

## Progress on Licensing Applications – First Quarter in Fiscal Year 2020

### 1. Progress to Eliminate the Backlog of Pending Licensing Actions

The U.S. Nuclear Regulatory Commission (NRC) has taken specific actions to ensure greater discipline and management oversight in the request for additional information (RAI) process, which may prevent future backlogs of licensing actions while still ensuring that key questions get asked by the NRC staff to ensure health and safety requirements are met.

The Office of Nuclear Reactor Regulation (NRR) made great strides in reducing the backlog of licensing actions by reducing the inventory of licensing actions greater than 1-year-old from 139 in September 2014 to 14 by the end of 2017. Through the use of strict controls and metrics, the staff has been able to maintain this inventory at historically low levels. This improvement is due in large part to the RAI-related improvements implemented over the last several years.

NRR launched several initiatives to focus on leveraging or revising existing licensing processes to enhance agency efficiency, effectiveness, and predictability, while maintaining a continued strong safety focus. Staff involved with these initiatives have analyzed the issues that caused the previous licensing action backlog, including in the RAI process, and recommended enhancements to the licensing review process. NRR management issued interim guidance to the staff in January 2015 and updated interim guidance in April 2016. These updates provided expectations to enhance consistency of the licensing review process, sound decision-making, and discipline of schedule. In January 2017, this interim guidance was incorporated into NRR procedures.

The Office of Nuclear Material, Safety and Safeguards (NMSS) also issued expectations and guidance to employees to improve the RAI process. The staff's continual efforts in this area have significantly improved the NRC's ability to monitor safety reviews and improve predictability. Current efforts include the formation of a working group to align, where appropriate, licensing strategies across the agency, including the RAI process. This working group includes representatives from NMSS, NRR, the Office of Nuclear Security and Incident Response, and the Office of the General Counsel.

### 2. Status of License Renewal Reviews

#### **Power Reactors**

The NRC staff is not reviewing any initial license renewal applications at this time.

During this reporting period, the NRC staff continued the review of three subsequent license renewal applications (SLRA) to extend operations from 60 to 80 years. These three requests involve six units at the three sites, as detailed below.

#### Turkey Point Nuclear Generating Units Nos. 3 and 4

On January 30, 2018, Florida Power & Light Company (FPL) submitted the first SLRA seeking to extend the operating life of Turkey Point Nuclear Generating (Turkey Point), Units 3 and 4. The NRC staff issued the acceptance letter dated April 26, 2018, with the technical safety and environmental review schedule. The notice of application acceptance and opportunity for hearing was published in the *Federal Register* on May 2, 2018. The

NRC staff completed all of the audits planned in support of this review during 2018 and issued its associated audit reports in 2018 and 2019.

On May 22, 2018, the staff issued a *Federal Register* notice (FRN) announcing its intent to conduct the environmental scoping process and to prepare an environmental impact statement (EIS). On May 31, 2018, the staff held two public environmental scoping meetings in Homestead, FL, near the Turkey Point site to obtain public input on the scope of the environmental review. During the scoping process, the NRC staff solicited comments and participation from the public, including residents in the surrounding community and from other interested stakeholders. The NRC also consulted with Federal, State, Tribal, regional, and local agencies. In January 2019, the NRC issued its "Supplemental Environmental Impact Statement Scoping Process Summary Report, Turkey Point Nuclear Generating Unit Nos. 3 and 4, Miami-Dade County, FL," which includes the comments received during the scoping process and the NRC staff's responses to those comments (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18342A014). Between June 19, 2018, and June 22, 2018, the staff was on-site to conduct an environmental audit in support of the staff's review of the SLRA. A summary of the audit was issued on July 20, 2018 (ADAMS Accession No. ML18178A229).

In early August 2018, three petitions for leave to intervene were submitted for the Turkey Point SLRA by (1) Friends of the Earth, Natural Resources Defense Council, and Miami Waterkeeper (Joint Intervenors), (2) Southern Alliance for Clean Energy (SACE), and (3) Mr. Albert Gomez. The applicant and staff filed answers to the petitions. The Atomic Safety and Licensing Board (ASLB) held oral arguments on the petitions on December 4, 2018, in Homestead, FL. The parties subsequently filed additional statements regarding the admissibility of two contentions associated with alternative cooling water systems. On March 7, 2019, the ASLB denied Mr. Gomez's petition for failure to file an admissible contention; granted the petitions filed by the Joint Intervenors and SACE; admitted four contentions (as revised) for litigation; and referred one portion of its ruling to the Commission. On April 9, 2019, SACE withdrew from the adjudication.

