



4-March-2022

Project Number: 99902080

US Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555-0001

**SUBJECT: SUBMITTAL OF ATOMIC ALCHEMY'S  
NON-POWER MODULAR REACTORS: MULTI-UNIT SITE REGULATORY  
STRUCTURE PLAN**

ENCLOSURES: 1) Affidavit Pursuant to 10 CFR 2.390  
2) AAO-VIPR-22-PRS-00(P), Atomic Alchemy's Position Paper on  
its Multi-unit Non-Power Nuclear Modular Reactor Regulatory  
Structure Plan, Revision 0 (Proprietary)

This letter submits an Atomic Alchemy position paper which provides a preliminary overview addressing the licensing options available under the Atomic Energy Act of 1954 as Amended, along with Atomic Alchemy's intended path forward. The proposed regulatory structure will facilitate the efficient licensing of Atomic Alchemy's Non-power Production and Utilization Facility which is designed to be constructed in several phases. This position paper also provides an alignment of the existing Title 10 regulatory framework and the NRC staff's preliminary positions promulgated through several commission papers regarding the licensing of modular nuclear reactors located on a multi-unit site.

The NRC licensing process urges early interactions to help identify and resolve regulatory, and technical issues related to a proposed facility's application. Effective communication with the NRC is a vital part of the Atomic Alchemy licensing strategy in preparation of its construction license application.

This position paper is provided for NRC review and informal feedback regarding the approach Atomic Alchemy intends to take with regards to the Title 10 regulations as applied to licensing multi-unit modular non-power reactors in a Non-power Production and Utilization Facility. We respectfully request after a suitable review period, and pending resolution of any follow-up questions, the NRC staff hold a public meeting to discuss the content and conclusions of this position paper and provide its informal, non-binding feedback.

Atomic Alchemy also requests that the NRC provide its feedback and documentation of its review in a format that acknowledges the NRC staff's acceptability of Atomic Alchemy's method of conformance to the key potential regulatory issues identified in this paper.

This position paper contains information concerning the physical protection of the Atomic Alchemy facility. It also contains commercially and time sensitive, proprietary information and constitutes a significant expenditure of resources in its preparation. As such, we are requesting that this information be withheld from public disclosure in accordance with 10

CFR 2.390, "Public Inspections, Exemptions, Request for Withholding." Atomic Alchemy seeks to withhold the entire document and no redacted public version is provided.

To help increase the efficiency of the licensing process, Atomic Alchemy discussed this position paper with the NRC staff during a conference call on February 1<sup>st</sup>, 2022.

There are no commitments made in this submittal.

If there are any questions or a need for additional information, please contact Mr. Michael Grochowski at [regulatory@atomicalchemy.us](mailto:regulatory@atomicalchemy.us).

Sincerely,

Thomas Eiden  
Founder & CEO, Atomic Alchemy Inc.

TE/mjg

CC:

Nuclear Regulatory Commission:

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