

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION

William M. Dean, Director

In the Matter of	)	Docket No. 50-285
	)	
OMAHA PUBLIC POWER DISTRICT	)	Renewed License No. DPR-40
	)	
Fort Calhoun Station, Unit 1	)	
	)	

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**DIRECTOR'S DECISION UNDER 10 CFR 2.206**

**I. Introduction**

By letter dated June 21, 2012, Mr. Wallace Taylor filed a petition on behalf of the Iowa Chapter of the Sierra Club (the petitioner) under Title 10 of the *Code of Federal Regulations* (10 CFR) 2.206, "Requests for action under this subpart," related to Fort Calhoun Station, Unit 1 (FCS) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12180A124). The petition requested enforcement action against FCS. Specifically, the petition requested that the U.S. Nuclear Regulatory Commission (NRC) revoke the license of Omaha Public Power District (OPPD, the licensee) to operate FCS.

Action Requested for June 21, 2012, Petition

In the June 21, 2012, petition, the petitioner stated that OPPD has been unable and unwilling to operate FCS properly and safely since 1992, has failed to correct problems identified years ago, and has resisted NRC directives to correct safety violations. The petition also asserted it is unlikely OPPD will ever be able or willing to operate FCS properly and safely.

The petition stated, in part, that “[t]he NRC’s own guidelines regarding enforcement sanctions would categorize the events at Fort Calhoun over the past 20 years at Severity Level I, the highest level, because those events involve (1) ‘situations involving particularly poor licensee performance, or involving willfulness; (2) ‘situations when the violation results in a substantial increase in risk, including cases in which the duration of the violation has contributed to the substantial increase; and (3) ‘situations when the licensee made a conscious decision to be in noncompliance in order to obtain an economic benefit.’ 63 FR 26630-OI, 26642 (May 13, 1998).” The petition also stated that “[t]he NRC considers these violations to be of significant concern, and may apply its full enforcement action to remedy these violations, including issuing appropriate orders.” *Id.*

The petition did not request immediate action.

The petitioner provided supplemental material in support of the petition on August 22 and 27, November 19, and December 16, 17, and 20, 2012 (ADAMS Accession Nos. ML12240A099, ML12240A162, ML12250A714, ML12352A279, ML12352A221, and ML13109A240, respectively).

The NRC’s acknowledgement letter to the petitioner, dated May 23, 2013 (ADAMS Accession No. ML13092A248), accepted the petition in part and stated that the NRC review would focus on these issues raised in the petition: (1) licensee event report submitted September 10, 2012, showed a support beam was not within allowable limits for stress and loading (ADAMS Accession No. ML12255A038); (2) flood protection measures at FCS are inadequate and create an on-going, high-risk danger to public safety; (3) the flood risks of the six dams upstream of FCS are either unevaluated or unresolved; and (4) the 614 primary reactor containment electrical penetration seals containing Teflon identified at FCS, a material that could degrade during design-basis accident conditions.

Because of performance concerns at FCS, the NRC transitioned its normal oversight process at FCS from Inspection Manual Chapter (IMC) 0305, "Operator Reactor Assessment Program," to its enhanced oversight process contained in IMC 0350, "Oversight of Reactor Facilities in a Shutdown Condition due to Significant Performance and/or Operational Concerns," as documented in its letter dated December 13, 2011 (ADAMS Accession No. ML113470721). In accordance with the IMC 0350 process, the NRC determined that FCS was safe to restart, as documented by letter dated December 17, 2013 (ADAMS Accession No. ML13351A423), and FCS returned to full power on December 26, 2013. Based on the NRC staff's evaluation of station performance, NRC returned FCS to the normal reactor oversight program on April 1, 2015 (ADAMS Accession No. ML15089A085). NRC inspections will continue to monitor the licensee's efforts to sustain improved plant performance and to comply with the commitments in the NRC's post-restart Confirmatory Action Letter (CAL) dated December 17, 2013 (ADAMS Accession No. ML13351A395). The NRC inspections will continue for the remaining open CAL items in coordination with their completion.

