



1101 Market Street, Chattanooga, Tennessee 37402

CNL-21-024

June 15, 2021

10 CFR 50.90

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Sequoyah Nuclear Plant, Units 1 and 2
Renewed Facility License Nos. DPR-77 and DPR-79
NRC Docket Nos. 50-327 and 50-328

Subject: **Partial Response to Additional Request for Additional Information (QUESTION 2) Regarding Application to Revise Sequoyah Nuclear Plant Units 1 and 2 Updated Final Safety Analysis Report Regarding Changes to Hydrologic Analysis (TS-19-02) (EPID L-2020-LLA-0004)**

- References:
1. TVA Letter to NRC, CNL-19-066, "Application to Revise Sequoyah Nuclear Plant Units 1 and 2 Updated Final Safety Analysis Report Regarding Changes to Hydrologic Analysis (TS-19-02)," dated January 14, 2020 (ML20016A396)
 2. TVA Letter to NRC, CNL-20-026, "Supplement to Application to Revise Sequoyah Nuclear Plant Units 1 and 2 Updated Final Safety Analysis Report Regarding Changes to Hydrologic Analysis, (TS-19-02) (EPID L-2020-LLA-0004)," dated February 18, 2020 (ML20049H184)
 3. NRC Electronic Mail to TVA, "Sequoyah Nuclear Plant, Request for Additional Information Regarding the Hydrologic Analysis LAR (EPID L-2020-LLA-0004)," dated April 14, 2020 (ML20106F104)
 4. TVA Letter to NRC, CNL-20-032, "Application to Revise Sequoyah Nuclear Plant Units 1 and 2 Updated Final Safety Analysis Report Regarding Changes to Hydrologic Analysis - Response to Request for Additional Information (TS-19-02) (EPID L-2020-LLA-0004)," dated May 14, 2020 (ML20135H067)
 5. NRC Electronic Mail to TVA, "Sequoyah Nuclear Plant, Units 1 and 2 - Request for Additional Information Regarding Hydrologic UFSAR Update (EPID L-2020-LLA-0004)," dated July 1, 2020 (ML20189A211)

~~Proprietary Information Withhold from Public Disclosure Under 10 CFR 2.390~~
~~This letter is decontrolled when separated from Enclosure 1 and Enclosure 4~~

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6. NRC meeting notice, "Meeting with Tennessee Valley Authority to Discuss Response to Requests for Additional Information Re: License Amendment Request on Updated Final Safety Analysis Report Hydrologic Analysis for Sequoyah Nuclear Plant, Units 1 and 2," dated July 16, 2020 (ML20188A366)
7. TVA Letter to NRC, CNL-20-057, "Application to Revise Sequoyah Nuclear Plant Units 1 and 2 Updated Final Safety Analysis Report Regarding Changes to Hydrologic Analysis - Partial Response to Additional Request for Additional Information (TS-19-02) (EPID L-2020-LLA-0004)," dated August 12, 2020 (ML20225A170)

In Reference 1, Tennessee Valley Authority (TVA) submitted a request for an amendment to Renewed Facility Operating License Nos. DPR-77 and DPR-79 for Sequoyah Nuclear Plant (SQN), Units 1 and 2, respectively. This license amendment request (LAR) revises the SQN Units 1 and 2, Updated Final Safety Analysis Report (UFSAR) to reflect the results from the new hydrologic analysis. TVA determined that the proposed changes to the SQN UFSAR required prior Nuclear Regulatory Commission (NRC) approval.

In Reference 2, TVA provided a response to a request for information to support the NRC acceptance review of the LAR. In Reference 3, the NRC provided a request for additional information (RAI), which TVA responded to in Reference 4. In Reference 5, NRC provided an additional RAI and requested that TVA respond by August 15, 2020.

A public meeting with the NRC regarding the proposed TVA responses to Reference 5 was held on July 16, 2020 (Reference 6). Based on this meeting, TVA determined that additional time was required to respond to NRC Question 2 of Reference 5. In Reference 7, TVA provided a response to NRC Question 1 of Reference 5 only. TVA then informed NRC that a response to NRC Question 2 of Reference 5 would be provided at a later date agreed to by TVA and NRC. Accordingly, the Enclosure 1 to this letter provides the response to NRC Question 2 of Reference 5.