The ASLB dismissed all remaining admitted contentions on July 8, 2019, and found that the contentions were rendered moot by the NRC staff's draft supplemental environmental impact statement (SEIS). The Joint Intervenors filed several new and amended contentions based on the draft SEIS. The applicant and the NRC staff responded to the filings on July 19, 2019, and the ASLB held oral arguments on September 9, 2019, in Rockville, MD. Several items are pending before the Commission: an earlier ASLB referral related to the applicability of the NRC's environmental regulations to SLRAs and a petition for review from Joint Intervenors challenging two of the ASLB's earlier decisions.

The partial government shutdown in the December 2018 – January 2019 timeframe impacted the original schedule for the environmental review. Specifically, the shutdown delayed the National Park Service (a cooperating agency on this review) from performing a review of those portions of the NRC's draft SEIS pertaining to the areas in and around Biscayne National Park. As a result, the issuance of the draft SEIS was delayed from January to March 2019. The staff issued the draft SEIS on March 29, 2019 (ADAMS Accession No. ML19078A330). Two public meetings were held on May 1, 2019, in Homestead, FL, to receive comments on the draft SEIS. The staff reviewed and assessed over 400 individual public comments.

Notifications of schedule change were provided to the applicant on January 30, 2019 (ADAMS Accession No. ML19028A417), May 9, 2019 (ADAMS Accession No. ML19127A070), and

August 15, 2019 (ADAMS Accession No. ML19200A070). The staff issued the Safety Evaluation Report (SER) with an open item on May 21, 2019, in an effort to support the June 21, 2019, Advisory Committee on Reactor Safeguards (ACRS) subcommittee meeting. The one open item was associated with buried and underground piping. The staff closed that item based on additional information and actions that FPL will conduct regarding installation of cathodic protection and conducting additional buried steel piping inspections. On July 22, 2019, the staff issued the final SER. The ACRS Full Committee meeting took place on September 4, 2019.

On October 25, 2019, the staff issued the final SEIS and provided it to the Environmental Protection Agency (EPA) through eNEPA<sup>1</sup>. On October 31, 2019, the EPA issued an FRN (84 FR 58416) providing notification of the NRC's completion of the final SEIS, which began the 30-day public comment period. As part of its Record of Decision, the NRC responded to comments from the EPA and the Seminole Indian Tribe that were provided in response to the FRN. The NRC staff completed its review and issued the renewed licenses for Turkey Point, Units Nos. 3 and 4 on December 4, 2019. The original schedule and the scheduled date for completion of the review and making a decision on the Turkey Point SLRA are provided below.

<b>Turkey Point</b>			
<b>Application Review Time from Acceptance Review Date (Months)</b>			<b>18</b>
<b>Milestone</b>	<b>Original Schedule</b>	<b>Revised Schedule</b>	<b>Completion Date</b>
Receive SLRA	01/2018		01/30/2018, as supplemented through 04/10/2018
Publish FRN – SLRA availability	04/2018		04/18/2018
Publish FRN – docketing acceptance/rejection and opportunity for hearing	05/2018		05/02/2018
Publish FRN – notice of intent to prepare an EIS and conduct environmental scoping process	05/2018		05/22/2018
Public meeting – license renewal overview and environmental scoping meeting	05/2018		05/31/2018
Environmental scoping process period ends	06/2018		06/21/2018
Deadline for filing hearing requests and petitions for intervention	07/2018		08/01/2018*
Issue draft SEIS	01/2019		03/29/2019
Public meeting – draft SEIS meeting	02/2019		05/01/2019
End of draft SEIS comment period	03/2019		05/20/2019

<sup>1</sup> eNEPA is a streamlining tool that facilitates the environmental review process through enhanced agency collaboration. It has two main functions in its application to the National Environmental Policy Act (NEPA)/Project Development Process: (1) document management and (2) interagency collaboration.

