



10 CFR 50.82(a)(4)

LIC-17-0050  
December 14, 2017

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

Fort Calhoun Station (FCS), Unit 1  
Renewed Facility Operating License No. DPR-40  
NRC Docket No. 50-285

**Subject: Response for Fort Calhoun Station Re: Specific Questions and Concerns Regarding Omaha Public Power District's Post-Shutdown Decommissioning Activities Report (PSDAR)**

Reference:

1. Letter from OPPD (M. J. Fisher) to USNRC (Document Control Desk), "Fort Calhoun Station, Unit No. 1, Post-Shutdown Decommissioning Activities Report," Dated March 31, 2017 (LIC-17-0033) (Adams Accession No. ML17089A759)
2. Letter from USNRC (J. S. Kim) to OPPD (M.J. Fisher) "Fort Calhoun Station, Unit No. 1 - Request for Additional Information Regarding Post-Shutdown Decommissioning Activities Report (CAC NO. MF9536)," dated October 5, 2017 (ADAMS Accession No. ML17193A263)
3. Letter, Entergy Nuclear Operations, Inc., to USNRC transmitting "Post Shutdown Decommissioning Activities Report." dated December 19, 2014 (ADAMS Accession No. ML14357A110)

By letter (Reference 1) dated March 31, 2017 (ADAMS Accession No. ML17089A759), Omaha Public Power District (OPPD) Submitted the Post-Shutdown Decommissioning Activities Report (PSDAR) the Fort Calhoun Station (FCS).

On October 5, 2017 (Reference 2), the NRC provided OPPD with a Request for Additional Information regarding the PSDAR (Reference 1). In preparation of the FCS PSDAR, care was taken to use recent precedence (Reference 3) to determine the level of detail to include in the FCS PSDAR. Regulations allow decommissioning activities to progress over a period not to exceed 60 years. FCS has selected SAFSTOR as the method of decommissioning for FCS. As such information on aspects of the decommissioning process will not be available as major deconstruction is expected to occur several decades in the future. Regulations anticipate this eventuality as they require that significant changes to the decommissioning plan be updated in the PSDAR as that information becomes available. Attachment 1 of this letter provides the OPPD's response to the NRC's RAI regarding the PSDAR.

For each question, the response includes the NRC question, the pertinent section from the FCS PSDAR (Reference 1), the pertinent section from the Vermont Yankee PSDAR (Reference 3) that was used as precedent, and OPPD's response to the NRC question. Based on these responses, OPPD does not plan on revising the FCS PSDAR at this time. As required by 10 CFR 50.82(a)(7), OPPD will "notify the NRC, in writing and send a copy to the affected State(s), before performing any decommissioning activity inconsistent with, or making any significant schedule change from, those actions and schedules described in the PSDAR, including changes that significantly increase the decommissioning cost." As required, OPPD will verify that the decommissioning activities meet the requirements of 10 CFR 50.82(a)(6)(i) – (iii), or seek appropriate regulatory approval if needed.

This letter contains no regulatory commitments.

If you should have any questions regarding this submittal or require additional information, please contact Mr. Bradley H. Blome, Director - Licensing and Regulatory Assurance, at (402) 533-7270.

Respectfully,



Mary J. Fisher  
Vice President, Energy Production & Nuclear Decommissioning

MJF/epm

Attachment:

1. Response to Request For Additional Information Post-Shutdown Decommissioning Activities Report Omaha Public Power District Fort Calhoun Station. Unit No. 1
- c: K. M. Kennedy, NRC Regional Administrator, Region IV  
J. S. Kim, NRC Project Manager  
R. S. Browder, NRC Senior Health Physicist, Region IV  
Bureau Chief, Bureau of Radiological Health, Iowa Department of Public Health,  
State of Iowa  
Director of Consumer Health Services, Department of Regulation and Licensure,  
Nebraska Health and Human Services, State of Nebraska