Enclosure 2 contains a non-proprietary version of Enclosure 1. Enclosure 4 provides a Digital Versatile Disc (DVD) of digital versions of Barge Design Solutions, Inc., Software Dedication Report (SDR) Revision 3 and TVA calculation CDQ0000002020000153, Revision 0, "Manual Computation of Grid Point PMP Depths" for NRC review. Enclosures 1 and 4 contain information that Barge Design Solutions (Barge) considers to be proprietary pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public inspections, exemptions, requests for withholding," paragraph (a)(4). Enclosure 3 provides the Barge Design Solutions affidavit supporting this proprietary withholding request. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the NRC and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR 2.390. Accordingly, TVA requests that the information which is proprietary to Barge Design Solutions, Inc., be withheld from public disclosure in accordance with 10 CFR Section 2.390. Correspondence with respect to the copyright or proprietary aspects of the items listed above or the supporting Barge Design

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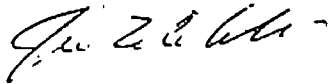
Solutions, Inc. affidavit should be addressed to Carrie Stokes, Senior Vice President, Barge Design Solutions, Inc., 615 3rd Avenue S., Suite 700, Nashville, TN 37210.

TVA has determined that this letter does not change the no significant hazards considerations or the environmental considerations contained in Reference 1. Additionally, in accordance with 10 CFR 50.91(b)(1), "Notice for Public Comment, State Consultation", TVA is sending a copy of this letter and the enclosures to the Tennessee Department of Environment and Conservation.

There are no new regulatory commitments associated with this submittal. Please address any questions regarding this submittal to Kimberly Hulvey, Senior Manager, Fleet Licensing at 423-751-3275.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 15th day of June 2021.

Respectfully,



James T. Polickoski
Director, Nuclear Regulatory Affairs

Enclosures:

1. Response to NRC Additional Request for Additional Information, Question 2 (Proprietary)
2. Response to NRC Additional Request for Additional Information, Question 2 (Non-Proprietary)
3. Barge Design Solutions, Inc., Affidavit
4. DVD (Proprietary)

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cc (Enclosures):

NRC Regional Administrator - Region II
NRC Senior Resident Inspector - Sequoyah Nuclear Plant, Units 1 and 2
NRC Project Manager - Sequoyah Nuclear Plant
Director, Division of Radiological Health - Tennessee State Department of Environment
and Conservation

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Enclosure 2

Response to NRC Additional Request for Additional Information, Question 2 (Non-Proprietary)

Enclosure 2

NRC Introduction

By letter dated January 14, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20016A396), as supplemented by a letter dated February 18, 2020 (ADAMS Accession No. ML20049H184), Tennessee Valley Authority (TVA) submitted a license amendment request (LAR) for Sequoyah Nuclear Plant related to a new hydrologic analysis. The U.S. Nuclear Regulatory Commission (NRC) staff issued requests for additional information (RAIs) (ADAMS Accession No. ML20106F104) related to the software tools used in the new hydrologic analysis. By letter dated May 14, 2020 (ADAMS Accession No. ML20135H065), TVA submitted responses to the NRC staff's RAIs. The NRC staff is continuing to review the application and has identified areas where it needs additional information to support its review.

NRC Question 1

TVA Response to Question 1 was submitted on August 12, 2020 in Reference 4 of this Enclosure.

NRC Question 2

The regulations at 10 CFR Part 21, "Reporting of Defects and Noncompliance," define the term "dedication," in part as, "an acceptance process undertaken to provide reasonable assurance that a commercial grade item to be used as a basic component will perform its intended safety and, in this respect deemed equivalent to an item designed and manufactured under a 10 CFR Part 50, Appendix B quality assurance program. In all cases, the dedication process must be conducted in accordance with applicable provisions of 10 CFR Part 50, Appendix B." Criterion III, "Design Control" of Appendix B to 10 CFR Part 50, requires, in part, that:

Measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems and components. ... Design changes, including field changes, shall be subject to design control measures commensurate with those applied to the original design and be approved by the organization that performed the original design unless the applicant designates another responsible organization.