<b>Turkey Point</b>			
Application Review Time from Acceptance Review Date (Months)			18
<b>Milestone</b>	<b>Original Schedule</b>	<b>Revised Schedule</b>	<b>Completion Date</b>
Issue SER with open items	04/2019		05/21/2019
ACRS subcommittee meeting	05/2019		06/21/2019
Issue final SEIS	08/2019	10/2019	10/25/2019
EPA publishes FRN – availability of final SEIS	08/2019	10/2019	11/01/2019
Issue final SER		08/2019	07/22/2019
ACRS Full Committee meeting	07/2019	09/2019	09/04/2019
Decision – Director, NRR	10/2019 (assuming no hearing)	11/2019	12/04/2019

\*Order (Granting a Partial Extension of Time) (ADAMS Accession No. ML18180A185)

#### Peach Bottom Units Nos. 2 and 3

On July 10, 2018, the NRC received an SLRA from Exelon Generating Company, LLC, for Peach Bottom Atomic Power Station, Units 2 and 3 (Peach Bottom). The staff informed the applicant in a letter dated August 27, 2018, that the application was accepted for detailed technical safety and environmental review.

In November 2018, a petition for leave to intervene was submitted by Beyond Nuclear, Inc. (Beyond Nuclear). Staff and applicant answers to the petition were filed on December 14, 2018. The Board heard oral argument on standing and contention admissibility on March 27, 2019.

On June 20, 2019, the Board found that, although Beyond Nuclear had demonstrated standing to intervene, neither of its two proposed contentions was admissible. Therefore, the Board denied Beyond Nuclear's petition to intervene and request for hearing and terminated the proceeding. On July 15, 2019, Beyond Nuclear appealed the Board's decision to the Commission. The appeal is pending before the Commission. On September 3, 2019, Beyond Nuclear filed a new contention based on information contained in the draft SEIS and on September 22, 2019, filed a motion to reopen the closed record.

The original schedule, the actual completion dates for milestones, and the scheduled date for completion of the review of the Peach Bottom SLRA are provided below. A schedule change letter was issued on July 31, 2019, to identify changes to the dates for issuance of the SER and the meeting with the ACRS subcommittee on Plant License Renewal (ADAMS Accession No. ML19210C571). The staff has completed all the planned audits and issued its associated audit reports. The staff issued the draft SEIS on July 30, 2019. A public meeting was held on September 12, 2019, to receive comments on the draft SEIS. The NRC is currently on track to meet the 18-month schedule for completing the review and making a decision on the SLRA for Peach Bottom.

<b>Peach Bottom</b>			
Application Review Time from Acceptance Review Date (Months)			16
<b>Milestone</b>	<b>Original Schedule</b>	<b>Revised Schedule</b>	<b>Completion Date</b>
Receive SLRA	07/10/2018		07/10/2018
Publish FRN – SLRA availability	08/2018		08/01/2018
Publish FRN – docketing acceptance/rejection and opportunity for hearing	09/2018		09/06/2018
Publish FRN – notice of intent to prepare an EIS and conduct environmental scoping process	09/2018		09/10/2018
Public meeting – overview of subsequent license renewal process and environmental scoping process	09/25/2018		09/25/2018
Environmental scoping process period ends	10/2018		10/10/2018
Deadline for filing hearing requests and petitions for intervention	11/2018		11/05/2018
Issue draft SEIS	07/2019		07/30/2019
Public meeting – draft SEIS meeting	09/2019		09/12/2019
End of draft SEIS comment period	09/2019		09/23/2019
Issue SER	09/2019	10/2019	11/19/2019
ACRS subcommittee meeting	10/2019	11/2019	11/05/2019
ACRS Full Committee meeting	12/2019		12/04/2019
Issue final SEIS	01/2020		
EPA publishes FRN – availability of final SEIS	02/2020	01/2020	
Decision – Director, NRR	03/2020		