**ATTACHMENT 1**

**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION  
POST-SHUTDOWN DECOMMISSIONING ACTIVITIES REPORT**

**OMAHA PUBLIC POWER DISTRICT (OPPD)  
FORT CALHOUN STATION. UNIT NO. 1  
DOCKET NO. 50-285**

By letter dated March 30, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17089A759), the Omaha Public Power District's (OPPD, the licensee) submitted Post-Shutdown Decommissioning Activities Report (PSDAR) for Fort Calhoun Station, Unit No. 1 (Fort Calhoun) to satisfy Title 10 of the Code of Federal Regulations (10 CFR), Section 50.82(a)(4) and generally follow the guidance contained in Regulatory Guide (RG) 1.185, Revision 1, "Standard Format and Content for Post-Shutdown Decommissioning Activities Report," June 2013 (ADAMS Accession No. ML 13140A038), governing the PSDAR content and the use of NUREG-0586, Supplement 1, "Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities," November 2002 (Decommissioning GEIS) (ADAMS Accession No. ML023470304), as appropriate.

In a PSDAR, a licensee must provide reasons for concluding that the environmental impacts associated with site-specific decommissioning activities will (or will not) be bounded by previously issued environmental impact statements such as the construction final environmental statement (FES), operation FES, license renewal (LR) supplemental environmental impact statement (SEIS), or the Decommissioning GEIS (NUREG-0586).

**Question 1: Identification of Federally and State-listed Species**

10 CFR 50.82(a)(4)(i) states:

Prior to or within 2 years following permanent cessation of operations, the licensee shall submit a post-shutdown decommissioning activities report (PSDAR) to the NRC, and a copy to the affected State(s). The PSDAR must contain a description of the planned decommissioning activities along with a schedule for their accomplishment, a discussion that provides the reasons for concluding that the environmental impacts associated with site-specific decommissioning activities will be bounded by appropriate previously issued environmental impact statements, and a site-specific DCE, including the projected cost of managing irradiated fuel.

10 CFR 50.82(a)(6) states, in part, that "Licensees shall not perform any decommissioning activities, as defined in [10 CFR] 50.2, that ... Result in significant environmental impacts not previously reviewed .... "

The OPPD PSDAR provides an assessment of environmental impacts associated with decommissioning activities at Fort Calhoun. The NRC staff has determined that the Section 5.1.7, "Threatened and Endangered Species," in the PSDAR did not identify or discuss the potential occurrence and impacts to two federally and State-listed species.

As noted by OPPD in its PSDAR, the Decommissioning GEIS states that a site-specific analysis should be conducted to determine the impacts from decommissioning activities to federally and State threatened and endangered species. Section 4.3. 7.3, "Evaluation," of the Decommissioning GEIS specifically states that the likelihood of impacts to threatened and endangered species is related to their presence or absence, and the site-specific analysis should include identification of federally and State-listed species that have the potential to occur at the site.

To determine the potential presence of threatened and endangered species at Fort Calhoun, OPPD reviewed the federally and State-listed species described in NRC's LR SEIS (NUREG-1437, Supplement 12). In its PSDAR, OPPD discussed State-listed species that are also federally listed, but did not discuss any species that are only State-listed. For federally listed species, OPPD discussed federally threatened and endangered species that were included in the Fort Calhoun LR SEIS. However, the Fort Calhoun LR SEIS did not address updates to the FWS list of threatened and endangered species. In addition, RG 1.185 states that the list of threatened and endangered species has likely changed since the most recent environmental document was published, and therefore, licensees "should obtain a current list from the appropriate U.S. Fish and Wildlife Service office and should make a determination as to the likelihood that a protected species is found on the site. If any species is likely to be affected by the decommissioning of the facility, the PSDAR should identify this potential."

The NRC staff reviewed FWS's Information, Planning, and Conservation System, which is a database that provides occurrence data for federally listed species, and determined that a total of six federally threatened species may occur within the vicinity of Fort Calhoun. Two of the six federally listed species were not discussed in PSDAR, including the northern long-eared bat (*Myotis septentrionalis*) and the prairie bush-clover (*Lespedeza leptostachya*).

