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NNP-23-004

November 30, 2023

10 CFR 50.10(c)  
10 CFR 50.12(b)

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-001

Clinch River Project  
NRC Docket No. 99902056

Subject: Request for Exemption from 10 CFR 50.10(c) to Allow Excavation at the Clinch River Nuclear Site Prior to Construction Permit Issuance

In accordance with the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.12, "Specific Exemptions," Tennessee Valley Authority (TVA) requests an exemption from portions of 10 CFR 50.10(c) to allow the conduct of certain excavation support activities prior to the issuance of a construction permit (CP).

Specifically, TVA requests an exemption pursuant to 10 CFR 50.12(b) to allow the conduct of certain excavation support activities at the Clinch River Nuclear (CRN) Site prior to the issuance of a CP, which are otherwise prohibited by 10 CFR 50.10(c). In accordance with 10 CFR 50.10(a)(2)(v), excavation on its own is not considered to fall into the definition of "construction." To ensure worker safety during excavation and to facilitate construction activities, an initial ground support system (i.e., erosion control measures) will be installed prior to and during excavation and will remain in place. The purpose of 10 CFR 50.10(c) is to prohibit the initiation of onsite construction activities that have a reasonable nexus to nuclear safety or security before issuance of a CP. Application of 10 CFR 50.10(c) would delay the installation of the initial ground support system, and consequently the excavation, and will not serve the underlying purpose of the rule because the initial ground support system does not have a reasonable nexus to nuclear safety or security.

The requested exemption is permissible under 10 CFR 50.12 because it is authorized by law, will not present an undue risk to the public health and safety, is consistent with the common defense and security, and special circumstances are present. Moreover, there are no significant adverse effects to the environment by installation of the initial ground support system.

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The Enclosure to this submittal provides details regarding the requested exemption from the specific provisions of 10 CFR 50.10(c) identified above.

As has been communicated previously, TVA has not yet authorized the deployment of a small modular reactor (SMR) at the CRN Site. Any decisions will be subject to support, risk sharing, required internal and external approvals, and completion of all necessary environmental and permitting reviews. Nonetheless, receiving an exemption from 10 CFR 50.10(c) will provide regulatory certainty from NRC moving forward for excavation activities. This exemption would enable TVA to move forward in a timely manner, if and when a decision is made to deploy an SMR. TVA requests review and approval of the requested exemption by November 1, 2024 to avoid delays in the potential, future construction of Clinch River Nuclear Unit 1 (CRN-1).

There are no new Regulatory Commitments associated with this submittal. Please address any questions regarding this request to Mr. Ray Schiele, Senior Manager Licensing, New Nuclear Program, at [rschiele@tva.gov](mailto:rschiele@tva.gov).

Respectfully,



Scott W. Hunnewell  
Vice President, New Nuclear Program

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## **Request for Exemption from 10 CFR 50.10(c) to Allow Excavation at the Clinch River Nuclear Site Prior to Construction Permit Issuance**

### **1.0 Introduction**

Pursuant to 10 CFR 50.12(b), TVA requests an exemption to allow the conduct of certain excavation support activities at the Clinch River Nuclear (CRN) Site<sup>1</sup> prior to the issuance of a construction permit (CP) which are otherwise prohibited by 10 CFR 50.10(c). Per 10 CFR 50.10(a)(2)(v), excavation on its own is not considered to fall into the definition of “construction”. To ensure worker safety during excavation and facilitate construction activities, an initial ground support system (erosion control measures) is expected to be installed prior to and during excavation and will remain in place. The purpose of 10 CFR 50.10(c) is to prohibit the initiation of onsite construction activities that have a reasonable nexus to nuclear safety or security before issuance of a CP. Application of 10 CFR 50.10(c) would delay the installation of the initial ground support, and consequently the excavation, and will not serve the underlying purpose of the rule because the initial ground support system does not have a reasonable nexus to nuclear safety or security.