#### Surry Power Station Unit Nos. 1 and 2

On October 15, 2018, Virginia Electric and Power Company (Dominion Energy Virginia or Dominion) submitted a SLRA for Surry Power Station, Units 1 and 2 (Surry). The staff informed the applicant in a letter dated December 3, 2018, that the application was accepted for detailed technical safety and environmental review. The staff completed all of the planned audits and issued its associated audit reports in 2018 and the draft SEIS on October 17, 2019. On April 29, 2019, the staff issued a schedule change letter to modify the schedule for three milestones (ADAMS Accession No. ML19100A254). For the safety review, the staff moved the milestone for “ACRS Full Committee Meeting” from March 2020 to April 2020. This change was made due to the finalization of the ACRS Full Committee meeting schedule. The staff issued the SER on December 27, 2019, to support a meeting with the ACRS subcommittee on Plant

License Renewal on February 5, 2020.

For the environmental review, the staff moved the milestones for issuing the final SEIS and the U.S. Environmental Protection Agency publishing an FRN noticing availability of the final SEIS from March 2020 to April 2020 to support workload prioritization. A schedule change letter was issued on July 31, 2019, to change the milestone for issuance of the draft SEIS from September 2019 to October 2019 (ADAMS Accession No. ML19206A651). The staff issued the draft SEIS on October 17, 2019. On November 7, 2019, the staff held a public meeting via webinar to receive comments on the draft SEIS. The public comment period on the draft SEIS closed on December 10, 2019, and the staff is currently in the process of reviewing and addressing the comments received. The staff's current plan is to issue the final SEIS in April 2020. One outstanding issue concerns Dominion's obligations under the Federal Coastal Zone Management Act (CZMA). Under the CZMA, the applicant must demonstrate that the proposed license renewal is consistent with and complies with enforceable policies of the Virginia Coastal Zone Management Program before the NRC can issue a renewed license. The staff issued an RAI on this issue on April 11, 2019, and noted the issue in the draft SEIS.

The original schedule, the actual completion dates for milestones, and the scheduled date for completion of the review of the Surry SLRA are provided below. The NRC is currently on track to meet the 18-month schedule for completing the review and making a decision on the SLRA for Surry.

<b>Surry</b>			
Application Review Time from Acceptance Review (Months)			12
<b>Milestone</b>	<b>Original Schedule</b>	<b>Revised Schedule</b>	<b>Completion Date</b>
Receive SLRA	10/15/2018		10/15/2018
Publish FRN – SLRA availability	11/2018		11/01/2018
Publish FRN – docketing acceptance/rejection and opportunity for hearing	12/2018		12/17/2018
Publish FRN – notice of intent to prepare an EIS and conduct environmental scoping process	12/2018		12/21/2018
Public meeting – overview of subsequent license renewal process and environmental scoping process	01/2019		01/08/2019
Environmental scoping process period ends	02/2019		01/22/2019
Deadline for filing hearing requests and petitions for intervention	02/2019		02/15/2019
Issue draft SEIS	09/2019	10/2019	10/17/2019
Public meeting – draft SEIS meeting, if needed	10/2019	11/2019*	11/07/2019
Issue draft SER	11/2019		12/27/2019
End of draft SEIS comment period	11/2019	12/2019	12/10/2019

Surry			
Application Review Time from Acceptance Review (Months)			12
Milestone	Original Schedule	Revised Schedule	Completion Date
ACRS subcommittee meeting	02/2020	02/2019	
ACRS Full Committee meeting	03/2020	04/2020	
Issue final SER	03/2020		
Issue final SEIS	03/2020	04/2020	
EPA publishes FRN – availability of final SEIS	03/2020	04/2020	
Decision – Director, NRR	06/2020		

\*Public meeting via webinar

### Research and Test Reactors License Renewal Applications Currently Under Review

The NRC staff is reviewing license renewal applications for four research and test reactors, and the review of one application is on hold. The current status of these reviews is provided in the table below.

