

**NUCLEAR REGULATORY COMMISSION**

**[Docket No. 50-397; NRC-2022-0062]**

**Energy Northwest;**

**Columbia Generating Station**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Environmental assessment and finding of no significant impact; issuance.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is considering approval of the continued onsite disposal of sediments containing very low levels of radioactive materials at the Columbia Generating Station (Columbia), located in Benton County, Washington for Renewed Facility Operating License No. NPF-21, held by Energy Northwest (EN, the licensee). The NRC is issuing an environmental assessment (EA) and finding of no significant impact (FONSI) associated with the proposed action.

**DATES:** The EA and FONSI referenced in this document are available on **March 10, 2022.**

**ADDRESSES:** Please refer to Docket ID **NRC-2022-0062** when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Website:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2022-0062**. Address questions about Docket IDs in Regulations.gov to Stacy Schumann; telephone: 301-415-0624; email: Stacy.Schumann@nrc.gov. For technical questions, contact the individual listed in the "For Further Information Contact" section of this document.

- **NRC's Agencywide Documents Access and Management System**

**(ADAMS):** You may obtain publicly available documents online in the ADAMS Public

Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select “Begin Web-based ADAMS Search.” For problems with ADAMS, please contact the NRC’s Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by email to [PDR.Resource@nrc.gov](mailto:PDR.Resource@nrc.gov). For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the “Availability of Documents” section.

- **NRC’s PDR:** You may examine and purchase copies of public documents, by appointment, at the NRC’s PDR, Room P1 B35, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. To make an appointment to visit the PDR, please send an email to [PDR.Resource@nrc.gov](mailto:PDR.Resource@nrc.gov) or call 1-800-397-4209 or 301-415-4737, between 8:00 a.m. and 4:00 p.m. (ET), Monday through Friday, except Federal holidays.

**FOR FURTHER INFORMATION CONTACT:** Mahesh Chawla, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone: 301-415-8371, email: [Mahesh.Chawla@nrc.gov](mailto:Mahesh.Chawla@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Introduction**

The NRC is considering approval of a request dated December 21, 2020, as supplemented by letter dated June 23, 2021, from EN for continued onsite disposal of sediments containing very low levels of radioactive material at Columbia, located in Benton County, Washington. Columbia is a single unit boiling water reactor. The cooling system consists of the circulating water system and standby service water system, including spray ponds and cooling towers. The sediments are generated from periodic cleaning of cooling towers and standby service water system spray ponds at the site. The licensee is requesting approval in accordance with Section 20.2002 of title

10 of the *Code of Federal Regulations* (10 CFR), "Method for obtaining approval of proposed disposal procedures," to dispose of approximately 1,116 cubic meters (m<sup>3</sup>) (1,460 cubic yards (yd<sup>3</sup>)) of sediment onsite within an existing disposal area. Based on the results of the EA that follows, the NRC has determined that the proposed action will not have significant environmental impacts and is issuing a FONSI.

Under 10 CFR 20.2002, a licensee may seek NRC authorization to dispose of licensed material using procedures not otherwise authorized by the NRC's regulations. A licensee's supporting analysis must satisfy the requirements associated with the four parts of the regulation, including demonstrating that the radiological doses arising from the proposed disposal will be within the dose limits of 10 CFR Part 20, "Standards for Protection Against Radiation," and will be as low as reasonably achievable.

## **II. Environmental Assessment.**

### *Description of the Proposed Action*

The proposed action would permit the disposal of up to 1,116 m<sup>3</sup> (1,460 yd<sup>3</sup>) of sediment containing very low levels of radioactive material from the circulating water system cooling towers and the standby service water system spray ponds into sediment disposal cells in an existing sediment disposal area on the Columbia site. This material results from the accumulation of sediment in the cooling towers and the standby service water system spray ponds and is removed from these systems, as needed, to prevent build-up.