Multiple sources are used to inform this exemption request as listed in the Reference section, most importantly the approved Licensing Topical Report (LTR), NEDO-33914-A, *BWRX-300 Advanced Civil Construction and Design Approach* (Reference 1).

### **1.1 NRC Regulatory Requirements**

10 CFR 50.10(a)(1) states in part:

*Activities constituting construction are...subsurface preparation [or] placement of backfill, concrete, or permanent retaining walls within an excavation...which are for: (i) Safety-related structures, systems, or components (SSCs) of a facility, as defined in 10 CFR 50.2; (ii) SSCs relied upon to mitigate accidents or transients or used in plant emergency operating procedures...*

10 CFR 50.10(c) states:

*No person may begin the construction of a production or utilization facility on a site on which the facility is to be operated until that person has been issued either a construction permit under this part, a combined license under part 52 of this chapter, an early site permit authorizing the activities under paragraph (d) of this section, or a limited work authorization under paragraph (d) of this section.*

10 CFR 50.12(a) states:

*The Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part, which are—*

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<sup>1</sup> As has been communicated previously, TVA has not yet authorized the deployment of an SMR. Any decisions will be subject to support, risk sharing, required internal and external approvals and completion of all necessary environmental and permitting reviews. Nonetheless, receiving an exemption from 10 CFR 50.10(c) will provide regulatory certainty from NRC moving forward for excavation activities which would enable TVA to move forward in a timely manner, if and when a decision is made to build an SMR.

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*(1) Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security.*

*(2) The Commission will not consider granting an exemption unless special circumstances are present.*

10 CFR 50.12(b) states:

*Any person may request an exemption permitting the conduct of activities prior to the issuance of a construction permit prohibited by § 50.10. The Commission may grant such an exemption upon considering and balancing the following factors:*

*(1) Whether conduct of the proposed activities will give rise to a significant adverse impact on the environment and the nature and extent of such impact, if any;*

*(2) Whether redress of any adverse environment impact from conduct of the proposed activities can reasonably be effected should such redress be necessary;*

*(3) Whether conduct of the proposed activities would foreclose subsequent adoption of alternatives; and*

*(4) The effect of delay in conducting such activities on the public interest, including the power needs to be used by the proposed facility, the availability of alternative sources, if any, to meet those needs on a timely basis and delay costs to the applicant and to consumers.*

## 2.0 Background

The Reactor Building (RB) is the only structure that meets the criteria of 10 CFR 50.10(a) for which the definition of "construction" applies for the BWRX-300 design. In preparing the CRN Site for nuclear construction, TVA intends to excavate for the BWRX-300 RB in advance of receiving the Construction Permit (CP). Per 10 CFR 50.10(a)(2)(v), excavation on its own is not considered to fall into the definition of "construction". To ensure worker safety during excavation and to facilitate construction activities, the initial ground support system is expected to be composed of the following components, installed prior to and during excavation:

- rock bolts to secure unstable rock blocks, as required;
- wire mesh and a, non-structural sprayed-gunite lining to stabilize and protect exposed rock walls;
- horizontal gravity drains to manage groundwater, as required; and
- pressurized grout to seal any notable areas of water entry, as required.

Depending on the excavation method selected, additional components of the initial ground support system may include items such as the following or similar:

- steel soldier beams with timber lagging through the soil overburden and weathered rock;
- rock bolts to secure soldier beams; and
- reinforced concrete compression rings to provide lateral support for the soldier beams.