Research and Test Reactors		
Facility Name	Application Date	Status
Texas A&M University (TAMU) Aerojet-General Nucleonics (AGN) Reactor	07/22/1997 (review on hold)	The review of the TAMU AGN reactor license renewal application is on hold. The AGN license currently allows only possession of the reactor. The licensee partially disassembled and placed the reactor into storage at the Texas Engineering Experiment Station Training, Research, Isotopes, General Atomics reactor facility, where the licensee has started construction on support laboratory space for the AGN reactor. The NRC staff will resume its review of the license renewal application once the licensee submits a revised safety analysis report as part of an application for a construction permit to reassemble the AGN in its new location.
University of Texas at Austin (UTA)	12/12/2011 (review in progress)	By letter dated December 14, 2018, UTA staff proposed a schedule that would have provided the results of the neutronics and thermal-hydraulics analyses to the NRC by August 30, 2019. UTA obtained a contract from the U.S. Department of Energy and is collaborating with staff from Oregon State University to help ensure the accuracy and completeness of the neutronics and thermal-hydraulics analyses. Following

Research and Test Reactors		
Facility Name	Application Date	Status
		<p>receipt of the UTA analyses, the NRC staff will validate the results and resume the license renewal review.</p> <p>By conference call on September 30, 2019, UTA personnel, technical staff of the Oregon State University (assisting UTA), and NRC staff discussed challenges with the neutronics analysis of reactor core safety parameters. The NRC staff conducted an additional conference call December 5, 2019, to review the status of the work on the reactor analyses. UTA staff requested an extension to March 31, 2020, to provide the reactor neutronics and thermal-hydraulics analyses. NRC staff is planning an audit visit with UTA staff after the reactor analyses have been submitted. The license renewal review schedule will be revised following completion of the audit.</p>
University of Massachusetts at Lowell	10/20/2015 (review in progress)	The review is on schedule for completion in June 2020. The NRC staff is drafting the SER. On July 19, 2019, the NRC staff issued RAIs to address the proposed instrumentation and control upgrades in the license renewal application, including additional changes proposed in an April 2019 application supplement. The licensee provided partial responses to these RAIs in October and December 2019; the licensee requested an extension until February 18, 2020, to complete its responses. The NRC staff is also planning a regulatory audit in February 2020, to address SER open items primarily related to technical specification and instrumentation and control RAI responses.
North Carolina State University	02/24/2017 (review in progress)	The licensee recently made several changes to the renewal application affecting the scope of the renewal. The review is on schedule for completion in October 2021. The NRC staff has prepared a draft of the SER, which is the basis for RAIs dated October 18, 2018, that were related to safety, financial, environmental, operator requalification, and supporting information. By letter dated



Research and Test Reactors		
Facility Name	Application Date	Status
		<p>November 1, 2018, the licensee provided partial responses to these RAIs. By letter dated December 13, 2018, the licensee requested an additional 60 days to complete the RAI responses. By letter dated February 14, 2019, the licensee submitted the remaining responses, including additional computational analysis indicating it would change the requested power level increase from 2.6 MW to 2.0 MW.</p> <p>On July 12, 2019, the licensee notified the NRC staff of its intention to withdraw its request for a separate fueled experiment license amendment and instead will submit a replacement safety analysis report (SAR) for license renewal that provides significant updates to supplement the license renewal application and incorporates the fueled experiment into the application to renew the operating license. The licensee submitted a revised SAR on August 8, 2019, and revised technical specifications on September 16, 2019.</p> <p>The NRC staff performed a regulatory audit on November 12, 2019, to discuss and review the technical specifications. The NRC staff is also preparing RAIs, which it expects to issue in March 2020 after reviewing the revised SAR, the fueled experiment update, and the site audit findings.</p>
University of California at Davis	06/11/2018 (review in progress)	<p>The review is currently on schedule for completion in June 2022. The NRC staff is reviewing the license renewal application and drafting the SER. The NRC staff conducted a site familiarization visit the week of April 9, 2019. By letter dated May 10, 2019, the licensee requested to supplement the license renewal application with an updated final SAR (UFSAR) that will reduce the licensed power level to approximately 1.0 MW and eliminate pulsing capability and irradiation of explosive materials in the reactor tank. By letter dated June 14, 2019, the licensee provided a date of April 10, 2020, for the submission of the UFSAR.</p>

### 3. Status of Power Uprate Application Reviews

The NRC staff currently has no power uprate applications under review.