Since 1995, the licensee has disposed of sediment containing very low concentrations of radioactive material from cooling towers and the standby service water system spray ponds within disposal cells located approximately 250 feet south of the cooling towers. Currently, the sediment disposal area totals approximately 4,459 square meters (m<sup>2</sup>) (48,000 square feet (ft<sup>2</sup>)) and consists of five disposal cells. Two of the

disposal cells no longer have capacity for future sediment disposal. The three remaining disposal cells, including two active disposal cells and one newly established cell for future disposal, have a combined capacity of approximately 1,116 m<sup>3</sup> (39,420 ft<sup>3</sup>). The corners of the disposal area are marked with posts and signs indicating its dedicated purpose, and a fence with a locked gate encloses the disposal area to prevent inadvertent access. Sediments collected from the cooling towers and the spray ponds consist of sand and silt-sized particles, with up to 25 percent of organic material by weight. The sediments are shown to have low levels of metals, with concentrations of lead and chromium detected above background levels. Removal and transfer of the sediment from the cooling towers will be via a vacuum truck or other mechanical means. The vacuum truck will be filled with sediment and emptied into the disposal cell during a cooling tower cleaning event. Removal and transfer of sediment from the standby service water system spray ponds will be determined by Columbia's operating status. When the plant is offline and water drained from the ponds, a vacuum truck will be used to remove and transfer the sediment. During plant operations when the spray ponds cannot be drained, the sediment will be vacuumed by divers into the vacuum truck and then discharged to the disposal cells. Pumping of the sediment from the spray ponds to large filter bags may also be used to remove the sediment from the spray ponds. The filter bags are used to separate the water from the sediment. Once dewatered, the sediment is moved to the disposal cells and the water that was collected from the laydown area is pumped back to the spray ponds. Each disposal cell will continue to be filled until the level reaches the top of the berm. Transportation of the sediments from the cooling towers and spray ponds to the disposal cells occurs within the boundaries of the Columbia property.

The proposed action is in accordance with the licensee's application dated December 21, 2020, as supplemented by letter dated June 23, 2021.

#### *Need for the Proposed Action*

The proposed action is needed to allow onsite disposal of sediments containing very low levels of radioactive material removed from Columbia's cooling towers and spray ponds.

Benefits of the licensee's proposed action include significantly reduced transportation distances and costs incurred as a result of offsite disposal, while maintaining protection of public health and safety and the environment. This request provides the licensee with an alternative to the usage of offsite shallow land burial waste repositories consistent with a previously released NRC Information Notice (IN) 83-05, "Obtaining Approval for Disposal of Very-Low-Level Radioactive Waste," dated February 24, 1983.

#### *Environmental Impacts of the Proposed Action*

This section addresses the radiological and non-radiological (resource-specific) impacts of the proposed action. The NRC considered the potential impacts of the proposed sediment disposal activities as well as the potential cumulative impacts associated with past, present, and reasonably foreseeable activities including consideration of recent disposal cell construction on the Columbia site that was completed in November 2020.

#### *Radiological Impacts and Human Health Occupational Dose*

The proposed request for onsite disposal of slightly contaminated sediment will not require any physical changes to the plant or plant operations; therefore, there will be no change to any in-plant radiation sources. In addition, the NRC's review of the processes and procedures for disposing of the material found that doses to different

individuals involved with these disposal actions would be less than the NRC's public dose limit of 25 millirem per year (mrem/yr). NRC staff also confirmed that the established maximum radionuclide concentration limits ensure that sum of fractions calculations for sediments containing a mixture of radionuclides will not exceed one.

The licensee applies pre-disposal screening criteria to contaminated sediment samples in accordance with Washington State's Energy Facility Site Evaluation Council (EFSEC) Resolution No. 299 to ensure that disposal limits are met.<sup>1</sup> Routine disposal cell monitoring is performed to determine the direct dose rates using thermoluminescent dosimeters (TLDs) placed in close proximity to disposal cells as well as a control TLD located farther away. Specifically, TLD 119B is located at the disposal cells while TLD 119 Ctrl is located 200 yards east of the sediment disposal area and is used for determining background radiation levels.