Regulatory Guide (RG) 1.231, "Acceptance of Commercial-Grade Design and Analysis Computer Programs Used in the Safety-Related Applications for Nuclear Power Plants," Revision 0, endorses Revision 1 of the Electric Power Research Institute (EPRI) Technical Report 1025243, "Plant Engineering: Guideline for the Acceptance of Commercial-Grade Design and Analysis Computer Programs Used in Nuclear Safety-Related Applications" with respect to acceptance of commercial-grade design and analysis computer programs associated with basic components for nuclear power plants. In TVA's response to the NRC staff's RAI Question 1c regarding information supporting the dedication of the PMP Evaluation Tool, TVA submitted the "Software Dedication Report [SDR] PMP Evaluation Tool Package SDR-16-01," Revision 1. The NRC staff has reviewed this SDR and requests the following additional information to support the review of the commercial grade dedication of the PMP Evaluation Tool to meet the requirements of Criterion III of Appendix B to 10 CFR Part 50.

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TVA Response to Question 2. 1a – c

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Enclosure 2

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NRC RAI Question (Continued)

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TVA Response to Question 2.2a

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TVA Response to Question 2.2b.1 – iv

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TVA Response to Question 2, Part 2.b.i.

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TVA Response to Question 2, Part 2.b.ii.

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TVA Response to Question 2, Part 2.b.iii.

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TVA Response to Question 2, Part 2.b.iv.

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After the NRC provided Question 2 of this RAI to TVA, Revision 2 of the PMP Evaluation Tool SDR was provided to the NRC for review in Reference 6 of this Enclosure. The NRC provided the additional questions listed below in regard to SDR Revision 2:

Additional NRC Vendor Audit Questions (Reference 5 of this Enclosure):

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TVA Response to NRC Vendor Audit Question No. 1:

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TVA Response to NRC Vendor Audit Question No. 2:

(Response to this question was incorporated into the response to RAI question 2.2a above)

TVA Response to NRC Vendor Audit Question No. 3:

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TVA Response to NRC Vendor Audit Question No. 4:

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Enclosure 2

References:

1. Tennessee Valley Authority, Calculation CDQ0000002020000153, "Manual Computation of Grid Point PMP Depths," Revision 000.
2. Barge Design Solutions, "Software Dedication Report: PMP Evaluation Tool Package SDR-16-10," Revision 2 (provided to the NRC in CNL-20-082, Enclosure 2, dated November 10, 2020, (ML 20328A093)).
3. EPRI TR 1025243 (Report Number 3002002289), Revision 1, "Plant Engineering: Guideline for the Acceptance of Commercial-Grade Design and Analysis Computer Programs Used in Nuclear Safety-Related Applications," EPRI, Palo Alto, CA: Final Report December 2013, (ML14085A054)
4. TVA Letter to NRC, CNL-20-057, "Application to Revise Sequoyah Nuclear Plant Units 1 and 2 Updated Final Safety Analysis Report Regarding Changes to Hydrologic Analysis - Partial Response to Additional Request for Additional Information (TS-19-02) (EPID L-2020-LLA-0004)," dated August 12, 2020 (ML20225A170)
5. NRC Electronic Mail (Mike Wetzel) to TVA (Andrew Taylor), "Sequoyah Nuclear Plant, Units 1 and 2 - Audit Plan and Setup of Online Reference Portal (EPID L-2020-LLA-0004)," dated December 14, 2020
6. TVA Letter to NRC, CNL-20-082, "Partial Response to Request for Additional Information Regarding Application to Revise Sequoyah Nuclear Plant Units 1 and 2 Updated Final Safety Analysis Report Regarding Changes to Hydrologic Analysis (TS-19-02) (EPID L-2020-LLA-0004)," dated November 10, 2020 (ML20328A093)
7. NRC Letter to TVA, "Final Safety Evaluation For Tennessee Valley Authority Topical Report "TVA Overall Basin Probable Maximum Precipitation and Local Intense Precipitation Analysis Calculation CDQ0000002016000041," Rev. 1 (EPID L-2016-TOP-0011)," dated March 18, 2019 (ML19010A212)
8. TVA Letter to NRC, CNL-19-040, "Submittal of Topical Report TVA-NPG-AWA16-A, "TVA Overall Basin Probable Maximum Precipitation and Local Intense Precipitation Analysis, Calculation CDQ0000002016000041," Revision 1," dated May 21, 2019 (ML19155A047)

Enclosure 3

Barge Design Solutions, Inc., Affidavit

AFFIDAVIT

STATE OF TENNESSEE)

)ss.