#### 4. Status of Design Certification Applications

The NRC employs a six-phase schedule to monitor progress towards completion of the safety reviews for design certification (DC) applications. These phases are:

- Phase 1 - Preliminary SER with RAIs issued to applicant
- Phase 2 - SER with open items issued
- Phase 3 - Response to the ACRS regarding SER with open items issued
- Phase 4 - Advanced SER with no open items issued
- Phase 5 - Response to ACRS regarding SER with no open items issued
- Phase 6 - Final SER issued

The NRC staff has two DC applications under review.

##### U.S. Advanced Pressurized-Water Reactor

Mitsubishi Heavy Industries, Ltd. (MHI) submitted its U.S. Advanced Pressurized-Water Reactor DC application on December 31, 2007. By letter dated November 5, 2013, MHI initiated a coordinated slowdown of NRC licensing activities in order to focus its resources towards supporting the restart of the Mitsubishi-designed reactors in Japan following the Fukushima event. Since that time, the NRC staff has been performing the review of the DC application at a reduced pace. The staff has completed Phase 2 for several chapters and is making progress on the Phase 4 review for six DC chapters.

##### NuScale

On January 6, 2017, NuScale submitted the first small modular reactor DC application for review by the NRC. On March 15, 2017, the NRC completed its acceptance review and docketed the application. The staff then issued the acceptance review letter to NuScale on March 23, 2017, and developed a full review schedule with public milestones, which was transmitted to NuScale on May 22, 2017. On April 11, 2018, the staff completed Phase 1 of the review. The staff completed Phase 2 of the review on July 12, 2019, except for Chapters 15 and 20 of the SER, which remained preliminary. A final Phase 2 SER was not issued at the time. As a result, on May 16, 2019, the NRC staff issued a letter to NuScale communicating that the staff had not met the Phase 2 milestone because several issues remained unresolved without a mutually understood and clearly defined path toward resolution. The letter further emphasized that to meet the overall 42-month schedule for review, NuScale must resolve the remaining issues and open items with the NRC staff in order to meet the Phase 4 milestone.

After that letter, the staff worked with NuScale to complete Phase 3 of the review on July 12, 2019, and complete Phase 4 of the review on December 12, 2019. The staff's review is currently in Phases 5 and 6. As of December 31, 2019, the staff had issued a total of 1,333 RAIs and the applicant has responded to all of them. The staff is currently on track to complete the NuScale small modular reactor DC review within the established 42-month schedule, with the expected completion date of September 8, 2020.

#### 5. Status of Design Certification Renewal Applications

The NRC employs a 4-phase schedule to monitor progress toward completion of the safety

reviews for DC renewal applications. These phases are:

- Phase 1 - RAIs and Supplemental RAIs
- Phase 2 - SER without Open Items
- Phase 3 - ACRS Review of SER without Open Items
- Phase 4 - Final SER

The NRC staff has one DC renewal application under review.

#### Advanced Boiling-Water Reactor Renewal (General Electric-Hitachi)

On December 7, 2010, General Electric-Hitachi (GEH) submitted an application for renewal of the Advanced Boiling-Water Reactor (ABWR) DC. The NRC staff continues to prepare the safety evaluation. The NRC staff issued a letter to GEH on July 20, 2012, that described 28 design changes that GEH should have included in the application. By letter dated September 17, 2012, GEH stated it planned to address the 28 items in its Revision 6 of the ABWR design control document. By letter dated February 19, 2016, GEH submitted its revised application incorporating the changes to the ABWR design control document. On August 3, 2017, the staff issued a letter to GEH stating that the NRC will not be able to meet the original schedule outlined in the August 30, 2016, letter due to unresolved issues with the application. The letter also stated that the NRC will issue a revised schedule letter to GEH after additional interactions with the applicant to resolve these issues and the staff receives complete responses to the NRC's RAIs. In a letter dated January 21, 2019, GEH provided the NRC staff with the final RAI response regarding the peak cladding temperature issue. As of December 31, 2019, the staff has issued 37 RAIs and the applicant has responded to all of them. GEH has addressed all the previous open items and the staff completed the advanced final SER (Phase 2) on June 28, 2019. The ACRS subcommittee meeting was held on August 23, 2019; the ACRS Full Committee meeting (Phase 3) was held in October 2019. The NRC plans to complete its final SER for this renewal application in March 2020.