The NRC staff reviewed the licensee's summary report of radionuclide concentrations for each onsite disposal event from 2010 through 2019. The measured concentrations for each of the radionuclides were much lower than the corresponding disposal limits. Additionally, the mean quarterly TLD results were provided for each monitoring station for each year and were documented in the summary report. The staff confirmed, using the measured exposure rate, that the dose estimated to workers would be much lower than the licensee's established limit of 15 mrem/yr. Thus, the proposed Columbia onsite disposal of slightly contaminated sediment containing very low concentrations of radioactive material within an existing disposal cell will have no

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<sup>1</sup> The NRC clarified the jurisdiction of these requests and their related disposal actions in Regulatory Issue Summary (RIS)-2016-11, "Requests to Dispose of Very Low-Level Radioactive Waste Pursuant to 10 CFR 20.2002." As reflected in that document, the NRC has jurisdiction over both the 20.2002 request for alternative disposal procedures and the on-site disposal of this material. This EA provides the NRC's analysis of the environmental impacts of approval of the disposal procedures under 20.2002; no separate NRC action is necessary regarding on-site disposal because the licensee already has authority to possess the radioactive materials.

significant radiological impact to the workers. Additionally, the licensee's established limit of 15 mrem/yr is below the radiological criteria of 25 mrem/yr for unrestricted use after license termination in accordance with 10 CFR 20.1402, "Radiological criteria for unrestricted use."

#### Offsite Dose

This request is for approval for the onsite disposal of slightly contaminated sediment within the sediment disposal area on the Columbia site. As such, members of the public will not have access to the disposal area. Therefore, there is no direct radiation exposure to the public. In addition, the proposed action does not require any physical changes to the plant or plant operation. Therefore, there will be no change to the types and quantities of radioactive effluents or to the operation of the radioactive gaseous and liquid waste management systems to perform their intended functions. Once deposited in the sediment disposal cell, the consolidated, mud-cake consistency of the dried sediment is not readily erodible, including by precipitation in the semiarid climate. Should erosion become a concern, site personnel will cover the deposited material with locally sourced sand to minimize fugitive dust emissions. The proposed onsite disposal would not contribute any additional groundwater contamination and associated radiological exposure to the public. For these reasons, the offsite radiation dose to members of the public would not change and would continue to be within regulatory limits and therefore would not be significant. Finally, as previously noted, the potential onsite radiological dose would be below the radiological criteria for unrestricted use after license termination. Therefore, the proposed action would not be expected to have a significant radiological impact to the public.

#### Radiological Impacts Summary

Based on the radiological evaluations previously discussed, the NRC staff has determined the proposed action would not result in any adverse or significant radiological impacts. The proposed action would have no or a negligible contribution to cumulative radiological doses to workers and the public.

#### Land Use

Current land uses would not be affected by the proposed onsite disposal of slightly contaminated sediment at Columbia. The designated disposal site is a previously disturbed area adjacent to the Columbia cooling towers. Therefore, the disposal area is industrial in nature, and the NRC staff has determined that there would be no significant land use impacts associated with the proposed action. The recent construction of the disposal cell and the continued use of the sediment disposal area under the proposed action would not affect existing land uses and would not contribute to regional cumulative land use trends.

#### Water Resources

The proposed sediment disposal location includes existing disposal cells and a newly established disposal cell within a designated sediment disposal area. As with past disposals, site personnel would transport the dewatered but saturated sediment removed from the cooling tower structures and deposit the material in a disposal cell. These activities would have no or negligible impact on surface water hydrology or quality because no surface water drainages exist in or near the sediment disposal area. The closest surface water feature is the Columbia River, which is located approximately 3.5 miles to the east of the disposal area.

Once deposited in the cell, the consolidated, mud-cake consistency of the dried sediment is not readily erodible, including by precipitation in the semiarid climate. When necessary, site personnel will cover the deposited material with locally sourced sand

should erosion become a concern. In addition, the licensee's cooling system sediment disposal activities are subject to Columbia's National Pollutant Discharge Elimination System (NPDES) permit (number WA-002515-1) (EFSEC 2014, 2019). Special Condition 10 of the site NPDES permit requires the licensee to develop, implement, and maintain a Storm Water Pollution Prevention Plan. This plan prescribes best management practices for soil erosion and sediment control, stormwater pollution prevention, waste management, and spill response across the Columbia site.