The NRC sent copies of the proposed director's decision to the petitioner and the licensee for comment on April 15, 2015 (ADAMS Accession Nos. ML15063A047 and ML15063A050, respectively). The proposed director's decision is available in ADAMS under Accession No. ML15063A066. The NRC staff did not receive any comments on the proposed director's decision.

## **II. Discussion**

As part of the 10 CFR 2.206(b) petition review process, the director of the NRC office with responsibility for the subject matter either accepts a petition and begins a proceeding or advises the petitioner in writing that no proceeding will be instituted, in whole or in part, with

respect to the request. The NRC staff will describe the reason for the decision. Accordingly, the decision of the Director of the Office of Nuclear Reactor Regulation is provided below.

The NRC staff concluded no safety concern existed that warranted an immediate enforcement action by the NRC and that FCS could safely restart operations. The NRC will not issue an enforcement order based on the petition because, as explained below, each of the petitioner's requests has been addressed through other actions.

FCS is undergoing a flooding hazard review, and the issues raised by the petitioner in issues No. 2 (flood protection measures at FCS) and No. 3 (flood risks of the six dams upstream of FCS) above are addressed in the NRC's request for information per 10 CFR 50.54(f), dated March 12, 2012 (Fukushima 50.54(f) letter; ADAMS Accession No. ML12056A046). The letter states, in relevant part, that

The current regulatory approach, and the resultant plant capabilities, gave the NTTF [Near-Term Task Force] and the NRC the confidence to conclude that an accident with consequences similar to the Fukushima accident is unlikely to occur in the United States (U.S.). The NRC concluded that continued plant operation and the continuation of licensing activities did not pose an imminent risk to public health and safety.

The NRC staff is evaluating the licensee's flooding hazard reviews in accordance with the schedule provided in the Fukushima 50.54(f) letter. OPPD provided the results of its flooding walkdown report for FCS to the NRC on November 27, 2012 (ADAMS Accession No. ML12334A449), with supplements on March 29, 2013, August 15, 2013, December 13, 2013, and January 31, 2014 (ADAMS Accession Nos. ML13091A059,

ML13228A098, ML13351A426, and ML14031A344, respectively). The NRC staff assessed the OPPD report on June 24, 2014 (ADAMS Accession No. ML14157A079) and concluded that

... the licensee's implementation of flooding walkdown methodology meets the intent of the walkdown guidance. The staff concludes that the licensee, through the implementation of the walkdown guidance activities and, in accordance with plant processes and procedures, verified the plant configuration with the current flooding licensing basis; addressed degraded, nonconforming, or unanalyzed flooding conditions; and verified the adequacy of monitoring and maintenance programs for protective features. Furthermore, the licensee's walkdown results, which were verified by the staff's inspection, identified no immediate safety concerns. The NRC staff reviewed the information provided and determined that sufficient information was provided to be responsive to Enclosure 4 of the 50.54(f) letter.

OPPD provided its flooding hazard reevaluation report (FHRR) for FCS to the NRC on February 4, 2015 (ADAMS Accession No. ML15042A127; it contains security-related information, so a portion of the document is not publicly available in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding"). NRC staff is reviewing the FHRR. Because the petitioner offered no information that shows an immediate threat to public health and safety, the staff continues its reviews of FCS's FHRR as scheduled. The NRC issued a letter to all power reactor licensees and holders of construction permits in active or deferred status dated March 1, 2013 (ADAMS Accession No. ML13044A561). Recommendation 2.1 of the Fukushima 50.54(f) letter is to "Order licensees to reevaluate the

seismic and flooding hazards at their sites against current NRC requirements and guidance, and if necessary, update the design basis and SSCs [Structures, Systems, and Components] important to safety to protect against the updated hazards.” The NRC’s March 1, 2013, letter emphasized the staff’s expectations regarding any new information found that may impact SSC operability and states, in relevant part, that

The staff considers the flood hazard reevaluations being performed pursuant to the 50.54(f) letter to be beyond the current design/licensing basis of operating plants. Consequently, the results of the analysis performed using present-day regulatory guidance, methodologies, and information would not generally be expected to call into question the operability or functionality of SSCs... However, as with any new information that may arise at a plant, licensees are responsible for evaluating and making determinations related to operability and any associated reportability on a case-by-case basis.

