

October 6, 2010

Dr. W. D. Reece, Director
Nuclear Science Center
Texas Engineering Experiment Station
Texas A&M University
1095 Nuclear Science Road
F.E. Box 89, M/S 3575
College Station, Texas 77843

SUBJECT: TEXAS A&M SYSTEM, TEXAS ENGINEERING EXPERIMENT STATION –
REQUEST FOR ADDITIONAL INFORMATION REGARDING THE NUCLEAR
SCIENCE CENTER REACTOR LICENSE RENEWAL (TAC NO. ME1584)

Dear Dr. Reece:

The U. S. Nuclear Regulatory Commission (NRC) completed its review of your letter dated August 31, 2010 in response to our letter dated June 24, 2010, requesting additional information. This review was performed in support of your application for renewal of Facility Operating License No. R-83 for the Nuclear Science Center Reactor (NSC) dated February 27, 2003, as supplemented by letters dated March 30, 2005, and July 22, 2009.

During our review, we find that some of the responses to our request for additional information were incomplete. The enclosed request for additional information identifies the additional information needed to complete our review. For your information, the enclosed do not contain any request beyond those already asked in our June 24, 2010, letter. Also for ease of review, the request numbers are kept the same.

Please provide responses to the enclosed request for additional information within 30 days of the date of this letter or as soon as possible. In accordance with Title 10 of the *Code of Federal Regulations* Section 50.30(b), your response must be executed in a signed original under oath or affirmation.

If you have any questions regarding this review, please contact A. Frank DiMeglio at 301-415-0894 or by electronic mail at francis.dimeglio@nrc.gov.

Sincerely,

/RA/

Linh N. Tran, Senior Project Manager
Research and Test Reactors Licensing Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Docket No. 50-128

Enclosure:
As Stated

Texas A&M University

Docket No. 50-128

cc:

Mayor, City of College Station
P.O. Box Drawer 9960
College Station, TX 77840-3575

Governor's Budget and
Planning Office
P.O. Box 13561
Austin, TX 78711

Texas A&M University System
ATTN: Jim Remlinger, Associate Director
Nuclear Science Center
Texas Engineering Experiment Station
F. E. Box 89, M/S 3575
College Station, Texas 77843

Radiation Program Officer
Bureau of Radiation Control
Dept. Of State Health Services
Division for Regulatory Services
1100 West 49th Street, MC 2828
Austin, TX 78756-3189

Susan M. Jablonski
Technical Advisor
Office of Permitting, Remediation & Registration
Texas Commission on Environmental Quality
P.O. Box 13087, MS 122
Austin, TX 78711-3087

Test, Research and Training
Reactor Newsletter
202 Nuclear Sciences Center
University of Florida
Gainesville, FL 32611

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Research and Test Reactors Licensing Branch
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Docket No. 50-128

Enclosure:

As Stated

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DHardesty, NRR

FDiMeglio, NRR

ADAMS Accession No: ML102770495

TEMPLATE # NRR-088

OFFICE	PRLB :PM	PRLB: PM	PRPB: LA	PRLB: ABC	PRLB: PM
NAME	FDiMeglio	LTran	GLappert	JQuichocho	LTran
DATE	10/5/2010	10/5/2010	10/5/2010	10/5/2010	10/6/2010

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OFFICE OF NUCLEAR REACTOR REGULATION

REQUEST FOR ADDITIONAL INFORMATION

TEXAS A&M UNIVERSITY TEXAS ENGINEERING EXPERIMENT STATION

NUCLEAR SCIENCE CENTER REACTOR

FACILITY OPERATING LICENSE NO. R-83

DOCKET NO. 50-128

The U. S. Nuclear Regulatory Commission (NRC) completed its review of the response provided by The Texas A&M University (the licensee) in a letter dated August 31, 2010. The NRC determined that some of the responses to the requests for additional information provided by the licensee were incomplete. In order for the NRC to complete its review, the licensee is requested to provide additional information as identified below:

RAI 1

The response provided for RAI 1 is incomplete in that while stating that there is a temperature indication available to the reactor operator, there is not a technical specification, an administrative procedure, or an operating procedure for the required actions following a temperature limit being reached. In addition, while it is proposed in the response to allow the inlet coolant temperature to increase beyond the temperature currently in the Texas A&M Safety Analysis Report, there is no consideration of the effect of this increased temperature on reactor components. Please provide a technical specification (TS), administrative control, or operating procedure for the maximum inlet temperature and consider the effect of increased temperature on reactor components.