The NPDES permit requires that the licensee manage all solid waste material so that it does not enter either surface waters or groundwater. The permit also requires that the discharge of leachate be managed to prevent a violation of State water quality standards for surface water and groundwater. Further, the NPDES permit specifically references site cooling water system sediment disposal operations and requires that the licensee follow the prescribed procedures for sediment handling and disposal set forth in the latest resolutions (i.e., Resolution No. 299) issued by the State of Washington EFSEC.

In accordance with EFSEC Resolution No. 299, EN personnel must conduct environmental and radiological monitoring of the sediment and the disposal site in accordance with the licensee's standard environmental monitoring procedures and practices. This monitoring includes ensuring that sediments placed in the disposal cells comply with specified disposal concentration limits for listed radionuclides. The licensee provides an updated summary of sediment disposal activities and associated sediment monitoring results in its publicly available annual radiological environmental operating reports. The NRC staff's review of the latest available report dated May 13, 2020, shows that the radionuclide concentrations in sediments placed in the disposal cells were well below the prescribed concentration limits, with overall activity levels (i.e., for cobalt-60

and cesium-137) within the range historically observed for cooling tower sediment. The licensee's adherence to the measures previously described and associated regulatory requirements would prevent or minimize any surface water quality or groundwater quality impacts during sediment disposal operations.

The potential exists for some water from the saturated sediment to infiltrate through the unlined disposal cells and reach groundwater. Groundwater occurs at a depth of approximately 50 feet below land surface at the disposal area. The underlying groundwater is contaminated with tritium and other contaminants associated with legacy activities at the U.S. Department of Energy's Hanford Reservation. Nevertheless, EN's adherence to sediment disposal procedures and disposal concentration limits for specified radiological constituents would ensure that disposal activities would not further contribute to groundwater contamination and associated radiological exposure to the public.

Long term, management and monitoring activities would ensure that there are no inadvertent offsite impacts to surface water or groundwater quality from continued disposal site operations. Based on the previously mentioned information, the NRC staff has determined the impacts to water resources would not be significant.

With the work practices, management, and monitoring measures in place as previously described, the recent disposal cell construction and the continued use of the sediment disposal area would result in a negligible contribution to cumulative water quality impacts, either in the underlying groundwater system or in the Columbia River.

#### Air Resources

With regards to the National Ambient Air Quality Standards for criteria pollutants (ozone, carbon monoxide, lead, particulate matter, nitrogen oxides, and sulfur dioxide), Benton County is designated in attainment for all criteria pollutants (EPA 2021). Air

emissions would be predominantly from the transfer of the sediment and equipment used in transporting the sediment (e.g., vacuum truck). The removal and disposal of sediment can result in fugitive dust emissions; fugitive dust is particulate matter suspended in the air. The use of vacuum trucks or filter bags to remove and transfer the sediment minimizes the potential for fugitive emissions. Similarly, soil erosion, and therefore fugitive dust, from the disposal cells is minimal since the sediment in the disposal cells dries as mud-cake. Air emissions from equipment exhaust would be intermittent and localized.

Based on the previously provided information, the NRC staff has determined that there would be no significant air quality impacts associated with the proposed action. With the best management practices (water application and placement of sand or gravel) that have been implemented to control fugitive dust, the recent construction of the disposal cell and the continued use of the sediment disposal area would result in a negligible contribution to cumulative air quality impacts in Benton County.

#### Terrestrial and Aquatic Resources

The designated disposal site is a previously disturbed area within the industrial-use portion of the Columbia site. The area where the disposal cells are located were originally disturbed during construction of Columbia and currently contain sediments from previous cleaning operations. To the west of the disposal cells, the borrow pit is used as a construction landfill. All areas of the disposal site are largely devoid of vegetation, although some sparse grasses and shrubs have repopulated the area. Topography is generally flat with some gentle slopes. Some animals may frequent the disposal site. Mammals common to the Columbia property include mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), cottontail rabbit (*Sylvilagus nuttalli*), and black-tailed jackrabbit (*Lepus californicus*) (NRC 2012). Columbia is within the Pacific

Flyway, and over 145 species of birds have been reported from the site. Some of the most commonly sighted birds include western meadowlark (*Sturnella neglecta*), red-winged blackbird (*Agelaius phoeniceus*), bank swallow (*Riparia riparia*), brown-headed cowbird (*Molothrus ater*), eastern kingbird (*Tyrannus tyrannus*), California gull (*Larus californicus*), Bullock's oriole (*Icterus bullockii*), killdeer (*Charadrius vociferus*), western kingbird (*Tyrannus verticalis*), and barn swallow (*Hirundo rustica*). No aquatic resources, such as wetlands, streams, or ponds occur within the disposal site.