**In accordance with 10 CFR 50.82(a)(4)(i) and 10 CFR 50.82(a)(6)(ii), discuss the reasons for concluding that the environmental impacts associated with site-specific decommissioning activities will be bounded by appropriate previously issued environmental impact statements for the northern long-eared bat and the prairie bush-clover.**

#### **OPPD PSDAR Section**

##### Section 5.1.7:

"Based on the SEIS (Reference 8), there was one federally-listed endangered aquatic species reported to inhabit the Missouri River: pallid sturgeon."

"The SEIS also identified one federally-listed endangered terrestrial species with the potential to occur within the vicinity of FCS: least tern. The bald eagle, piping plover and western prairie fringed orchid were listed in the SEIS as federally listed threatened species."



"The environmental impacts during decommissioning are expected to be minimal on threatened and endangered terrestrial species. OPPD does not anticipate disturbing habitat beyond the operational areas of the plant for decommissioning and construction activities. Construction activities that disturb one acre or greater of soil necessitate permits by the NDEQ and BMPs are required to be implemented to control sediment and the effects of erosion. Additionally, FCS has administrative controls in place which require that significant project activities undergo an environmental review prior to the activity occurring, which ensures that impacts are minimized through implementation of BMPs. Federal and state regulations pertaining to listed species will also remain in effect, which will further ensure that impacts to listed species and their habitats are minimized."

### **Vermont YANKEY PSDAR Section**

#### **Section 5.1.7:**

"Based on the SEIS (Reference 7), there were two federally-listed endangered aquatic species that were reported to inhabit the Connecticut River: dwarf wedge mussel and short nose sturgeon."

"The SEIS also identified three federally-listed endangered terrestrial species with the potential to occur within the vicinity of VYNPS: Jessup's milk-vetch, northeastern bulrush, and Indiana bat."

"The environmental impacts during decommissioning are expected to be minimal on threatened and endangered terrestrial species. ENVY does not anticipate disturbing habitat beyond the operational areas of the plant for decommissioning and construction activities. Construction activities that disturb one acre or greater of soil are permitted by the VTDEC and BMPs are required to be implemented to control sediment and the effects of erosion. Additionally, VYNPS has procedural administrative controls in place which require that significant project activities undergo an environmental review prior to the activity occurring to ensure that impacts are minimized through implementation of BMPs. Federal and state regulations pertaining to listed species will also remain in effect, which will further ensure that impacts to listed species and their habitats are minimized."

### **Question 1: OPPD Response:**

These impacts are evaluated by OPPD. There is no current, known occurrence of the northern long-eared bat at Fort Calhoun Station that would be affected by decommissioning. OPPD does not anticipate impacting the bats nesting habitat (trees) as part of the decommissioning process at this time. OPPD environmental personnel conduct periodic (monthly) site environmental inspections to monitor for adverse environmental impacts and general environmental conditions including protected species. OPPD does have a plan in place for protection of the bats, as well as other mammals and birds that may be encountered in their service territory. The OPPD Avian Protection Plan, which also includes a section on the northern long-eared bat, has triggers that prompt additional actions to ensure that the federally listed threatened and endangered species and their habitats are protected.

The Nebraska state threatened and endangered list has been reviewed. The river otter is the only additional species identified as being subject to decommissioning effects. OPPD anticipates little impact from decommissioning on the otter as the impact on the river will be less water utilized by the station than was used during power operation. No activities are planned outside the operational areas of the plant and there are no known occurrences of the prairie bush-clover (Iowa State listed plant) in the operational areas. At such time that more extensive demolition or disturbance of land areas on the Owner Controlled Area are to occur, procedures drive the station to the required state permits. This permitting includes extensive evaluation of the environmental impact to include the consideration on threatened and endangered species at that time.

**Question 2: Federally and State-listed Species Analysis of Impacts**

As noted above, the Decommissioning GEIS states that a site-specific analysis is required to determine impacts to federally and State-listed species. Section 5.1.7, "Threatened and Endangered Species," of OPPD's PSDAR provides a site-specific analysis of potential impacts to federally listed terrestrial species, including potential direct impacts during dismantling activities. However, the PSDAR does not discuss the potential impacts associated with noise from dismantling facilities and bird collisions with construction equipment. Noise could disrupt nesting, foraging, or resting behaviors for birds and bats that have the potential to occur on or near Fort Calhoun and could result in indirect adverse impacts. Bird and bat collisions with equipment could result in direct impacts, such as bird mortality or injury, if they were to occur.