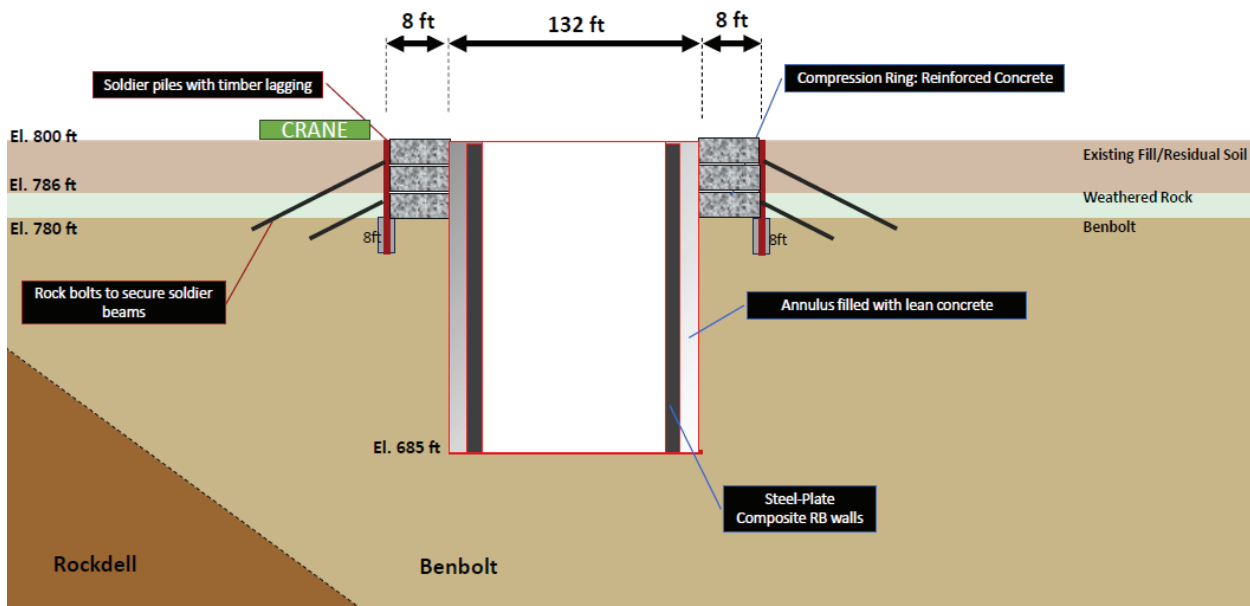
Although the initial ground support system serves no function in the completed RB construction, the identified items are infeasible to remove and will remain in place.

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LTR NEDO-33914-A Section 5.0 (Ref. 1) describes the design methodology for the BWRX-300 design and specifically addresses the initial ground support system. The BWRX-300 design does not rely on the resistance provided by the initial ground support system or the material used to fill the annular gap between the below-grade RB shaft exterior wall and the excavated soil and rock. Effects of the initial ground support system will be considered through seismic sensitivity analyses performed using best estimate properties of surrounding in-situ subgrade materials on a RB finite element model.

### 2.1 Excavation Activities Proposed

The development of the excavation plan considers multiple options to support a safe and efficient excavation for the RB at the CRN Site through residual soil, weathered rock, and bedrock. Erosion control measures will be required during excavation through the soil overburden and weathered rock. This may be accomplished with soldier beams keyed into the bedrock with rock bolts and concrete compression rings for lateral support, or other comparable erosion control methods. Figure 1 shows the conceptual layout (information only) of the excavation utilizing the soldier beams with concrete compression rings and rock bolts. The dimensions and elevations are subject to change as the excavation design progresses. Note that the approximate diameter of the RB is 122' and there is an annulus approximately 5' wide around the RB shaft, so the concrete compression rings do not contact the RB shaft. The construction of temporary crane pads will be required to support the excavation activities and will be located adjacent to the excavation as shown in the figure.



**Figure 1: Conceptual layout of Excavation utilizing Soldier Beams and Concrete Compression Rings**

Excavating through the bedrock is expected to be completed through a series of sequential lifts. Spoils will be removed and transported to the designated onsite spoils disposal area. Temporary de-watering systems, such as pumps and sumps and temporary wells or well points, will be

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employed during shaft excavation. Areas of notable water entry will be sealed via an engineered pressure grouting process or localized temporary water collection system.