Notwithstanding the preceding discussion, and as noted in the 50.54(f) letter, based upon the results of the review of the responses and other available information, the staff may impose additional requirements to protect against the reevaluated flood hazard. As always, the safety of the operating plants is of paramount importance. The NRC staff will follow established regulatory processes, including the backfit rule, in determining whether additional requirements are warranted.

The flooding concerns raised as issue Nos. 2 and 3 of the petition were also evaluated by the NRC in “Issuance of Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events” (EA-12-049), dated March 12, 2012 (ADAMS Accession No. ML12054A736). Order EA-12-049 provides requirements that nuclear power reactor applicants and licensees must comply with to mitigate challenges to key safety functions following beyond-design-basis external events. The Order requires licensees to develop strategies to mitigate a simultaneous loss of all alternating current power and loss of normal access to the ultimate heat sink.

On August 21, 2012, the Nuclear Energy Institute (NEI) submitted Revision 0 to NEI 12-06, “Diverse and Flexible Coping Strategies (FLEX) Implementation Guide” (ADAMS Accession No. ML12242A378). On August 29, 2012, the NRC staff issued the Japan Lessons-Learned Project Directorate Interim Staff Guidance JLD-ISG-2012-01, “Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events” (ADAMS Accession No. ML12229A174). The Interim Staff Guidance was published in the *Federal Register* on September 7, 2012 (77 FR 55230). The Interim Staff Guidance endorses NEI 12-06, Revision 0, and finds the recommended strategies are an acceptable means of meeting the requirements of Order EA-12-049. JLD-ISG provides guidance and clarification to assist nuclear power reactor applicants and licensees with the identification of measures needed to comply with requirements to mitigate challenges to key safety functions. The Interim Staff Guidance and NEI 12-06, Revision 0, outline the process licensees use to define and deploy strategies to enhance their ability to cope with beyond-design-basis external events, including station blackout.

OPPD gave the NRC staff its overall integrated plan for FCS in response to Order EA-12-049 on February 28, 2013 (ADAMS Accession No. ML13116A208), and confirmed that it has a plan developed in accordance with the guidance of NEI 12-06, Revision 0 for defining and deploying strategies that will enhance the ability to cope with conditions resulting from beyond design basis external events. The NRC staff provided its interim staff evaluation and audit report of the licensee's overall integrated plan by letter dated February 27, 2014 (ADAMS Accession No. ML14007A693). The NRC found that the licensee's plan demonstrates reasonable assurance that the requirements of Order EA-12-049 at FCS will be met. The staff expects that the licensee will implement the plan as described, and will satisfactorily resolve the open and confirmatory items detailed in the interim staff evaluation and audit report.

Issue Nos. 2 and 3 raised by the petitioner are subject to NRC staff review and evaluation because of the NRC's response to the Fukushima Dai-ichi accident. The NRC is already making as much information as possible available to the public regarding its ongoing activities in response to the Fukushima Dai-ichi accident (e.g., see <http://www.nrc.gov/reactors/operating/ops-experience/japan-dashboard.html>).

In addition, the issues raised in the petition regarding flooding and station blackout are being addressed through rulemaking concerning mitigation of beyond-design-basis events. (See <http://www.regulations.gov>, Docket ID NRC-2011-0299). The rulemaking is developing generic requirements for implementing the mitigation strategies in Order EA-12-049. The rulemaking also addresses the lessons learned and the feedback received following implementation of the Order.

