



NUCLEAR SCIENCE CENTER

Dr. Sean M. McDeavitt
Director, TEES Nuclear Science Center
Texas A&M University
Texas A&M Engineering Experiment Station
1095 Nuclear Science Road, 3575 TAMU
College Station, TX 77843-3575

March 18, 2016
Docket Number 50-128 / License No. R-83

2016-0017

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington DC 20555

SUBJECT: Supplement 3 to License Amendment Request dated October 14, 2015,
Facility License R-83, Docket Number 50-128. (ADAMS Accession No.
ML15287A148)

Attn: Mr. Alexander Adams, Jr., Chief
Research and Test Reactors Branch
Office of Nuclear Reactor Regulation

Mr. Patrick Boyle, Project Manager
Research and Test Reactors Branch
Office of Nuclear Reactor Regulation


The purpose of this letter is to provide supplemental information, ensuring that the TS 5.6 is worded correctly. Specifically in our March 15, 2015 submittal we used “will” in two places of TS 5.6 and via this letter we are replacing “will” with the correct term “shall.” This is the third supplement in support of our October 14, 2015 license application (ADAMS Accession No. ML15287A148). In the March 15, 2015 letter TEES proposed an additional change to TS Section 5.6. This current submission (supplement 3) supersedes the proposed TS 5.6 contained in our letters of March 3, 2015 (ADAMS Accession No. ML16063A264) and March 15, 2015 (ADAMS Accession No. ML 16075A409). The enhancement made to the TS clarifies the limits regarding the amount of special nuclear material (SNM) that can be placed in the NSC Fuel Storage Vault. While the enhancement clarifies the limits, we used the term “will” and are now recommending the used of the term “shall” which is defined in the TS,

Should you have any questions regarding the information provided in this submittal, please contact me or Mr. Jerry Newhouse at (979) 845-7551 or via email at mcdeavitt@tamu.edu or newhouse@tamu.edu.

Oath of Affirmation

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

A handwritten signature in black ink, appearing to read "Sean M. McDeavitt". The signature is fluid and cursive, with a large, stylized "S" at the beginning and a distinct "D" at the end.

Sean M. McDeavitt, PhD.
Director, TEES Nuclear Science Center

Enclosure: Technical Specification 5.6
cc: next page

cc:

Mr. William Dean, Office Director
United States Nuclear Reactor Commission
Office of Nuclear Reactor Regulation

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

Mr. Michael Young, President
Texas A&M University 1246 TAMU
College Station, TX 77843-1246

Governor's Budget and Policy Office
P.O. Box 12428
Austin, TX, 78711-2428

Dr. M. Katherine Banks, Vice Chancellor
and Dean
Dwight Look College of Engineering
3126 TAMU
College Station, TX 77843-3126

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

Dr. Dimitris Lagoudas, Deputy Director
Texas A&M Engineering Experiment Station
3470 TAMU
College Station, TX 77843-3577

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

Dr. Costas Georghiadis, Associate Agency
Director
Texas A&M Engineering Experiment Station
3470 TAMU
College Station, TX 77843-3577

Test, Research and Training Reactor
Newsletter
P.O. Box 118300
University of Florida
Gainesville, FL 32611-8300

Dr. Yassin Hassan, Department Head
Nuclear Engineering
Texas A&M University
Nuclear Engineering Department
3133 TAMU
College Station, TX 77843-3133

Mr. Jerry Newhouse,
NSC Assistant Director
Texas A&M Engineering Experiment Station
3575 TAMU
College Station, TX 77843-3575

Dr. John Hardy
Reactor Safety Board Chairman Texas A&M
University
3255 TAMU
College Station, TX 77843-3255

Mr. Scott Miller,
NSC Manager of Reactor Operations
Texas A&M Engineering Experiment Station
3575 TAMU
College Station, TX 77843-3575

Dr. Latha Vasudevan
Radiological Safety Officer
Texas A&M University
Environmental Health and Safety
1111 Research Parkway
College Station, TX 77843-4472

Mr. Jeremy Osborn
AGN-201M Reactor Supervisor
Texas A&M University
Nuclear Engineering Department
3133 TAMU
College Station, TX 77843-3133

Enclosure:

Proposed Technical Specification Change

The following replacement Technical Specification change is recommended to support this LAR:

5.6 Fuel Storage

Applicability

This specification applies to the storage of reactor fuel at times when it is not in the reactor core. This includes the combined ²³⁵U fissile mass of no more than 0.7 kilograms, byproduct material, and the ²³⁹PuBe neutron start-up source with a ²³⁹Pu fissile mass of no more than 20 grams from the TAMU AGN-201M reactor. Further, there shall be no introduction of any additional SNM while the AGN-201M fuel and PuBe source are stored in the fuel storage vault that would exceed the current licensing basis as described in the SAR.

Objective

The objective is to ensure that fuel that is being stored will not become critical and will not reach an unsafe temperature.

Specification

1. All fuel elements and fueled devices shall be stored in a geometrical array for which the k-effective is less than 0.8 for all conditions of moderation and reflection.
2. Irradiated fuel elements and fueled devices shall be stored in an array, which will permit sufficient natural convection cooling by water or air such that the fuel element or fueled device temperature will not exceed design values.
3. Possession of the AGN-201M fuel, byproduct material, and neutron start-up source is restricted to receipt, possession, but not use in the operation of the NSC reactor. Specification 2, above, is not applicable to these materials.
4. There shall be no introduction of any additional SNM while the AGN-201 SNM are stored in the fuel storage vault.

Basis

The limits imposed by Specifications 5.6.1, 5.6.2, 5.6.3, and 5.6.4 are conservative and ensure safe storage.