No terrestrial or aquatic habitat would be altered, modified, or destroyed as a result of the proposed action. The licensee anticipates no surface water or storm water runoff as a result of disposal activities. Some limited wind erosion and fugitive dust may occur during movement of heavy equipment during use of the disposal cells. Wind erosion after placement of the sediment is not expected because of its tendency to dry as mud-cake. Noise associated with grading, transportation, or other related activities may temporarily disturb wildlife. However, most wildlife on or near the disposal site is likely relatively tolerant of human activity given that the disposal site is part of a larger operating power plant site. Disposal activities would not require additional lighting. The recent construction of the disposal cell and the continued use of the sediment disposal area would not affect terrestrial or aquatic habitats, and no cumulative effects to ecological resources would result.

As previously described, the only potential impact on ecological resources is temporary noise-related disturbance; however, this does not pose a significant impact on surrounding wildlife due to their relative tolerance to human activity. Therefore, the NRC concludes that the impacts to aquatic and terrestrial resources resulting from the proposed action would not be significant.

Threatened and Endangered Species

The Endangered Species Act (ESA) was enacted to prevent further decline of endangered and threatened species and to restore those species and their critical habitat. Section 7 of the ESA requires Federal agencies to consult with the U.S. Fish and Wildlife Service (FWS) or National Marine Fisheries Service (NMFS) regarding actions that may affect listed species or designated critical habitats. The NRC staff conducted a search of Federally listed species and critical habitats that have the potential to occur in the action area using the FWS's Environmental Conservation Online System Information for Planning and Conservation system. The FWS-generated report from this system (FWS 2021) identifies two Federally listed species that occur or potentially occur within the vicinity of the action area: western yellow-billed cuckoo (*Coccyzus americanus*) and bull trout (*Salvelinus confluentus*). Additionally, the upper Columbia River spring chinook salmon (*Oncorhynchus tshawytscha*) and upper Columbia River steelhead (*O. mykiss*), which are under the jurisdiction of NMFS, occur in the Columbia River, which lies approximately 3.5 miles east of the Columbia site. No critical habitats occur in the action area. The designated disposal site lacks suitable aquatic features for the three fish species. Therefore, these species do not occur in the action area and would not be affected by the proposed action.

The western yellow-billed cuckoo is associated with riparian habitats, especially cottonwood-willow forests. When migrating, the species may inhabit coastal scrub, second-growth forests, and forest edges. Although this species has been recorded within Benton County, it has not been observed on the Columbia site. Based on the lack of suitable habitat and sightings, the NRC staff concludes that this species does not occur within the action area and would, therefore, not be affected by the proposed action.

For these reasons, the NRC staff concludes that the proposed action would have

no effect on Federally listed species or designated critical habitats. Federal agencies are not required to consult with NMFS or the FWS if they determine that an action will not affect listed species or critical habitats. Thus, the ESA does not require consultation for the proposed action, and the NRC staff considers its obligations under the ESA Section 7 to be fulfilled for the proposed action.

#### Historic and Cultural Resources

Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties. Historic properties are defined as resources included in, or eligible for inclusion, in the National Register of Historic Places. There are no historic properties within the Columbia site. The designated disposal site is a previously disturbed area adjacent to the Columbia cooling towers, which is not considered a culturally sensitive area. The only known culturally sensitive area at Columbia is approximately 3 miles to the east of the sediment disposal area, along the Columbia River. EN has been disposing sediment from the cooling towers and spray ponds in disposal cells within this area since 1995 (Energy Northwest 2020). Based on the information previously mentioned, the NRC staff concludes 1) there would be no significant historic and cultural resources impacts associated with continued disposal of sediment within the existing disposal cells, and 2) continued disposal of sediment within the existing disposal cells does not have the potential to cause effects on historic properties.

