

Withdrawn

NRC Regulatory Issue Summary 2010-03, "Licensing Submittal Information for Small Modular Reactor Designs," dated February 25, 2010, has been withdrawn.

ADAMS Accession Number: ML100260855

See *Federal Register* notice dated October 25, 2016

81 FR 73448

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NEW REACTORS
WASHINGTON, DC 20555-0001

February 25, 2010

**NRC REGULATORY ISSUE SUMMARY 2010-03
LICENSING SUBMITTAL INFORMATION FOR SMALL MODULAR
REACTOR DESIGNS**

ADDRESSEES

Those companies who have an interest in applying for an early site permit (ESP), combined license (COL), standard design certification (DC), standard design approval (DA), or manufacturing license (ML) for a nuclear power plant referencing a small modular reactor (SMR) design under the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants." For the purpose of this Regulatory Issue Summary (RIS), SMRs are defined using the International Atomic Energy Agency definition of small and medium-sized reactors with an electrical output of less than 700 megawatts.

INTENT

The Nuclear Regulatory Commission (NRC) is issuing this RIS to obtain new or updated information on the scheduling of ESP, COL, DC, DA, or ML application submissions related to advanced reactor designs. These designs include integral pressurized-water reactors, high-temperature gas-cooled reactors, liquid metal reactors, and other small or medium-sized reactor designs. The purpose of this RIS is to facilitate the establishment of a predictable and consistent method for reviewing applications. To this end, the NRC also seeks new or updated information on addressee activities related to white papers or other technical and topical report submittals and other pre-application activities.

The NRC recently issued RIS 2010-01, "Process for Scheduling Acceptance Reviews of New Reactor Licensing Applications and Process for Determining Budget Needs for Fiscal Year 2012," dated February 3, 2010, which seeks voluntary responses regarding the number and the degree of complexity of ESP, LWA, DC, and COL applications, and any other licensing requests that applicants expect to submit in fiscal year 2012. Since this RIS seeks information not covered in RIS 2010-01, the staff asks any potential applicant that meets the criteria in the addressee section to submit a response to this RIS instead of responding to RIS 2010-01.

This RIS does not transmit or imply any new or changed requirements or staff positions. Submission of advance notice of addressee plans or comments in response to this RIS is strictly

ML100260855

voluntary. Although no specific action or written response is required, this information will enable the NRC to plan effectively for anticipated licensing-related review and inspection activities.

BACKGROUND INFORMATION

The design-centered review approach (DCRA) is the NRC's strategy to manage the licensing review workload, and the updated information solicited in this RIS will aid the agency's schedule and resource planning efforts. The NRC outlined the DCRA in RIS 2006-06, "New Reactor Standardization Needed to Support the Design-Centered Licensing Review Approach," dated May 31, 2006. In summary, the DCRA is a review strategy for COL applications that reference a particular design. This approach will use, to the maximum extent practicable, a "one issue, one review, one position" strategy in order to optimize the review effort, the resources needed to perform these reviews, and the review schedules. Specifically, the staff will conduct one review for each issue associated with a particular design, reach a decision on each issue, and if possible rely on that decision in reviewing a subsequent application. For the DCRA to be fully effective, it is paramount that applicants achieve a consistent level of standardization. As discussed at an NRC-sponsored workshop in October 2009 on SMRs, the philosophy of "one issue, one review, one position" can also be used across designs and reactor technologies to address policy or technical issues generally associated with SMRs.

SUMMARY OF ISSUE

The NRC anticipates receiving a number of ESP, DC, DA, ML, and COL applications starting as early as 2011 for a number of advanced reactor designs. The review of these advanced reactor designs will require the resolution of a number of important policy and technical issues. The NRC expects that many of these issues will require an in-depth review, with the resolution of some issues involving decisions by the Commission.

In RIS 2006-06, the NRC suggested that COL and DC applicants form Design-Centered Working Groups (DCWGs). Such groups have been created to facilitate the standardization of COL applications. The NRC staff seeks information on potential DCWGs for each of the designs. As discussed at the October 2009 SMR workshop, this process may also be beneficial for working groups associated generally with SMRs and with specific reactor technologies. The NRC would appreciate information about the formation of such groups that may interact with the NRC staff on generic or technology-related policy or technical issues. It is important for the NRC to identify possible applications and other interactions in order to formulate resource needs and budget requests for future fiscal years. In addition, the NRC expects that the staff will need to issue requests for additional information (RAIs) to complete its reviews. The staff seeks standardized responses to RAIs associated with applications consistent with the DCWGs or generic or technology-related working groups. To maintain the anticipated review schedules, applicants will need to adhere to a specified RAI response period, including coordination within the DCWG or other working groups.

