Finding global solutions to the world's most critical needs.

Abilene Christian University
Nuclear Energy eXperimental Testing Lab
ACU Box 28208, Abilene, Texas 79699-8208
acunextlab.org

January 23, 2024

Docket No. 50-610

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Subject: Abilene Christian University Construction Permit Application
Partial Response to Audit Questions 3.5-4, 4.2-9, and 4.3-3

Abilene Christian University submitted a construction permit application for the Molten Salt Research Reactor (MSRR) in August 2022 (ML22227A201). During audits conducted as part of the review of the application, the NRC staff asked audit questions 3.5-4, 4.2-9, and 4.3-3 on safety related valves, the safety classification of equipment, and the application of consensus codes to equipment. Because the information responding to the audit questions is proprietary, the information is being transmitted with this letter.

Preliminary service conditions for primary MSRR components are provided in Enclosure 1. The table also provides the safety classification and ASME Code assignments for the components. A process flow diagram is provided in Enclosure 2. The flow diagram indicates where the Code breaks will occur in various MSRR systems. Enclosure 3 provides the function, type, and service conditions of safety related valves. Each enclosure contains proprietary information and Abilene Christian University and Natura Resources request that Enclosures 1, 2, and 3 be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390. An affidavit supporting the withholding request is provided in Enclosure 4. The proprietary information of Enclosures 1, 2, and 3 is also identified as Export Controlled Information and must be protected in accordance with 10 CFR 810.

If you need additional information, please contact a licensing manager at Benjamin.Beasley@acu.edu or Lester Towell at Lester.Towell@acu.edu.

Recognizing that the enclosures provide the preliminary design and that the final design may differ, I declare under penalty of perjury that the enclosed information is true and correct.

Executed on January 23, 2024.

Rusty Towell

Rusty Towell, PhD
Director of NEXT Lab

Enclosures:

1. MSRR Service Conditions
2. ASME Code Assignments Diagram
3. Safety Related Valve Description
4. Request for Withholding from Public Disclosure and Affidavit in Accordance with 10 CFR 2.390(a)(4)

Cc: Michael Wentzel, Chief, NRR Advanced Reactor Licensing Branch 2
Richard Rivera, Project Manager, NRR Advanced Reactor Licensing Branch 2
Edward Helvenston, Project Manager, NRR Non-Power Production and Utilization Facility Licensing Branch
Mohsin Ghazali, Project Manager, NRR Advanced Reactor Licensing Branch 2

Enclosure 4
Request for Withholding from Public Disclosure and Affidavit
in Accordance with 10 CFR 2.390(a)(4)

Natura Resources (Natura) is funding the construction of the Abilene Christian University (ACU) Molten Salt Research Reactor (MSRR), and as part of the funding effort, is licensing to ACU the design of Natura's 1 MWth molten salt reactor. In addition, Natura has entered into sponsored research agreements with ACU and three other universities ("Other Universities") to assist in the development of the MSR system and the construction of the MSRR whereby Natura owns exclusive rights to the intellectual property developed under those sponsored research agreements. Under those agreements, the intellectual property developed is confidential for three years from development and considered trade secrets of Natura unless Natura has opted to publicly disclose and/or file a patent application on the technology. As owner of these exclusive proprietary and confidential rights, Natura is executing this affidavit to support the protection of those rights during the NRC review of the construction permit application submitted by ACU for the MSRR.

I, Jordan Robison, state:

1. I am the Vice President of Engineering and Program Management for Natura Resources. I have been specifically delegated the function of reviewing the information to be withheld and I am authorized to apply for the withholding of the information on behalf of Natura.

2. The information sought to be withheld, in its entirety, with this request is contained in Enclosures 1, 2, and 3, which accompany this Affidavit.

3. Pursuant to the provisions set forth in 10 CFR § 2.390(b)(4), the following is provided for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.

4. The request for withholding is based upon the following:

    a. The information sought to be withheld is owned and has been held in confidence by ACU, the Other Universities, and Natura as confidential and proprietary, trade secret information.

    b. The information is of a type that is customarily held in confidence by ACU, the Other Universities, and Natura based on the rationale described in this affidavit.

    c. The information is being transmitted to and, pursuant to 10 CFR 2.390, received by the NRC in confidence.

d. No public disclosure of the information has been made, and it is not available in public sources. All disclosures to third parties, including any required transmittals to NRC, have been made, or must be made, pursuant to regulatory provisions or contractual agreements that provide for maintenance of the information in confidence.

e. The information requested to be withheld reveals specific distinguishing design aspects. The information consists of supporting data relative to a process, component, structure, tool, method, etc., and the application of the data secures a competitive economic advantage as described in paragraph 5.

f. Use by a competitor of the information requested to be withheld would reduce the competitor's expenditure of resources, or improve its competitive position, in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product.

g. The information requested to be withheld may be the subject of patentable ideas for which Natura is still developing applications.

5. Public disclosure of the information sought to be withheld is likely to cause substantial harm to Natura's competitive position and foreclose or reduce the availability of profit-making opportunities. The accompanying information reveals distinguishing aspects about Natura’s proprietary molten salt reactor design.

   Natura has expended a considerable sum of money to fund significant research and evaluation to develop a basis for the design information, including that with ACU and the Other Universities. The precise financial value of the information is difficult to quantify, but it is a key element of the design basis for a Natura proprietary molten salt reactor design and, therefore, has substantial value to Natura.

   If the information were disclosed to the public, Natura's competitors would have access to the information without purchasing or entering into a license for the right to use it or having been required to undertake a similar expenditure of resources. Such disclosure would constitute a misappropriation of Natura's intellectual property and would deprive Natura of the opportunity to exercise its competitive advantage to seek an adequate return on its investment.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on January 23, 2024.

Jordan Robison
Vice President of Engineering and Program Management
Natura Resources