**Discuss the potential impacts from noise and bird collisions to threatened and endangered species not addressed in previously issued Environmental Impact Statements.**

**OPPD PSDAR Section**

Section 5.1.16:

"General noise levels during the decommissioning process are not expected to be any more severe than during refueling outages and are not expected to present an audible intrusion on the surrounding community. Some decommissioning activities may result in higher than normal onsite noise levels (i.e., some types of demolition activities). However, these noise levels would be temporary and are not expected to experience an audible intrusion on the surrounding community.

Section 4.3.16 of the GEIS indicates that noise impacts are not detectable or destabilizing and makes a generic conclusion that potential noise impacts are small. Based on the standard decommissioning approach proposed for FCS, OPPD concludes that the impacts of FCS decommissioning on noise are bounded by the GEIS."

**Vermont YANKEY PSDAR Section**

Section 5.1.16:

"General noise levels during the decommissioning process are not expected to be any more severe than during refueling outages and are not expected to present an audible intrusion on the surrounding community. Some decommissioning activities may result in higher than normal onsite noise levels (i.e., some types of demolition activities). However, these noise levels would be temporary and are not expected to experience an audible intrusion on the surrounding community. Section 4.3.16 of the GEIS indicates that noise impacts are not detectable or destabilizing and makes a generic conclusion that potential noise impacts are small. Based on the standard decommissioning approach proposed for VYNPS, ENVY concludes that the impacts of VYNPS decommissioning on noise are bounded by the GEIS."

**Question 2: OPPD Response:**

Noise levels for decommissioning are considered in the PSDAR. The general noise levels during the decommissioning process are not expected to be any more severe than during refueling outages and are not expected to present an audible intrusion on the surrounding community and environment. In the station's current status, there are few activities which would reach higher than normal noise levels. However, any noise levels which would reach this status would be temporary and are not expected to become an audible intrusion on the surrounding environment.

For bird collisions, in a SAFSTOR status, the existing site structures are not currently planned for alteration, thereby leaving the impact on bird populations unchanged. OPPD's Avian Protection Plan has actions in place for any unexpected finding of accidental or unintentional damage or destruction of threatened and endangered species. Following any incidents to protected populations, OPPD personnel would implement the OPPD Avian Protection Plan. The Forestry Office of OPPD investigates any incidents to birds or to the northern long-eared bat (in accordance with the state and Federal regulations).

Prior to planned demolition activities, state permits (as well as updates to the PSDAR) are required which include extensive evaluation of the environmental impact to include the consideration of threatened and endangered species of the specific activity. Any necessary mitigation activities, should any be identified due to environmental consequences at the time, will be necessary to receive state permitting (which also has federal triggers to check for threatened and endangered species) and no demolition would proceed without approval.

**Question 3: Environmental Justice Impact Analysis**

**The NRC staff has determined that the Section 5.1.13, "Environmental Justice," in the PSDAR is incomplete because it references 2000 Census data. It does not provide current information on minority and low-income populations living in the vicinity of Fort Calhoun, and concludes the impacts of decommissioning on environmental justice are small and bounded by the Decommissioning GEIS - when the GEIS says "the impacts must be determined on a site-specific basis."**

Potential environmental justice impacts from decommissioning activities, the Decommissioning GEIS (Section 4.3.13.4, "Conclusions," page 4-65) states, "the staff has concluded that the adverse impacts and associated significance of the impacts must be determined on a site-specific basis .... Subsequent to the submittal of the PSDAR, the NRC staff will consider the impacts related to environmental justice from decommissioning activities." Section 5.1.13, "Environmental Justice," of OPPD's PSDAR provides an analysis of potential impacts to minority and low-income populations, including human health and environmental effects. However, the analysis utilizes out-of-date 2000 Census information. Demographic data from the latest 2010 Census is readily available as well as recent 2015-2016 American Community Survey (ACS) data.