Geological mapping of the rock walls will be completed during the excavation as described in Section 3.2.1 of LTR NEDO-33914 (Ref. 1), meeting the requirements of NRC Inspection Manual 88131. The inspection of the shaft walls will be performed as the shaft progresses in lifts. Digital records will be kept of each lift (e.g., in the form of stills and videos). The NRC will be notified when each lift is available for viewing and may perform independent mapping, as requested. Natural voids or poor quality rock identified during the excavation process or exposed in the walls of lifts will be evaluated and, when required, stabilized. This stabilization may include rock reinforcement (i.e., rock bolts) or treatment with grout.

To further stabilize and protect cleaned rock surfaces and create a safe excavation for workers, wire mesh reinforcement, in combination with a non-structural sprayed-gunite lining will be installed on the rock face. These surface treatments will be maintained between the excavation and construction of the RB to protect the exposed rock and avoid degradation of the rock strength as discussed in LTR NEDO-33914-A (Ref. 1). In cases where seepage is noted in the bedrock, horizontal gravity drains and/or weep holes will be installed so that the water does not deteriorate the sprayed-gunite lining.

The final foundation level at the base of the excavation will be cleaned and mapped in addition to the walls of the final lift. If any anomalous issues are discovered, additional geotechnical investigations will be performed in accordance with RG 1.132.

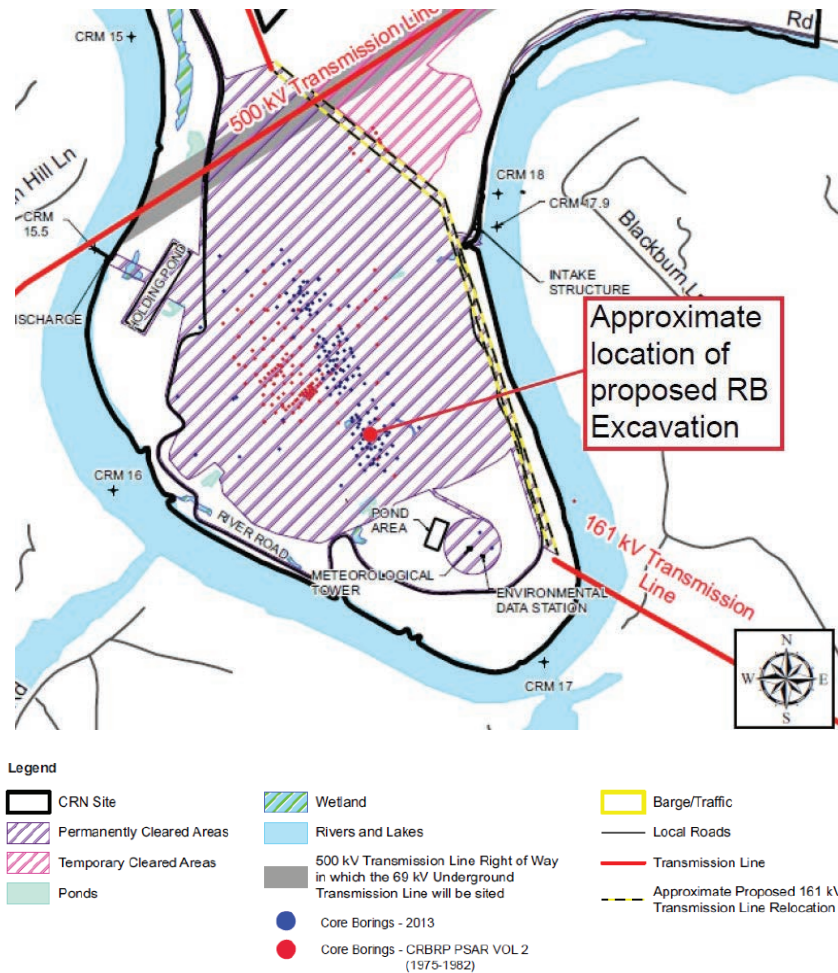
When the excavation plan is fully developed, the impacts of the options chosen will be evaluated as discussed below to ensure there are no adverse impacts to the loads of which the RB is designed.

