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Prof. Mostafa Ghiaasiaan  
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To Prof. Mostafa Ghiaasiaan,

Please find enclosed a manuscript entitled: “Strategies for thorium fuel cycle transition in the SD-TMSR” which I and my coauthors (Mr. Andrei Rykhlevskii, Prof. G. V. Tikhomirov, and Prof. Kathryn D. Huff) are submitting for publication as a research article in Annals of Nuclear Energy. The presented manuscript is 100% original and never been published in any form (symposia, conferences, etc).

This manuscript investigates the fuel cycle and neutronics performance of the single-fluid double-zone thorium molten salt reactor (SD-TMSR) with different fissile material loadings at startup: High Assay Low Enriched Uranium (HALEU) (19.79%), Pu mixed with HALEU (19.79%), reactor-grade Pu, transuranic elements (TRU), and  $^{233}\text{U}$ , using SERPENT-2 Monte Carlo code. This manuscript provides feasible strategies for thorium fuel cycle transition in the SD-TMSR based on reactor-grade Pu and transuranic elements (TRU) results.

Declarations of interest: none

Thank you for your consideration of our work.

Your quick response will be highly appreciated.

Sincere regards,

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