

50-59

APPLICATION FOR RENEWAL OF CLASS 104
FACILITY LICENSE R-23 FOR OPERATION
OF AGN-201M REACTOR

BY

TEXAS A&M UNIVERSITY
COLLEGE STATION, TEXAS

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Please consider this to be an application for renewal of our facility license R-23, Docket 50-59 for our AGN-201M research reactor (serial # 106), which expires at midnight, August 26, 1977. Currently the AGN-201M reactor is owned and operated by Texas A&M University and located on the campus at College Station, Texas. The reactor room is located in room 61B of the Zachry Engineering Center and has been in this location since 1970.

Texas A&M University is technically and financially qualified to continue to operate the AGN-201M in accordance with the applicable United States Nuclear Regulatory Commission rules and regulations. The applicant is a state supported educational institution in the State of Texas: its principal business is teaching, research and extension work within the fields of study offered by the university.

1. COMPLIANCE OF FACILITY WITH APPLICABLE STANDARDS AND CRITERIA

Texas A&M University has operated the AGN-201M research reactor, serial #106 under USNRC license #R-23 since 1957. Records from the facility indicate that operations of the reactor over the last forty years have been in accordance with applicable USNRC rules and regulations, with the exceptions of a few minor violations found during USNRC inspections over the course of this time period.

During the initial license period the AGN had a maximum rated power of 100mWt, this was later increased to a maximum rated power of 5 watts thermal under

Amendment 10 dated January 18, 1973 . The reactor has been in its current location in room 61B of the Zachry Engineering center since 1972 when it was moved to this location under approved construction permit CPRR-112 and will remain in this location for the rest of its useful life.

2. EMERGENCY AND SECURITY PLANNING

Emergency and Physical Security Plans and Procedures have copy been prepared and used by personnel at the AGN-201M reactor facility. Both the Emergency Plan and Physical Security Plan are reviewed and audited by the Reactor Safety Board on a biennial basis. During the last review several changes were made to both Emergency Plans and Procedures and Security Plans and Procedures. The old and revised plans and procedures are in Appendix A and are the submitted during this license review for approval by the USNRC. Only minor changes have been made to the Emergency and Security Plans and Procedures and these changes involve no unresolved safety concerns.

3. TECHNICAL SPECIFICATIONS

A copy of the Technical Specification approved by the USNRC as Amendment 12 to the operating license is attached in Appendix B, a revised is also included and is submitted for approval at this time to the USNRC. Only minor changes have been made to the Technical Specifications and reflect no unresolved safety issues.

4. OPERATOR LICENSING AND REQUALIFICATION PROGRAM

A copy of the AGN-201 operator licensing and requalification program is attached in Appendix C., this program was initially approved in 1976 and has been modified to incorporate changes to 10 CFR part 55. All operators are required to rigorously follow this program in order to maintain their operators license. Records of all requalification activities are maintained by the facility staff.

5. FINANCIAL CONSIDERATIONS

The AGN-201 research reactor is owned by Texas A&M University and run by the Department of Nuclear Engineering. The University is committed to maintaining and operating this reactor well into the next century and will continue to provide funding for the manning and maintaining of the AGN-201. Any cost, such repair parts which occur during the operation and in support of the reactor are considered to be a laboratory expenses and are paid by the Department of Nuclear Engineering. Other financial information can be found in Chapter 15 of Safety Analysis Report.

Financial statements about the University and other requested information is located in Appendix D.

6. ENVIRONMENTAL CONSIDERATIONS

No environmental effects can be produced from the operation of a AGN-201M reactor except for the small amount of radioactivity produced.. By design the reactor has

a dry core of uranium-impregnated polyethylene sealed in an aluminum tank, and the fueled control rods have an aluminum clad that encases the fuel. Both of these design features provide a physical barrier between the fuel and the environment. The isolated nature of the reactor room its location (room 61B) in the Zachry Engineering Center also helps to isolate the reactor from the environment. Materials activated in the glory hole or beam ports are short half-life nuclides for student laboratory use. Activated samples are surveyed for activity and contamination prior to use in the laboratory. Records of radionuclides produced are documented in the reactor log book. Guidelines for the production and use of radionuclides are outlined in university regulations, a copy of which is attached as Appendix E.

Health Physics for the AGN-201M reactor is provided by the University Radiological Safety personnel. Radiological Safety takes monthly swipe surveys in the reactor room and adjoining laboratory and maintain a personnel and environmental dosimetry program. A copy of the Environmental Report is included in Appendix F.

7. SAFETY ANALYSIS REPORT

A Safety Analysis Report has been prepared for this license renewal application in accordance with NUREG-1537 Part 1 , with all applicable information provided to the USNRC. This report is attached as Appendix G.