Given that the disposal site is in a previously disturbed area and not near culturally sensitive areas, the recent construction of the disposal cell and the continued use of the sediment disposal area would not have a cumulative impact on historic and cultural resources.

#### Socioeconomics

Current socioeconomic conditions would be unaffected by the proposed onsite disposal of slightly contaminated sediment at Columbia. The licensee would use existing resources including onsite workforce or local contractors to conduct the disposal; therefore, there would be no significant socioeconomic impacts. Similarly, the recent construction of the disposal cell and the continued use of the sediment disposal area would result in a negligible contribution to cumulative socioeconomic impacts.

#### Noise

Noise emissions would occur as a result of equipment used onsite to remove and transfer the sediment. Noise levels from the proposed action would not be beyond those generated from operation of Columbia. Furthermore, the nearest resident is approximately 4.5 miles from Columbia, and noise levels from equipment and activities are not expected to be noticeable at this distance.

Based on the information previously mentioned, the NRC staff has determined that there would be no significant noise impacts associated with the proposed action.

#### Environmental Justice

The environmental justice impact analysis evaluates the potential for disproportionately high and adverse human health and environmental effects on minority and low-income populations that could result from the proposed disposal of slightly contaminated sediment at Columbia. Such effects may include human health, biological, cultural, economic, or socioeconomic impacts.

According to the 2010 Census, approximately 27 percent of the total population residing within a 10-mile radius of Columbia identified themselves as minority (MCDCCAPS 2021). The largest minority populations were people of Hispanic, Latino, or Spanish origin of any race (18 percent). Minority populations within Benton County

comprise 30 percent of the total population with the largest minority populations being Hispanic, Latino, or Spanish origin of any race (23 percent).

According to the U.S. Census Bureau's 2015–2019 American Community Survey 5-Year Estimates using the University of Missouri's Circular Area Profiling System (MCDCCAPS 2021), approximately 9 percent of individuals and 6.5 percent of families residing within a 10-mile radius of Columbia were identified as living below the Federal poverty threshold. The 2019 Federal poverty threshold was \$26,172 for a family of four (USCB 2021).

According to the U.S. Census Bureau's 2019 American Community Survey 1-Year Estimates (USCB 2021), the median household income for Washington was \$78,687, while 10 percent of the state population and 6 percent of families were found to be living below the Federal poverty threshold. Benton County had a lower median household income average (\$72,084) with 11 percent of individuals and 9 percent of families living below the poverty level, respectively.

Potential impacts to minority and low-income populations would mostly consist of radiological and environmental effects (e.g., noise and dust impacts). Radiation doses are expected to remain well within regulatory limits and noise and dust impacts would be temporary and limited to onsite activities.

Based on this information and the analysis of human health and environmental impacts presented in this EA, minority and low-income populations near Columbia are not expected to experience disproportionately high and adverse human health and environmental effects from the proposed action.

Similarly, the contributory effects of the recent construction of the disposal cell and the continued use of the sediment disposal area would also not have

disproportionately high and adverse human health and environmental cumulative effects on minority and low-income populations residing in the vicinity of the Columbia site.

*Environmental Impacts of the Alternatives to the Proposed Action*

As an alternative to the proposed action, the NRC staff considered denial of the proposed request (i.e., the “no-action” alternative). Denial of the application would result in no change in current environmental conditions or impacts. However, if the request for continued onsite disposal of slightly contaminated sediments were not approved, the licensee would have to pursue other means of managing materials removed from the Columbia cooling system. The no-action alternative would not satisfy the purpose and need for efficient and cost-effective disposal of routinely generated sediments from the Columbia cooling system.

As an alternative to the proposed action and no-action alternative, the NRC staff considered other options for disposing contaminated sediments. The most reasonable alternative would involve disposal at an offsite location. The chosen site would have to be licensed to accept low-level waste (LLW) including the slightly contaminated sediments from Columbia. In considering this alternative, the potential environmental impacts of loading and transporting the contaminated sediments from Columbia to any licensed, offsite disposal facility would be greater than those associated with the proposed action. As discussed in IN 83-05, the NRC has recognized that onsite disposal of LLW can minimize the quantity of waste shipped to radioactive waste disposal facilities and can provide a reasonable alternative to the high costs associated with disposal at radioactive waste disposal facilities. Therefore, disposal at an offsite location would not result in a compensating improvement in the environmental impacts, as there would be additional transportation related impacts associated with transporting the contaminated sediments offsite.