#### Status of Combined License Applications

The NRC staff currently has no combined license applications under review.

#### Status of Early Site Permit Applications

The NRC employs a four-phase schedule to monitor progress towards completion of the safety reviews for early site permit (ESP) applications. These phases are:

- Phase A - RAIs and supplemental RAIs issued
- Phase B - Advanced SER with no open items developed
- Phase C - ACRS meeting on advanced SER
- Phase D - Final SER issued

The NRC employs a three-phase schedule to monitor progress towards completion of the environmental review for ESP applications. These phases are:

- Phase 1 - Scoping summary report issued
- Phase 2 - Draft EIS issued to EPA
- Phase 3 - Final EIS issued to EPA

The NRC staff completed review of one ESP application and has no additional ESP applications under review.

### Clinch River

On May 12, 2016, the Tennessee Valley Authority (TVA) submitted an ESP application for the Clinch River Nuclear Site located in Oak Ridge, TN. This application is based on a plant parameter envelope characterizing several small modular reactor designs. By letter dated August 11, 2016, TVA identified certain aspects of the application for which it intended to provide supplemental information. The NRC responded to TVA in a letter dated August 19, 2016, and informed TVA that its application would remain in a tendered, but not docketed, status until all of the supplemental information was provided to the NRC. By December 30, 2016, TVA had provided the supplemental information in support of its application, and by letter dated January 5, 2017, the NRC staff informed TVA that its application, as supplemented, was acceptable for docketing and detailed technical safety and environmental review.

The NRC staff began its detailed technical review of the ESP application in January 2017 and developed a full review schedule with public milestones that was transmitted to TVA on March 17, 2017. The Phase A safety review for all chapters of the application was completed by the staff on August 4, 2017. The staff completed Phase B of its review on October 17, 2018. On December 6, 2018, the NRC staff completed Phase C. The final SER (Phase D) was issued on June 14, 2019.

For the environmental review, the NRC staff completed Phase 1 of the review on October 30, 2017. Additionally, the NRC staff completed Phase 2 by issuing the draft EIS on April 27, 2018. The public comment period for the draft EIS closed on July 13, 2018. Based on one of the comments received from the applicant, the staff issued one environmental RAI question in September 2018, and the applicant responded to the RAI in October 2018. The final EIS was issued on April 3, 2019. Both the final EIS and final SER were completed more than 2 months ahead of schedule.

On June 12, 2017, SACE, the Tennessee Environmental Coalition (TEC), and the Blue Ridge Environmental Defense League (BREDL) filed petitions seeking a hearing. The ASLB denied BREDL's petition to intervene and granted SACE and TEC's joint petition to intervene and admitted two contentions. Separately, TVA appealed the admission of the two contentions to the Commission, and the Commission upheld the admission of one contention and dismissed the other. On May 21, 2018, SACE/TEC submitted two new contentions on the draft EIS. On July 31, 2018, the ASLB issued a memorandum and order (LBP-18-04) denying SACE/TEC's motion for leave to file new contentions, granted TVA's and the NRC staff's motions to dismiss the remaining admitted contention, and terminated the contested proceeding. The Board's decision was not appealed. The Commission conducted the mandatory hearing for the Clinch River ESP application on August 14, 2019. This was the first mandatory hearing on an ESP involving a small modular reactor. The Commission authorized issuance of the ESP on December 17, 2019. The staff subsequently issued the ESP to TVA for the Clinch River Nuclear Site on December 19, 2019.

### Status of Uranium Recovery Licensing Application Review

For the timeframe of October – December 2019, no major uranium recovery applications were reviewed. In September 2018, Wyoming became an Agreement State and now has authority

over uranium recovery facilities. The NRC has three operating facilities that remain under its jurisdiction: Cameco Resources Crow Butte in situ recovery facility in Crawford, NE, the Powertech Dewey Burdock site in South Dakota, and the NuFuels Crownpoint site in New Mexico. The Crow Butte facility remains in a standby status. Powertech continues to pursue the Dewey Burdock site and is in the process of obtaining other permits. NuFuels is currently not pursuing construction or operation due to market conditions.