COUNTY OF DAVIDSON)

1. My name is Carrie Stokes. I am Senior Vice President, for Barge Design Solutions, Inc. and as such I am authorized to execute this Affidavit.

2. I am familiar with the criteria applied by Barge Design Solutions, Inc. to determine whether certain Barge Design Solutions, Inc. information is a trade secret, proprietary, and commercially sensitive. I am familiar with the policies established by Barge Design Solutions, Inc. to ensure the proper application of these criteria.

3. I am familiar with the Barge Design Solutions, Inc. information contained in the report:

“Software Dedication Report, PMP Evaluation Tool Package, SDR 16-01” dated April 2021 and referred to herein as “Dedication Report.” Information regarding the dedication methodology and test problem suite has been classified by Barge Design Solutions, Inc. as proprietary and a trade secret in accordance with the policies established by Barge Design Solutions, Inc. for the control and protection of proprietary information in furtherance of the business of Barge Design Solutions, Inc..

4. This Dedication Report contains trade secrets and information of a proprietary nature of the type customarily held in confidence by Barge Design Solutions, Inc. and not made available to the public. Based on my experience, I am aware that other companies regard information of the kind contained in this Dedication Report as commercially sensitive, trade secrets, proprietary, and confidential.

5. This Dedication Report has been made available to the U.S. Nuclear Regulatory Commission in confidence with the request that the information contained in this Document be withheld from public disclosure. The request for withholding of proprietary information is made

in accordance with 10 CFR 2.390. The information for which withholding from disclosure is requested qualifies under 10 CFR 2.390(a)(4) "Trade secrets and commercial or financial information."

6. The following criteria are customarily applied by Barge Design Solutions, Inc. to determine whether information should be classified as proprietary:

- (a) The information reveals details of Barge Design Solutions, Inc.'s research and development processes or their results.
- (b) Use of the information by a competitor would permit the competitor to significantly reduce its expenditures, in time or resources, to design, produce, or market a similar product or service.
- (c) The information includes test data or analytical techniques concerning a process, methodology, or component.
- (d) The information reveals certain distinguishing aspects of a process, methodology, or component, the exclusive use of which provides a competitive advantage for Barge Design Solutions, Inc. in product optimization or marketability.
- (e) The information is vital to a competitive advantage held by Barge Design Solutions, Inc., would be helpful to competitors, and would likely cause substantial harm to the competitive position of Barge Design Solutions, Inc.

The information in the Dedication Report is considered proprietary for the reasons set forth in paragraphs 6(a) - 6(e) above.

7. In accordance with Barge Design Solutions, Inc.'s policies governing the protection and control of information, trade secrets and confidential or proprietary information contained in this Dedication Report have been made available, on a limited basis, to others outside Barge Design Solutions, Inc. only as required and under suitable agreement providing for nondisclosure and limited use of the information.

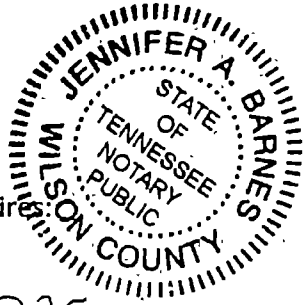
8. Barge Design Solutions, Inc. policy requires that proprietary information be kept in a secured file or area and distributed on a need-to-know basis.

9. The foregoing statements are true and correct to the best of my knowledge, information, and belief.

FURTHER AFFIANT SAYETH NOT.

Cecil Stokes

SUBSCRIBED before me this 9th day of April, 2021



My Commission Expires

3-8-2025

Jennifer A. Barnes
Notary Public

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Enclosure 4
DVD (Proprietary)

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