### *Alternative Use of Resources*

The proposed action does not involve the use of any different resources or significant quantities of resources beyond those previously considered and associated with past onsite disposals of sediments from Columbia's cooling system. Further, the proposed disposal activities are consistent with the proposed action (Columbia license renewal and 20 years of continued operations) considered in NUREG-1437, Supplement 47.

### *Agencies and Persons Consulted*

The NRC notified the representative from the State of Washington on October 28, 2021, of the EA and FONSI, and was informed on February 4, 2022, that the State of Washington does not have any comments on this action. No additional agencies or persons were consulted regarding the environmental impact of the proposed action. The NRC staff determined that the proposed action would have no effect on Federally listed threatened and endangered species that could occur on or near the proposed disposal area. As well, the proposed action would have no potential to cause effects on historic properties. Therefore, consultation was not required under Section 7 of the ESA or under Section 106 of the National Historic Preservation Act.

### **III. Finding of No Significant Impact**

Energy Northwest has requested onsite disposal of up to 1,116 m<sup>3</sup> (39,420 ft<sup>3</sup>) of sediments containing very low levels of radioactive materials at Columbia in accordance with 10 CFR 20.2002. Based on the EA, included in Section II of this document, the NRC staff has concluded that the proposed action will not have a significant impact on the quality of the human environment. Consistent with 10 CFR 51.21, the NRC conducted an environmental review of the proposed action, and this FONSI incorporates

by reference the EA in Section II. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

#### IV. Availability of Documents

The documents identified in the following table are available to interested persons through one or more of the following methods, as indicated.

DOCUMENT	ADAMS ACCESSION NO. / WEB LINK
Energy Northwest, "Columbia Generating Station, Docket No. 50-397 On-Site Cooling System Sediment Disposal," dated December 21, 2020	ADAMS Accession No. ML20356A172
Energy Northwest, "Columbia Generating Station, Docket No. 50-397 Response to Request for Additional Information Related to On-Site Cooling System Sediment Disposal," dated June 23, 2021	ADAMS Accession No. ML21174A151
State of Washington, Energy Facility Site Evaluation Council (EFSEC 2014). National Pollutant Discharge Elimination System Waste Discharge Permit No. WA0002515-1, Energy Northwest's Columbia Generating Station, dated September 30, 2014	<a href="https://www.efsec.wa.gov/energy-facilities/columbia-generating-station/columbia-generating-station-permits">https://www.efsec.wa.gov/energy-facilities/columbia-generating-station/columbia-generating-station-permits</a> (date accessed August 17, 2021)
Energy Northwest, "Columbia Generating Station, Docket No. 50-397 Independent Spent Fuel Storage Installation, Docket No. 72-35 2019 Annual Radiological Environmental Operating Report," dated May 13, 2020	ADAMS Accession No. ML20134J113
State of Washington Energy Facility Site Evaluation Council (EFSEC 2019). Letter from Sonia Bumpus, EFSEC, to S. Khounnala, Energy Northwest Environmental and Regulatory Programs Manager. Subject: Columbia Generating Station, Energy Northwest (EN) National Pollutant Discharge Elimination System (NPDES) Permit No. WA002515-1 Extension of NPDES Permit, dated September 13, 2019	<a href="https://www.efsec.wa.gov/energy-facilities/columbia-generating-station/columbia-generating-station-permits">https://www.efsec.wa.gov/energy-facilities/columbia-generating-station/columbia-generating-station-permits</a> (accessed January 19, 2022)
U.S. Environmental Protection Agency (EPA 2021). Washington Nonattainment/Maintenance Status for Each County by Year for All Criteria	<a href="https://www3.epa.gov/airquality/greenbook/anayo_wa.html">https://www3.epa.gov/airquality/greenbook/anayo_wa.html</a> (date accessed August 16, 2021)