Issue No. 1 raised by the petitioner was based on a licensee event report submitted on September 10, 2012, which said that a support beam was not within allowable limits for stress and loading (LER 2012-014; ADAMS Accession No. ML12255A038). The NRC staff inspected



the licensee's corrective actions as documented in NRC Integrated Inspection Report No. 05000285/2014007, dated May 14, 2014 (ADAMS Accession No. ML14134A410), Section 4OA4.2(1), "Item 2.d: Containment Internal Structure." The NRC determined that OPPD appropriately evaluated the cause and extent-of-condition for this issue and independently verified that OPPD has actions in place via the corrective action process to restore the containment internal structure to its design criteria in a timely manner. Based on the NRC Enforcement Policy, however, the NRC issued non-cited violations for the licensee's failure (1) to correct conditions adverse to quality for the containment internal structure and auxiliary building design drawing and design calculation discrepancies, and (2) to ensure the design of the reactor vessel head stand met current licensing basis requirements. The NRC staff also verified that the licensee's determination was reasonable that the containment internal structure, auxiliary building, and reactor vessel head stand structure were non-conforming to the design basis, but were operable and fully capable of performing their function under all design-basis accident loading conditions. In addition, as documented in the post-restart CAL dated December 17, 2013 (ADAMS Accession No. ML13351A395), the licensee has committed to:

- Evaluate the structural design margin for the containment internal structures, and reactor cavity and compartments, and resolve any deficiencies in accordance with its corrective action program (CAP).
- Resolve any deficiencies in accordance with the CAP concerning Beam 22A and Beam 22B in the containment internal structures.
- Evaluate the structural design margin for the reactor head stand and resolve any deficiencies in accordance with the CAP prior to the next use of the head stand.

As stipulated in the CAL, the CAL remains in effect until the NRC has verified that OPPD has effectively implemented the commitments. In the case of the containment internal structures, the licensee's corrective actions are not expected to be complete until the 2016 refueling outage, because of the modifications necessary to restore the structures to the FCS design basis. The licensee event report that was the basis of petitioner's issue No. 1 was closed by the NRC's Integrated Inspection Report No. 05000285/2014007. As part of the CAL process, the NRC continues to monitor the licensee's corrective actions required as a result of the NRC's review of the extent of condition.

Issue No. 4 raised by the petitioner maintained that the 614 primary reactor containment electrical penetration seals identified at FCS containing Teflon could degrade during design-basis accident conditions. The issue was identified by the licensee in a condition report and included in the NRC's Restart Checklist for FCS, enclosed in the CAL issued to the licensee on June 11, 2012 (ADAMS Accession No. ML12163A287), and updated on February 26, 2013 (ADAMS Accession No. ML13057A287). Section 2 of the Restart Checklist contained those items necessary to ensure that important structures, systems, and components (SSC) affected by the flood and safety SSC at FCS are in an appropriate condition to support safe restart and continued safe plant operation. The NRC staff inspected the licensee's corrective actions for the condition report as documented in NRC Inspection Report No. 05000285/2013013, dated April 3, 2014 (ADAMS Accession No. ML14094A052), Section 4OA4.2, "Item 2.c: Qualification of Containment Electrical Penetrations." To correct the issue, the licensee prior to plant startup replaced or capped containment electrical penetrations that used Teflon as electrical insulation or sealant. The NRC reviewed the licensee's causal analyses, corrective actions, and extent of

condition and concludes this issue was adequately addressed by the licensee. Therefore, the issue is closed.

### **III. Conclusion**

The NRC has evaluated each of the petitioner's requests. For the reasons stated above, the NRC will not issue orders requiring the enforcement actions specified in the petitioner's requests.

As provided in 10 CFR 2.206(c), a copy of this director's decision will be filed with the Secretary of the Commission for the Commission to review. This decision will constitute the final action of the Commission 25 days after the date of the decision unless the Commission, on its own motion, institutes a review of the decision within that time.

Dated at Rockville, Maryland, this 3<sup>rd</sup> day of June, 2015.

For the U.S. Nuclear Regulatory Commission.

***/Michele G Evans for/***

William M. Dean, Director,  
Office of Nuclear Reactor Regulation.