RAI 10

The response provided for RAI 10 is incomplete in that the proposed TS does not reflect the maximum licensed power level of the reactor. Please revise the proposed TS to reflect the maximum licensed power level of the reactor.

RAI 13

The response to RAI 13 is ambiguous in that it suggests that the 1 kW interlock may be checked after maintenance by operating the reactor. Please provide clarification for this response.

ENCLOSURE

RAI14

The response provided for RAI 14 is incomplete as follows:

The response to item (3) and (4) is incomplete because it does not establish a limiting condition for operation (LCO). Please provide a LCO for minimum amount of water above the core and pool water level monitoring.

The current TS have a LCO on pool water pH. The response has removed the LCO on pool water pH. Please provide an explanation as to why this LCO should not be retained.

RAI 18

The response to RAI 18 is incomplete in that the Basis provided for the technical specification revision is ambiguous. Please provide clarification for the statement concerning "a safety factor of 2.0 or greater."

RAI 22

The response to RAI 22 is incomplete in that adequate justification is not provided for removing the limitations of the pool water pH. Please reconsider retaining the LCO on pool water pH or provide justification why it is not needed.

RAI 23

The response to RAI 23 is inadequate as follows:

TS 14.4.8, Specification 7 refers to TS 14.4.3.2, Reactor Safety Systems and "except pool level." TS 14.4.3.2 does not contain a specification on pool level. Please provide clarification for this specification.

TS 14.4.8, Specification 9 refers to TS 14.4.4.1, Coolant Radioactivity Analysis allows for deferral of determination of coolant radioactivity analysis. This appears to be a contradiction of the Basis for TS 14.4.8, Specification 5. Please provide justification for deferment of coolant radioactivity analysis.

TS 14.4.8, Specification 10 refers to TS 14.4.4.2, Coolant conductivity allows for deferral of measurement of coolant conductivity. Please provide justification for deferment of coolant conductivity determination.

RAI 28

The response to RAI 28 is incomplete in that it does not specify limits on coolant pH. In addition, response 2) is ambiguous and requires clarification. Please provide this additional information.

RAI 29

The response to RAI 29 is incomplete in that it does not state whether the filter bank is part of the ventilation system which is used to achieve building confinement. The components of the ventilation system including a filter bank would require an LCO and surveillance even if no credit is taken for filtration in analysis. Please amend the response to RAI 29 to include the filter bank or justify why the inclusion is not needed.

RAI 30

The response to RAI 30 is a proposed TS concerning the TAMU site. Please review the proposed TS for sensitive information which should be withheld and not be included in the TS.

RAI31

The response to RAI 31 is unclear in that it appears to allow a maintenance technician who is not a licensed reactor operator to be performing maintenance on the unsecured reactor with the Senior Reactor Operator somewhere on site. This places the non licensed maintenance technician in control of the unsecured reactor. Please provide clarification for this response.

RAI 32

The response to RAI 32 is incomplete in that it does not show consistency with ANSI/ANS-15.4-1988 (R1999) nor endorse it. Please provide clarification this response.

RAI 33

The response to RAI 33 proposed a new proposed TS concerning the Reactor Safety Board. However, the response is incomplete. From the proposed TS, it appears that in the absence of the Chairman, a committee meeting can be held with a quorum of two voting individuals. In addition, the meeting frequency specified in the Facility Operating License No. 83 and the proposed TS differ. The proposed TS does not provide for the use of subcommittees and for the review, approval, and dissemination of minutes which are provided for in the current TS. The proposed TS does not clearly state that the ex-officio members do not vote. Please provide clarification for the proposed TS.

RAI 35

The response to RAI 35 is incomplete in that it does not include all surveillance procedures in proposed TS 14.6.3. For examples: surveillance procedures for shipping of radioactive materials and maintenance of major components of systems that could have an effect on reactor safety. Please review and revise proposed