### **2.2 Location of Excavation**

The planned excavation activities for the RB at the CRN Site will be confined to the portion of the site that was previously disturbed during the construction activities associated with the former Clinch River Breeder Reactor Project (CRBRP) (See Figure 2). During site preparation activities and construction of the CRBRP, approximately 240 acres of the current CRN Site were disturbed. Site preparation activities included leveling a ridge that originally reached 880 feet (ft) above mean sea level (msl) to 780 ft above msl, excavation of the construction area, and installation of various structures and pads. The excavated area totaled approximately 24 acres in extent and extended to as much as 100 ft in depth. Approximately three million cubic yards of earth and rock were excavated during the CRBRP site preparation. After termination of the CRBRP in 1983, site redress plans were implemented by the U.S. Department of Energy (DOE). The excavated area was partially backfilled in a manner to sustain site drainage. Level areas of the CRBRP site were graded and compacted. The RB excavation at the CRN Site is located on a plateau created during

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the construction activities associated with the former CRBRP, approximately 750 feet southeast of the depression created during site preparation activities.



**Figure 2: Approximate location of proposed RB excavation**

The location of the RB excavation has been extensively evaluated from an environmental perspective. The excavation is within the area evaluated in the Clinch River Early Site Permit Application (ESPA) Environmental Report (ER). Under the NRC regulations in 10 CFR Part 52 and in accordance with the applicable provisions of 10 CFR Part 51, which are the NRC regulations implementing the National Environmental Policy Act of 1969, as amended (NEPA) (42 U.S.C. § 4321 *et seq.*), the NRC prepared an environmental impact statement (EIS) as part of its review of TVA's ESPA. The NRC EIS evaluated the proposed action and the potential impacts of the proposed action, to make a recommendation to the Commission regarding whether or not to issue an ESP. After considering the environmental aspects of the proposed action before the NRC, NRC staff recommended that an ESP be issued for the CRN Site.

In 2022, subsequent to the NRC's ESP Final EIS, TVA developed a Programmatic Environmental Impact Statement (PEIS) that provided a bounding analysis of the potential environmental impacts of site preparation, construction, operation, and decommissioning of various facilities for an

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Advanced Nuclear Reactor Technology Park at the CRN Site. The RB excavation discussed herein is within the area evaluated within the PEIS.

### 3.0 Justification

#### 3.1 Criteria of 10 CFR 50.12(a)

The general exemption requirements for 10 CFR Part 50 regulations, as listed in 10 CFR 50.12(a), are satisfied as follows:

*The requested exemption is authorized by law (10 CFR 50.12(a)(1)).* This exemption is not inconsistent with the Atomic Energy Act of 1954, as amended, and would not conflict with any provision of the Atomic Energy Act or the National Environmental Policy Act. The NRC has authority under 10 CFR 50.12 to grant exemptions from the requirements of this regulation, as specifically contemplated by 10 CFR 50.12(b). Therefore, this exemption is authorized by law.

*The requested exemption will not present an undue risk to the public health and safety (10 CFR 50.12(a)(1)).* This exemption does not affect NRC safety requirements that apply to the design, construction, or operation of the plant. The initial ground support system will not perform or support a function of the RB itself. Thus, this exemption does not affect the performance or reliability of power operations, does not impact the consequences of a design basis event, and does not create new accident precursors.

This exemption affects only the timing of initial ground support system installation, allowing excavation to proceed in advance of CP issuance. The initial ground support system serves no function with respect to radiological health and safety and is only needed for personnel safety during the excavation process. The initial ground support system will remain in place, as the identified items are infeasible to remove. The RB shaft functions as the permanent ground support system and will not be installed until after the NRC issues a CP.