The NRC encourages potential applicants to provide the agency with design and licensing plans, construction plans, and pre-application activities that will be used to demonstrate compliance with NRC safety and environmental requirements such as quality assurance requirements. In addition, information received from potential applicants will allow the NRC to coordinate pre-application activities and, as appropriate, conduct vendor audits prior to submission of applications. Furthermore, information on vendors and consultants assisting in the preparation of the application will facilitate a more efficient licensing review of the

applications. For more information on pre-application activities, see Section IV.7 of Regulatory Guide 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)," at <http://www.nrc.gov/reading-rm/doc-collections/reg-guides/power-reactors/active/01-206/>, issued June 2007.

VOLUNTARY RESPONSE

The NRC is developing pre-application, licensing, and project plans for the Advanced Reactor Program. To support this effort, the NRC is seeking new or updated information on schedules for submitting DC, DA, ML, ESP, and COL applications, as well as white papers and technical or topical reports. The NRC may share the planned application schedules with other Federal agencies to support their planning efforts related to the licensing of new plants. If a prospective applicant deems this information proprietary, this information may be accompanied by a request to withhold information from public disclosure in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Request for Withholding." Additional information regarding requests for withholding proprietary information from public disclosure appears in RIS 2004-011, "Supporting Information Associated with Requests for Withholding Proprietary Information," dated June 29, 2004. The NRC requests that potential applicants request withholding only for information the company currently treats as proprietary and, where necessary, provide the proprietary information in designated attachments to their response to this RIS.

If an addressee chooses to provide a voluntary response, the NRC is interested in obtaining the information within 30 days of the date of this RIS. Respondents should provide the information outlined below, based on realistic, best estimate predictions of applications or other submittals to the NRC:

Design and Licensing Submittal Information

- When (month and year) are applications planned for design-related applications and what NRC action will be requested (i.e., DC, DA, ML, or COL not referencing a DC or DA)?
- Will the applicants be organized into DCWGs? If known, what is the membership of the DCWG and which party is the primary point of contact designated for each DCWG? Have protocols been developed to provide coordinated responses for RAIs with generic applicability to a design center?
- Which applicant referencing the design will be designated as the reference COL (R-COL) applicant?
- When (month and year) will COL or ESP applications be submitted for review? In addition, what are the design, site location, and number of units at each site?
- Are there vendors and/or consultants assisting in the preparation of the application(s)? If so, please describe roles and responsibilities for the design and licensing activities.

Design, Testing, and Application Preparation

- What is the current status of the development of the plant design (i.e., conceptual, preliminary, or finalizing)? Has a schedule been established for completing the design? If

so, please describe.

- What is the applicant's current status (i.e., planning, in progress, or complete) for the qualification of fuel and other major systems and components? Has a schedule been established for completing the qualification testing? If so, please describe.
- What is the applicant's status (i.e., planning, in progress, or complete) in developing computer codes and models to perform design and licensing analyses? Has the applicant defined principal design criteria, licensing basis events, and other fundamental design/licensing relationships? Has a schedule been established for completing the design and licensing analyses? If so, please describe.
- What is the applicant's status in designing, constructing, and using thermal-fluidic testing facilities and using such tests to validate computer models? Has a schedule been established for completing the thermal-fluidic testing? If so, please describe.
- What is the applicant's status in defining system and component suppliers (including fuel), manufacturing processes, and other major factors that can influence design decisions? Has a schedule been established for identifying suppliers and key contractors? If so, please describe.
- What is the applicant's status (i.e., planning, in progress, complete) for implementing a business model, including identifying and securing funding sources, for the completion of design, testing, and licensing activities?
- What are the applicant's current staffing levels (e.g., full time equivalent staff) working on the design and testing of the reactor design? Does the applicant have plans to increase staffing, and if so, please describe future staffing plans.
- What are the applicant's current and future plans for the use of contractors to support plant design and testing (e.g., how many part-time and how many full-time contractors does or will the applicant employ)?

