



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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September 9, 2019

MEMORANDUM TO: Steven T. Lynch, Acting Chief
Advanced Reactor Licensing Branch
Division of Advanced Reactors
Office of New Reactors

FROM: Lucieann Vechioli, Project Manager */RA/*
Advanced Reactor Licensing Branch
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Office of New Reactors

SUBJECT: SUMMARY OF JUNE 27, 2019, PUBLIC MEETING TO DISCUSS
REGULATORY IMPROVEMENTS FOR ADVANCED REACTORS

On June 27, 2019, the U.S. Nuclear Regulatory Commission (NRC) held a Category 2 public meeting with stakeholders, including the Nuclear Energy Institute (NEI), to discuss ongoing initiatives related to the development and licensing of non-light-water reactors (non-LWRs or advanced reactors). The meeting notice can be found in the NRC's Agencywide Documents Access and Management System (ADAMS) at Accession No. ML19175A218. Enclosure 1 lists the meeting attendees and participants who joined via webinar. The presentation slides are available in ADAMS at Accession No. ML19179A181.

The meeting began with discussions led by Southern Company and the NRC staff about the Technology Inclusive Content Application Project. Amir Afzali from Southern Company provided an overview of the proposed approach, scope, execution planning, and team players. The results of the project are expected to be available for NRC staff review within two years. The NRC's William Reckley explained that recent NRC activities recognize the limitations of existing LWR-related guidance and, consequently, the benefits of revisiting the approach to reviewing fundamental safety functions in applications. Progress on the project will be provided during the next stakeholder meeting to be held on August 15, 2019, as requested by the NRC staff during the meeting.

Mr. Reckley also presented on the population-related siting considerations for advanced reactors. Building on previous discussions, the next step will be to convert the draft NRC staff-prepared white paper, "Population-Related Siting Considerations for Advanced Reactors," issued June 2019 (ADAMS Accession No. ML19163A168), into a Commission paper and present to a subcommittee of the Advisory Committee on Reactor Safeguards in August 2019.

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Rich Powell and Jeffrey Merrifield from ClearPath proposed using a generic environmental impact statement to support the reviews of initial license applications for advanced reactors. ClearPath expressed that its proposed framework will reduce NRC staff resources dedicated to environmental permits.

Other subjects covered during the meeting included environmental topics such as the interim staff guidance for micro-reactor environmental reviews. The NRC's Mallecia Sutton led the discussion on the interim staff guidance under development for micro-reactor environmental and siting reviews. The discussion focused on how micro-reactors may have inherent safety features and reduced environmental impacts that could lessen the level of detail necessary in environmental documents.

Boyce Travis of the NRC led a discussion on the NRC staff's perspective on the micro-reactor licensing process. The small size and operational characteristics of micro-reactors differentiate them from LWRs. As such, existing regulations for nuclear power reactors may not be applicable to these facilities based on their small size and reduced radiological consequences. The NRC staff plans to prepare a Commission paper addressing policy and licensing considerations for microreactors. Marc Nichol from NEI went over regulatory topics for micro-reactors. He identified operations, the need for resident inspectors, physical security, and emergency preparedness as some regulatory topics that should be prioritized.

Mike Tschiltz from NEI presented the results of the Codes and Standards for Advanced Reactors survey. The results identified the potential barriers that may impact the development of designs for advanced reactors.

Steven Lynch from the NRC presented on best practices for pre-application interactions, highlighting the NRC staff's encouragement of the early engagement with prospective applicants. He provided tools and information on the different ways prospective applicants may interact with the NRC staff to support the preparation of high-quality applications. Pre-application interactions facilitate the early identification of technical, policy, and licensing issues of importance for advanced reactor vendors, and contributing to predictability effectiveness of the NRC's licensing process.

Meeting participants also discussed the NRC's endorsement of the probabilistic risk assessment standard. Mary Drouin and Hanh Phan of the NRC provided an overview and the action plan for the gap analysis of American Society of Mechanical Engineers (ASME)/American Nuclear Society RA-S-1.4, "Probabilistic Risk Assessment Standard for Advanced Non-LWR Nuclear Power Plants," to ensure consistency with the licensing modernization project.

Nicholas McMurray presented on the NRC staff's review and endorsement of Section III, Division 5, of the ASME Boiler and Pressure Vessel Code. The NRC staff plans to create a draft regulatory guide by August 2020. The review is in process and on schedule.

The next advanced reactors stakeholders meeting will be held on August 15, 2019, and the discussions will include progress on several of the topics discussed during this meeting.