LTR NEDO-33914-A Section 5.0 (Ref. 1) describes the design methodology for the BWRX-300 design and specifically addresses the initial ground support system. The BWRX-300 design does not rely on the resistance provided by the initial ground support systems or the material used to fill the annular gap between the below-grade RB shaft exterior wall and the excavated soil and rock. The validation of soil and rock pressure loads may consider the subgrade improvements like consolidation grouting, rock reinforcement, and soil support made during construction. However, these improvements are typically considered only as initial ground support that is separate from the permanent ground support system because these types of reinforcements and any surface protection will be inaccessible for monitoring and repair after the construction. If the degradation of initial support for large rock blocks potentially creates unacceptable high pressures, other mitigation options can include over excavating and backfilling the rock block to reduce the potential pressures or the use of degradation resistance rock reinforcement to permanently support the rock block during the construction phase of the project. Any effects of the initial ground support system will be considered through seismic soil structure interaction (SSI) sensitivity analyses performed using best estimate properties of surrounding in-situ subgrade materials on a RB finite element model that includes the excavation support structure and the fill material to assess their effect on the BWRX-300 RB seismic response as discussed in Section



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5.3.8 of LTR NEDO-33914-A (Ref. 1). The interaction of surrounding Non-Seismic power block structures with the RB are evaluated as part of the BWRX-300 design as discussed in Section 6.0 of LTR NEDO-33914. The impacts of the initial ground support system on the design of the surrounding foundations and the corresponding interaction analysis will also be evaluated. Therefore, structural integrity of the RB will be demonstrated prior to the presence or use of radiological materials on the CRN Site to provide adequate protection of the public health and safety.

*The requested exemption is consistent with the common defense and security (10 CFR 50.12(a)(1)).* This exemption does not affect the design, function, or operation of structures or plant equipment that are necessary to maintain the secure status of the plant. This exemption has no impact on plant security or safeguards procedures. This exemption affects only the timing of initial ground support system installation, allowing excavation to proceed in advance of CP issuance. This exemption does not authorize the possession of licensed material or affect NRC security requirements that will apply to the CRN Site. Therefore, this exemption is consistent with the common defense and security.

*Special circumstances are present in that compliance with 10 CFR 50.10(c) would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted in its current form (10 CFR 50.12(a)(2)(iii)).* The adopted version of 10 CFR 50.10 specifically contemplated that excavation is excluded from the definition of construction and thus may be conducted without a CP. Without an exemption, the initial ground support system will not be authorized prior to issuance of a CP, and because of the nature of the CRN Site and design, excavation will not be possible. This delay will not serve the underlying purpose of the rule because the initial ground support system does not have a reasonable nexus to nuclear safety or security.

If excavation for the RB at the CRN Site is delayed until receipt of the CP, the construction schedule and commercial operation of Clinch River Nuclear Unit 1 (CRN-1)<sup>2</sup> would undergo excessive delays<sup>3</sup>. The cost of any delay of the commercial operation of CRN-1 would depend upon a number of uncertain factors but is expected to be substantial. Removal of the initial ground support system, which would make it temporary and not considered construction under 10 CFR 50.10, is infeasible because the initial ground support system is necessary for personnel safety and removal of these items could potentially destabilize the rock walls further and create dangerous work conditions.

Because installation of the initial ground support system is necessary for excavation to proceed, compliance with 10 CFR 50.10(c) will result in substantial costs due to delays in construction and commercial operation.

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<sup>2</sup> As has been communicated previously, TVA has not yet authorized the deployment of an SMR. Any decisions will be subject to support, risk sharing, required internal and external approvals and completion of all necessary environmental and permitting reviews. Nonetheless, receiving an exemption from 10 CFR 50.10(c) will provide regulatory certainty from NRC moving forward for excavation activities which would enable TVA to move forward in a timely manner, if and when a decision is made to build an SMR.

