure Differentials	3.3.3 Tables 3-3, 3-4 & 3-5
Steam Dryer and Separator Evaluation	3.3.6
Containment Evaluation	4.1 Table 4-1 & 4-2

MELLL Analyses	PUSAR Section
Emergency Core Cooling System Performance	4.3 Table 4-3
Neutron Monitoring System	5.1.2 Table 5-1
Instrument Setpoints	5.3.5 Table 5-1
Transient Analyses	9.1 Tables 9-1 & 9-2 Figures 9-1 – 9-4
Anticipated Transients Without Scram (ATWS) Evaluations	9.3.1 Tables 9-7 & 9-8