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

Letter of Intent for Pre-Application Licensing Activities with Thorium Atomics Inc. and U.S. Nuclear Regulatory Commission

Thorium Atomics Inc. hereby formally notifies the U.S. Nuclear Regulatory Commission (NRC) of its intent to engage in pre-application licensing activities with respect to a proposed thorium gas-cooled reactor of approximately 250 MWth output. We appreciate the initial meeting with NRC staff on May 15, 2026, which provided an opportunity for an introductory discussion and a better understanding of the pre-application process. It is noted that we also held a similar meeting with Canadian Nuclear Safety Commission staff earlier this year.

While Thorium Atomics Inc. is actively engaged in collaborative discussions and initiatives with national labs, industry, academia, and others, we also fully recognize the importance of early regulatory engagement to ensure a common understanding of the regulatory expectations to be addressed during the design development and formal licensing stages. As such, a key purpose of the requested early-stage pre-application interactions with NRC staff is to establish and execute a mutually agreed-to regulatory engagement plan. This plan would include NRC familiarization with the conceptual design as well as timelines for the submission of various supporting documents by Thorium Atomics Inc. followed by corresponding NRC technical reviews and feedback on any potential fundamental barriers to licensing. The regulatory engagement plan would also help to inform resource and budget planning for both parties.

Regarding our technology objective, we are endeavouring to diversify the nuclear fuel supply and thus help to alleviate potential long-term sustainability issues. To this end, Thorium Atomics Inc. is developing a Generation IV small modular reactor that is augmented with thorium fuel and is designed to operate with significantly less mined uranium than reactors that solely use uranium fuel (HALEU, LEU, or natural uranium), for the same amount of electrical energy generated. The proposed conceptual design is based on a pebble-bed high-temperature gas-cooled reactor (HTGR) configuration, wherein thorium and

LEU are used to breed uranium-233 at a relatively high conversion ratio. The bred U-233 is utilized in-situ (without fuel reprocessing), thereby reducing the re-fuelling requirement for new LEU fuel.

Thorium Atomix Inc. considers its design concept to be an exciting innovation that leverages proven technologies and that we believe serves the nation's interest to help ensure energy security. Moreover, the proposed thorium-based reactor offers enhanced nuclear safety and proliferation resistance, while producing substantially lower volumes of nuclear waste with a significantly shorter-lived radiological burden.

It should be noted that we are considering to pursue licensing of our technology via the NRC's recently introduced risk-informed, performance-based, and technology-inclusive regulatory framework under 10 CFR Part 53.

Thorium Atomix Inc. looks forward to continued engagement and working closely with NRC staff throughout the pre-application process. To facilitate this process, we would be grateful if the NRC could assign a project manager with whom we could further work to discuss and coordinate future pre-application engagement activities. Thank you.

If you have any questions regarding this matter, please contact me at jack.vecchiarelli@thoriumatomix.com

Sincerely,



Dr. Jack Vecchiarelli
Chief Scientific and Regulatory Officer
Thorium Atomix Inc.

cc:

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