<sup>3</sup> TVA is currently evaluating specific excavation techniques and estimated durations range from 12 - 24 months without consideration of uncertainties.

### 3.2 Criteria of 10 CFR 50.12(b)

The balance of the exemption factors applicable to a construction exemption, as listed in 10 CFR 50.12(b), favor the granting of this exemption as follows:

*Whether conduct of the proposed activities will give rise to a significant adverse impact on the environment and the nature and extent of such impact, if any (10 CFR 50.12(b)(1)).* The activities subject to the exemption request involve emplacement of inert materials and non-deleterious materials such as steel rock bolts and drains, grout, wire mesh, sprayed gunite, timber lagging, steel soldier beams, reinforced concrete, and PVC pipe drains to prevent erosion within the excavation. Considering the quantities and characteristics of these materials and the local precipitation and groundwater characteristics of the CRN Site, there is no reasonable likelihood that these materials would produce significant leachates of environmental concern. The physical extent of the initial ground support system is confined to the immediate area of the RB excavation. It is assumed the laydown area required to support placement of the initial ground support system would be confined to those areas of the site that have previously been disturbed during the construction activities associated with the former CRBRP and within the area evaluated in the CRN ESPA ER and NRC's FEIS and would not disturb any additional land area. The small number of additional workers required to implement the initial ground support system would not result in significant adverse socioeconomic impacts in the vicinity of the CRN Site. Additionally, placement of the initial ground support system within the RB excavation will not have an adverse aesthetic impact, because all items would be located below grade and not visible from off-site areas. TVA implements standard best management practices to mitigate potential environmental impacts from its construction and excavation activities. These practices would address the activities subject to the exemption request. For all of these reasons, conduct of the proposed activities will not give rise to a significant adverse impact on the environment.

Because TVA is a federal agency subject to the requirements of the National Environmental Policy Act (NEPA) and other federal laws and regulations, both preconstruction (including site preparation) and construction activities are subject to TVA's decision-making. TVA studied the potential bounded environmental effects of construction of a suite of reactor technologies in the 2022 Clinch River Nuclear Site Advanced Nuclear Reactor Technology Park Final Programmatic Environmental Impact Statement (PEIS) (Ref. 5). This analysis was similar in scope to the environmental impacts of a surrogate plant evaluated in TVA's Early Site Permit Application (ESPA) to the NRC for the CRN Site and the NRC's Final Environmental Impact Statement (FEIS) for an Early Site Permit (ESP) at the Clinch River Nuclear Site. The proposed ground support activities are bounded by the evaluation of potential environmental effects detailed in the ESPA Environmental Report, the NRC ESP FEIS, and TVA's PEIS (Ref. 3-5).

TVA is currently developing a Supplemental Environmental Impact Statement (SEIS) that will evaluate the potential environmental impacts of construction and operation of a BWRX-300, including the impacts from the activities subject to this exemption request.

*Whether redress of any adverse environment impact from conduct of the proposed activities can reasonably be effected should such redress be necessary (10 CFR 50.12(b)(2)).* As discussed above, installation of the initial ground support system within the RB excavation will not result in

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significant adverse environmental impacts. If redress should be necessary, the initial ground support system would be left in place and covered as part of the excavation backfill effort.

*Whether conduct of the proposed activities would foreclose subsequent adoption of alternatives (10 CFR 50.12(b)(3)).* TVA intends to pursue various generating resources to meet the energy needs of the Tennessee Valley over a 20-year planning period, including the evaluation of small modular reactors (SMRs), as part of technology innovation efforts aimed at developing future electricity generation capabilities. The alternatives to construction of a SMR at the CRN Site include taking no-action and the development of reasonable energy alternatives capable of meeting the purpose and need of demonstrating new nuclear technology at the CRN Site. Installation of the initial ground support system would not foreclose subsequent adoption of these alternatives.