White papers and technical/topical reports

- What are the applicant's plans regarding the submittal of white papers or technical/topical reports related to features of their design or the resolution of policy or technical issues? Has a schedule been established for submitting such reports? If so, please describe.
- For ESP applicants, will the applicant be seeking approval of either "proposed major features of the emergency plans" per 10 CFR 52.17(b)(2)(i), or "proposed complete and integrated emergency plans" per 10 CFR 52.17(b)(2)(ii)?

Addressees that choose to provide a voluntary response should send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001.

BACKFIT DISCUSSION

This RIS requires no action or written response. Any action on the part of addressees to provide information regarding standardization or advance notice of intent to pursue a COL in

accordance with the guidance contained in this RIS is for the purpose of aiding the NRC in planning the use of its resources and is strictly voluntary. Therefore, this is not a backfit under 10 CFR 50.109, "Backfitting," and the staff did not perform a backfit analysis.

FEDERAL REGISTER NOTIFICATION

The NRC did not publish a notice of opportunity for public comment on this RIS in the *Federal Register* because the RIS pertains to an administrative aspect of the regulatory process that involves the voluntary submission of information on the part of addressees.

CONGRESSIONAL REVIEW ACT

The NRC has determined that this action is not a rule and therefore is not subject to the Congressional Review Act.

PAPERWORK REDUCTION ACT STATEMENT

This RIS contains information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.) These information collections were approved by the Office of Management and Budget (OMB), approval numbers 3150-0011 and 3150-0151.

The burden to the public for these voluntary information collections are estimated to average 12 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Send comments regarding this burden estimate or any other aspects of these information collections, including suggestions for reducing the burden, to the Records and FOIA/Privacy Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet electronic mail to infocollects@nrc.gov; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0011), Office of Management and Budget, Washington, DC 20503.

PUBLIC PROTECTION NOTIFICATION

The NRC may not conduct or sponsor, and a person is not required to respond to, an information collection unless the requesting document displays a currently valid OMB clearance number.

CONTACT

Please direct any questions about this matter to the technical contact listed below.

/RA/

Michael E. Mayfield, Director
Advanced Reactor Program
Office of New Reactors

Technical Contact: Wesley W. Held,
Project Manager
NRO/ARP/ARB1
(301) 415-1583
E-mail: wesley.held@nrc.gov

Note: NRC generic communications may be found on the NRC public Web site,
<http://www.nrc.gov>, under Electronic Reading Room/Document Collections.

CONTACT

Please direct any questions about this matter to the technical contact listed below.

/RA/

Michael E. Mayfield, Director
Advanced Reactor Program
Office of New Reactors

Technical Contact: Wesley W. Held,
Project Manager
NRO/ARP/ARB1
(301) 415-1583
E-mail: wesley.held@nrc.gov

Note: NRC generic communications may be found on the NRC public Web site,
<http://www.nrc.gov>, under Electronic Reading Room/Document Collections.

Distribution:

Public

ARP R/F	WReckley, NRO	SMagruder, NRO	DCarlson, NRO
ACosta, NRO	JDonohew, NRO	TKevern, NRO	JShea, NRO
JWilliams, NRO	TKenyon, NRO	SShaikh, NRO	JSmith, NRO
JStarefos, NRO	RidsNroArp	RidsNroOd	RidsOeMailCenter
RidsOgcMailCenter	RidsOIS		

ADAMS Accession Number: ML100260855

NRO-002

OFFICE	PM:ARB2/ARP	Tech Editor	BC:NRO/ARB1	OGC/CRA
NAME	WHeld/ndr1/dlj1	KAzariah-Kribbs	WReckley	TRothschild (SCrockett for)
DATE	02/18/10	02/22/10	02/19/10	02/23/10
OFFICE	OE	OIS	OGC/NLO	NRR/DPR/PGCB/PM
NAME	NHilton (DStarkey for)	RNichols (CColburn for)	MZobler (SVrahoretis for)	SStuchell SXS
DATE	02/23/10	02/22/10	02/24/10	02/25/10
OFFICE	DPR/LA	NRO/ARP		
NAME	CHawes CMH	MMayfield		
DATE	02/25/10	02/25/10		

OFFICIAL RECORD COPY