The Decommissioning GEIS (Section 4.3.13.2, "Potential Impacts of Decommissioning Activities on Environmental Justice," page 4-64) also states, "decommissioning activities that may affect environmental justice are related to organizational or staffing changes and offsite transportation issues .... Any decommissioning activity that results in a disproportionate share of the negative environmental consequences to minority or low-income groups has the potential to be an adverse environmental justice impact." The GEIS goes on to state, "Detectability and destabilization, as they relate to environmental justice, must be defined in proportion to the minority and low-income populations that reside in the area of the power plant. Proportionment must be determined at each site at the time of decommissioning." The OPPD analysis in the PSDAR does not address proportionment at the time of decommissioning and is silent on the potential impacts of dismantlement and decontamination activities on minority and low-income populations living near Fort Calhoun.

*In accordance with 10 CFR 50.82(a)(4)(i) and 10 CFR 50.82(a)(6)(ii), discuss the reasons for concluding that the environmental justice impacts associated with site-specific decommissioning activities will (or will not) be bounded by appropriate previously issued environmental impact statements. In addition, provide a more up-to-date environmental justice impact analysis using 2010 Census or recent ACS data and address the site-specific human health and environmental effects from dismantlement and decontamination activities, including offsite transportation issues associated with the delivery of dismantlement equipment and the removal of waste material, on minority and low-income populations living near Fort Calhoun.*

#### OPPD PSDAR Section

##### Section 5.1.13:

"Section 4.4.6 of the SEIS (Reference 8) analyzed 2000 census data within 50 miles of FCS to identify minority and low income populations. The SEIS analysis concluded that there were three counties in Nebraska (Thurston, Colfax, and Douglas) and one in Iowa (Crawford) within the 50-mile region that exceeded the NRC thresholds defining minority populations. Three counties in Nebraska (Thurston, Burt, and Douglas) and one in Iowa (Pottawattamie) within the 50-mile region exceeded the NRC thresholds defining low-income populations."



“Section 4.13.3 of the GEIS reviewed environmental justice decommissioning impacts related to land use, environmental and human health, and socioeconomics. OPPD does not anticipate any offsite land disturbances during decommissioning, thus the land use impacts are not applicable for FCS. In addition as previously discussed in Section 5.1.12, it was determined that socioeconomic impacts from decommissioning are bounded by the GEIS. Potential impacts to minority and low-income populations would mostly consist of radiological effects. Based on the radiological environmental monitoring program data from FCS, the SEIS determined that the radiation and radioactivity in the environmental media monitored around the plant have been well within applicable regulatory limits. As a result, the SEIS found that no disproportionately high and adverse human health impacts would be expected in special pathway receptor populations (i.e., minority and or low income populations) in the region as a result of subsistence consumption of water, local food, fish, and wildlife. Therefore, OPPD concludes that the impacts of FCS decommissioning on environmental justice are small and are bounded by the GEIS.”

Section 5.1.17:

“The transportation impacts of decommissioning are dependent on the number of shipments to and from the plant, the types of shipments, the distance the material is shipped, and the radiological waste quantities and disposal plans. The shipments from the plant would be primarily radioactive wastes and nonradioactive wastes associated with dismantlement and disposal of structures, systems and components.”

“In addition, shipments of non-radioactive wastes from the site are not expected to result in measurable deterioration of affected roads or a destabilizing increase in traffic density. Therefore, OPPD concludes that the impacts of FCS decommissioning on transportation are bounded by the GEIS.”

**Vermont YANKEY PSDAR Section**

Section 5.1.13:

“Section 4.4.6 of the SEIS (Reference 7) analyzed 2000 census data within 50 miles of VYNPS to identify minority and low income populations. The SEIS analysis concluded that there were no census block groups in Vermont or New Hampshire within the 50-mile region that exceeded the NRC thresholds defining minority populations. The only census block groups that exceeded the NRC minority population thresholds were located south and southeast of VYNPS in Massachusetts. The majority of the census block groups exceeding the thresholds defining a low-income population were also located in the same communities to the south and southeast of the site containing minority populations. Additional low-income census block groups were located in Greenfield, Adams, and Pittsfield, Massachusetts, in Bennington, Vermont, and in Keene, New Hampshire.