Pollutants,” data is current as of January 31, 2022	
U.S. Fish and Wildlife Service, Washington Fish and Wildlife Office. (FWS 2021). “Pygmy Rabbit (Columbia Basin DPS).”	<a href="https://ecos.fws.gov/ecp/species/1126">https://ecos.fws.gov/ecp/species/1126</a>
Endangered Species Act of 1973, as amended	16 U.S.C. § 1531 et seq
U.S. Fish and Wildlife Service, Columbia Onsite Disposal 20.2002 Exemption Request, “List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project,” dated August 17, 2021	ADAMS Accession No. ML21229A180
National Historic Preservation Act, as amended	54 U.S.C. § 300101 et seq
Missouri Census Data Center Circular Area Profiling System (MCDCCAPS 2021). Summary Report, U.S. Census 2010 Summary File 1 (SF1) and Aggregated 2015–2019 American Community Survey Data Estimates in a 10-mile radius around the proposed disposal site at Columbia (46.471111 Lat., -119.333889 Long.)	<p>Summary Report, U.S. Census 2010 Summary File 1:  <a href="https://mcdc.missouri.edu/cgi-bin/broker?_PROGRAM=apps.caps2010.sas&amp;_debug=&amp;latitude=46.471111&amp;longitude=-119.333889&amp;radii=10&amp;sitename=&amp;units=bg">https://mcdc.missouri.edu/cgi-bin/broker?_PROGRAM=apps.caps2010.sas&amp;_debug=&amp;latitude=46.471111&amp;longitude=-119.333889&amp;radii=10&amp;sitename=&amp;units=bg</a> (accessed January 19, 2022)</p> <p>Aggregated 2015–2019 American Community Survey Data Estimates:  <a href="https://mcdc.missouri.edu/cgi-bin/broker?_PROGRAM=apps.capsACS.sas&amp;_SERVICE=MCDC_long&amp;_debug=&amp;latitude=46.471111&amp;longitude=-119.333889&amp;radii=10&amp;sitename=&amp;dprofile=on&amp;eprofile=on&amp;sprofile=on&amp;hprofile=on&amp;units=">https://mcdc.missouri.edu/cgi-bin/broker?_PROGRAM=apps.capsACS.sas&amp;_SERVICE=MCDC_long&amp;_debug=&amp;latitude=46.471111&amp;longitude=-119.333889&amp;radii=10&amp;sitename=&amp;dprofile=on&amp;eprofile=on&amp;sprofile=on&amp;hprofile=on&amp;units=</a> (accessed January 19, 2022)</p>
U.S. Census Bureau (USCB 2021). “2019 American Community Survey 1-Year Estimates, Table S1701—Poverty Status in the Past 12 Months, Table S1702 “Poverty Status in the Past 12 Months of Families,” and Table S1901 “Income in the Past 12 Months (in 2019 Inflation-Adjusted Dollars)” for Benton County and the State of Washington	<p>Table S1701:  <a href="https://data.census.gov/cedsci/table?q=S1701%3A%20POVERTY%20STATUS%20IN%20THE%20PAST%2012%20MONTHS&amp;tid=ACSST1Y2019.S1701">https://data.census.gov/cedsci/table?q=S1701%3A%20POVERTY%20STATUS%20IN%20THE%20PAST%2012%20MONTHS&amp;tid=ACSST1Y2019.S1701</a> (accessed January 19, 2022)</p> <p>Table S1702:  <a href="https://data.census.gov/cedsci/table?q=s1702&amp;tid=ACSST1Y2019.S1702">https://data.census.gov/cedsci/table?q=s1702&amp;tid=ACSST1Y2019.S1702</a> (accessed January 19, 2022)</p> <p>Table S1901:</p>

	<a href="https://data.census.gov/cedsci/table?q=S1901&amp;g=0400000US53_0500000US53005">https://data.census.gov/cedsci/table?q=S1901&amp;g=0400000US53_0500000US53005</a> (accessed January 19, 2022)
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Dated: March 7, 2022.

For the Nuclear Regulatory Commission.

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Mahesh L. Chawla, Project Manager,  
Plant Licensing Branch IV,  
Division of Operating Reactor Licensing,  
Office of Nuclear Reactor Regulation.