Enclosures:

1. List of attendees

SUMMARY OF JUNE 27, 2019, PUBLIC MEETING TO DISCUSS REGULATORY IMPROVEMENTS FOR ADVANCED REACTORS - DATED September 9, 2019

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***Via Email**

NRO-002

OFFICE	NRO/DAR	NRO/DAR
NAME	LVechioli	SLynch*
DATE	09/09/2019	09/08/19

OFFICIAL RECORD COPY

Attendance List – Attended in Person		
Name		Organization
Michael	Misaka	NRC
Joe	Williams	Self
Stu	Magruder	NRC
Kati	Austgen	NEI
Joe	Giacinto	NRC
Tim	Drzewiecki	NRC
Nicholas	McMurray	NRC
Arlon	Costa	NRC
Bo	Saulsbury	PNNL
George	Tartal	NRC
Anne	Cottingham	NEI
Lucieann	Vechioli	NRC
Mallecia	Sutton	NRC
Donald	Chung	NRC
John	Monninger	NRC
Dayna	Dority	NRC
Boyce	Travis	NRC
Tammara	Seshagiri	NRC
Marc	Nichol	NEI
Steve	Lynch	NRC
Steve	Kline	Bechtel
Corey	Smith	Bechtel
Nicholas	Settle	Bechtel
Ben	Lilley	NEI
Jess	Gehin	INL
Jeff	Merrifield	Pillsbury
Peter	Hastings	Kairos Power
Rich	Powell	ClearPath
Alex	Polonsky	Morgan Lewis
Farshid	Shahrokhi	Framatome
Jill	Monahan	Westinghouse
Amir	Afzali	Southern Co.
N.P.	Kadambi	Self

T.L.	Sham	ANL
Martin	Stutzke	NRC
Jana	Bergman	Curtiss Wright
Donald	Palmrose	NRC
Eric	Bowman	NRC
Duc	Nguyen	NRC
Jan	Mazza	NRC
Gerry	Stirewalt	NRC
Ian	Jung	NRC
Caroline	Cochran	Oklo
Tom	Boyce	NRC
Tuan	Le	NRC
Dave	Goodman	PNNL
Andy	Campbell	NRC
Eric	Schrader	NRC
Jack	Cushing	NRC
Trish	Holahan	NRC
Hanh	Phan	NRC
Ken	Erwin	NRC
Olivia	Mikula	NRC
Jason	White	NRC
Nanette	Valliere	NRC
John	Segala	NRC
Jordan	Hoellman	NRC
Amy	Cubbage	NRC
Michelle	Hart	NRC
Tim	Lupold	NRC
Bill	Reckley	NRC
Daniel	Carleton	Terrestrial Energy USA
Kim	Webber	NRC
Michael	Case	NRC
Michelle	Gonzalez	NRC
Imtiaz	Madni	NRC

Attendance List – Attended via Webinar		
Name		Organization
Wilna	Geringer	ORNL
Jordan	Hill	Atomic Alchemy Inc.
Karl	Fleming	self
Olivia	Mikula	NRC
Emma	Redfoot	OKLO
Luara	Schwartz	ITTA Inc.
Mike	Calley	INL
John	Pfabe	self
Nicholas	Hansing	NRC
Diane	Jackson	NRC
Andrew	Zach	United States Senate
Michelle	Gonzalez	NRC
Peyton	Doub	NRC
Laura	Smith	NRC
Charles	Rhodes	self
Sean	Hagen	Hagen Global Consulting LLC
Mark	Holbrook	INL
Alex	Popova	OKLO
Robert	Davis	self
Chip	Lagdon	Bechtel
Mike	Poore	ORNL
David	Heeszel	NRC
Steven	Cade	NRC
Robert	Kahler	NRC
Jan	Mazza	NRC
Randall	Fair	self
Neil	Sheehan	NRC
Haeseong	Kim	self
Jeff	Mitman	NRC
Jim	Kinsey	INL
Timothy	Crook	EPM

Richard	Turk	self
Clint	Medlock	Southern Co.
Alex	Huning	ORNL
Maxine	Segarnick	NRC
Stephen	Burdick	INL
Steve	Schilthelm	BWX Technologies Inc.
David	Diamond	BNL
Chris	Bajwa	NRC
Alan	Levin	MIT
Raymond	Gibson	NRC
Edwin	Lyman	Union of Concerned Scientists
Dr. Deb	Luchsinger	Enercon Services Inc.
Andrea	Jennetta	S&P Global
Bruce	McDowell	PNNL
Keith	Consani	NIST
Carl	Perez	Elysium Industries
Pranab	Samanta	BNL
William	Corwin	self
Andrea	Mayer	NRC
Scott	Bussey	NRC
George	Flanagan	ORNL