*The effect of delay in conducting such activities on the public interest, including the power needs to be used by the proposed facility, the availability of alternative sources, if any, to meet those needs on a timely basis and delay costs to the applicant and to consumers. (10 CFR 50.12(b)(4)).* The Atomic Energy Act (AEA) requires the social and environmental consequences of the civilian use of nuclear materials be weighed against the benefits that their use would provide. Historically, the primary benefit of nuclear power generation projects has been to provide electrical power to the grid. The goal of the need for power analysis is to provide confidence that the power generated by the proposed project will be produced and consumed in a manner consistent with the stated purpose and need of the project. In 68 FR 55909, the Commission acknowledged that there may be multiple benefits to a project. While not a nuclear reactor project, in *Louisiana Energy Services, L.P. (LES)* (Claiborne Enrichment Center), CLI-98-3, the Commission held that the Licensing Board should consider multiple benefits of the proposed uranium enrichment facility when performing the ultimate cost-benefit balancing. Similarly, the Commission acknowledged that the construction and operation of a nuclear power plant could have multiple benefits such as reducing greenhouse gases and other air pollutants and increasing energy efficiency by retiring older, less efficient sources of power.

The primary purpose of the potential deployment of an SMR at CRN is to demonstrate the ability to license, construct, and operate a SMR at the CRN Site. Successfully demonstrating the ability to license, construct, and operate a SMR at the CRN Site supports TVA's goal to decarbonize the generation of electricity through the development and use of carbon-free nuclear energy. Further, successful demonstration of the SMR technology would enable TVA to consider utilizing SMRs throughout the TVA Power Service Area to support TVA's carbon reduction aspirations (e.g. executing a plan to 70% carbon reduction by 2030, developing a path to approximately 80% carbon reduction by 2035, and an aspiration to achieve net-zero carbon emissions by 2050). Delay of RB excavation would be contrary to the public interest to expedite potential deployment of carbon-free electricity generation. As described above, delay of the excavations until CP issuance would delay commercial operation of CRN-1 which would potentially jeopardize the economic viability of the project. CRN-1 could have substantial benefits for the public interest and consumers and approval of this exemption is therefore in the public interest.

#### 4.0 Conclusions

The RB excavation is of critical importance to the CRN-1 construction schedule and cannot be conducted without installation of the initial ground support system discussed in this exemption request. If excavation for CRN-1 is delayed until issuance of the CP, the construction schedule and commercial operation of CRN-1 would each be delayed, hence delaying the deployment of carbon-free electricity generation. Successful demonstration of the SMR technology at the CRN Site is critical in enabling TVA to consider utilizing SMRs throughout the TVA Power Service Area to meet carbon reduction aspirations (e.g. executing a plan to 70% carbon reduction by 2030, developing a path to approximately 80% carbon reduction by 2035, and an aspiration to achieve net-zero carbon emissions by 2050).

The exemption request satisfies the necessary elements of 10 CFR 50.12(a) and 10 CFR 50.12(b). Therefore, TVA requests the NRC grant an exemption allowing the installation of the initial ground support system for the RB excavation at the CRN Site prior to issuance of the CP.

#### 5.0 References

1. Licensing Topical Report (LTR), NEDO-33914-A, *BWRX-300 Advanced Civil Construction and Design Approach*, Revision 2
2. ML102070274, *South Texas Project Units 3 & 4 Docket Nos. 52-012 and 52-013 Revised Request for Exemption to Authorize Installation of Crane Foundation Retaining Walls*, dated 7/21/2010
3. ML19030A478, *Clinch River Nuclear Site Early Site Permit Application, Part 3, Environmental Report*, dated 03/2019
4. ML19073A099, NUREG-2226, Vol. 1, *Environmental Impact Statement for an Early Site Permit at the Clinch River Nuclear Site, Final Report*, dated 04/2019
5. Tennessee Valley Authority, *Clinch River Nuclear Site Advanced Nuclear Reactor Technology Park Final Programmatic Environmental Impact Statement*, dated 07/2022