



ARC/NRC-PM-002

November 3, 2022

Project No. 99902103

US Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: ARC Clean Technology
Revision of the ARC-100 Regulatory Engagement Plan

Reference: ARC/NRC-PM001 dated March 28, 2022

The reference letter transmitted the ARC-100 Regulatory Engagement Plan (REP). The REP was provided for NRC staff information and outlines plans for interactions with the NRC during pre-licensing activities associated with the ARC-100 Sodium-Cooled Fast Reactor.

Following a period during which considerable progress has been made in the conceptual design of the ARC 100 facility, and also as a result of the first meeting held on October 26, 2022, ARC Clean Technology is suggesting a revision of dates and topics for the follow-on meetings.

In addition, the initial naming of certain reports as "topical" reports has been revised to clarify that all such reports are for information only.

The Enclosure to this letter provides the suggested revised meeting topics, as well as the nature of the reports that will be made available to the NRC approximately 30 days before the meetings. If you have any questions or need any additional information, please contact me at riotti@arc-cleantech.com or (732) 890-3602 or Raymond Burski, ARC 100 Licensing Director at rburski@arc-cleantech.com or (504) 909-6436.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Iotti". The signature is stylized with a large, sweeping "R" and a cursive "Iotti".

Robert Iotti
ARC 100 Project Manager
ARC Clean Technology

D135
NRR

Enclosure

ARC-100 Regulatory Engagement – Proposed Meetings

cc (w/enclosure):

Stephanie Devlin-Gill, Senior Project Manager, NRR/DANU/UAR1

Donna Williams, Senior Project Manager, NRR/DANU/UAR1

William Jessup, Chief, NRR/DANU/UAR1

Stephen Philpot, Acting Chief, NRR/DANU/UAL2

Brian Robinson, DOE Program & Project Manager

Enclosure
Regulatory Engagement - Proposed Meetings

Meeting dates and Information material [in brackets] to be made available to the NRC approximately 30 days before the meetings.**

1st Meeting April 2023

Quality Program, Design Approach, Project Execution [ARC Quality Assurance Program Description, Project Execution Plan]

SSC Classification [ARC Structures, Systems and Components Classification Approach and Report]

Fuel [Fuel Qualification Program Plan; Fuel System Design Description Document (SDD)]

Core [Core SDD]

Reactor Vessel, Guard Vessel, and Internals [RVDV SDD]

Primary System [Primary Heat Transport SDD],

Reactivity Control [Reactivity Control and Drive system SDD]

Heat Removal Systems [Direct Reactor Auxiliary Cooling System (DRACS); Reactor Vessel Auxiliary Cooling System (RVACS) SDD]

R&D Management Program [Same name report]

2nd Meeting November 2023

Fuel Handling Systems and Safeguards [Fuel Handling Systems SDD]

Instrumentation and Control (Reactor Protection Systems) [I&C SDD]

Electrical [Electrical SDD; EMPumps Variable Frequency Drives; Pump Coast down provisions technical report]

Power Conversion System [Power Conversion System SDD]

Purification Systems [Primary and Intermediate sodium purification SDD; Cover gas purification SDD]

3rd Meeting April 2024

Probabilistic Safety Analysis [Technical Information Report]

Deterministic Safety Analyses [Updated Technical Information Report]

Functional Containment [Technical Information Report]

4th Meeting November 2024

Structures

Seismic Isolation [*Technical Information Report*]

Aircraft Impact

Flexibility to operate ARC-100 at 200MWe (545MWth) [*Technical Information Report*]

Other systems and structures

Fire protection [*Fire Protection SDD*]

HVAC [*Safety and non-Safety HVAC SDD*]

Security

Water Systems [*Various SDDs*]

R&D Activities

Technical Information Report on Flow Blockage

Technical Information Report on Power Reactivity Decrement (precomputed shapes)

Justification for no Alternate Shutdown System [*Technical Information Report*]

Updated R&D Program [*Technical Information Report*]

5th Meeting April 2024

Decommissioning [*Technical Information Report*]

Update on prior meeting

NRC Preliminary Conclusions

****Propose all meetings via Video with the possible exception of last meeting**