Section 4.13.3 of the GEIS reviewed environmental justice decommissioning impacts related to land use, environmental and human health, and socioeconomics. ENVY does not anticipate any offsite land disturbances during decommissioning, thus the land use impacts are not applicable for VYNPS. In addition as previously discussed in Section 5.1.12, it was determined that socioeconomic impacts from decommissioning are bounded by the GEIS. Potential impacts to minority and low-income populations would mostly consist of radiological effects. Based on the radiological environmental monitoring program data from VYNPS, the SEIS determined that the radiation and radioactivity in the environmental media monitored around the plant have been well within applicable regulatory limits. As a result, the SEIS found that no disproportionately high and adverse human health impacts would be expected in special pathway receptor populations (i.e., minority and/or low income populations) in the region as a result of subsistence consumption of water, local food, fish, and wildlife.

Therefore, ENVY concludes that the impacts of VYNPS decommissioning on environmental justice are small and are bounded by the GEIS."

#### Section 5.1.17

"The transportation impacts of decommissioning are dependent on the number of shipments to and from the plant, the types of shipments, the distance the material is shipped, and the radiological waste quantities and disposal plans. The shipments to and from the plant would primarily result from construction activities associated with the ISFSI expansion and shipments of radioactive wastes and non-radioactive wastes associated with dismantlement and disposal of structures, systems and components."

"In addition, shipments of non-radioactive wastes from the site are not expected to result in measurable deterioration of affected roads or a destabilizing increase in traffic density. Therefore, ENVY concludes that the impacts of VYNPS decommissioning on transportation are bounded by the GEIS."

#### Question 3: OPPD Response:

More recent census data (2010) was reviewed and OPPD determined that there are no substantial changes to the number of, or the regions within which there are, low-income or minority populations in a 50 mile radius around FCS (Thurston, Colfax, Douglas, and Burt counties in Nebraska and Crawford and Pottawattamie counties in Iowa). The GEIS concludes that socioeconomic impacts are neither detectable nor destabilizing and that mitigation measures are not warranted. OPPD concluded that decommissioning activities are less impactful than the pathways through which the environmental impacts associated with FCS license renewal can affect human populations as discussed in Supplement 12 to the GEIS. There will be little change with consideration of tax revenue and the continuation of the OPPD to provide electricity as a political subdivision of Nebraska.

Reductions in tax revenue can affect the surrounding communities when a shutdown occurs, and, in turn, affect the availability of public or social services. These effects can disproportionately affect the low-income or minority populations who rely on these services. However, the Nebraska State Constitution Article VII, Section 11, stipulates that every corporation and political subdivision (of which OPPD is one) which is organized primarily to provide electricity shall annually make the same payments in lieu of taxes as it made in 1957 to the same public bodies. Also, if the public corporation sells electricity at retail, they will also pay to the treasurer of the county a sum of five percent of the annual gross revenue of the utility. OPPD fits these descriptions and pays six in lieu of tax payments each year to the 12 counties it serves, which includes those surrounding FCS (in particular Washington, Burt, Dodge, and Douglas counties). These counties also receive five percent of the total gross revenue that OPPD receives from electricity sales within the county. As a publicly owned entity, OPPD will still be responsible for producing and distributing electricity and the resulting in lieu of payments, even with Fort Calhoun Station decommissioning. The station's lack of generation does not stop the delivery of electricity to the area surrounding the site. Thurston County is not in the District's service area and therefore will not have any tax revenue changes from Decommissioning. All of these factors should result in little impact to the local revenue, as it relates to tax revenue and availability of public or social services regardless of the proportion of low-income or minority populations.

In a SAFSTOR state, the change in transportation at shift change is expected to be reduced, along with a proportionate decrease in truck traffic. The traffic would be less than any outage traffic the area has encountered during plant operations. Any major activities, when they occur, would be temporary in nature and would occur over extended periods of time such that significant changes to local traffic density or patterns are not expected. Consequently, there is no impact expected to the low-income or minority populations near Fort Calhoun Station.