

May 28, 2013

Mr. David Kraft
Director, Nuclear Energy Information Service
3411 West Diversey Avenue, #16
Chicago, IL 60647-1245

Dear Mr. Kraft,

I very much appreciated your time and the engaged conversation during the meeting on March 25 at the Beach Haven Event Center in South Haven Michigan. As promised, I am responding to your letter dated March 25, 2013, which expressed concerns regarding the safe operation of Palisades. A record of these and other questions from local citizens, as well as my responses, is documented in the Nuclear Regulatory Commission's (NRC) Agencywide Documents Access and Management System No. ML13142A424. The discussion with you and the other participants was very helpful to me as I continue to consider public concerns about nuclear safety.

You raised issues regarding the inspection of recent leaks at Palisades and concerns with the fundamentals of plant operation at Palisades. In the enclosure, I have provided specific responses to the items you provided to me.

The NRC maintains safety as our top priority to ensure the protection of our citizens and the environment. I and all my colleagues at the agency are firmly dedicated to ensuring the safe operation of nuclear power plants and to protecting public health and safety.

Thank you for sharing your views and insights. If you have any additional questions, don't hesitate to contact me at 301-415-8430.

Sincerely,

/RA/

William D. Magwood, IV

Enclosure:
Responses to Questions

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The correspondence addresses policy issues previously resolved by the Commission, transmits factual information, or restates Commission policy.

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**Response to Questions Raised in Letter Sent to the NRC by
Mr. David Kraft**

1. **Comm. Magwood's rationalization for not adopting filtered vents, 3/22/13:**
 - ***"The use of qualitative factor applied by the staff in this SECY [-12-0157] goes well beyond previous Commission guidance and the use of such an approach renders the Backfit Rule essentially meaningless....The regulatory stability the NRC has developed over the decades would be lost."***

Does preserving "regulatory stability" take precedence over public health and safety?

NRC's mission is to license and regulate the Nation's civilian use of radioactive materials to protect public health and safety, promote the common defense and security, and protect the environment. Public health and safety always takes precedence over regulatory stability. The NRC has an extensive regulatory framework designed to ensure all nuclear power plants, including Palisades, are operated safely. The regulatory framework is designed to ensure the NRC takes actions before public health and safety is compromised. Whenever it is necessary, the NRC will take action to ensure the health and safety of members of the public is protected. My position on filtered vents did not compromise safety.

In the case of Palisades, although the NRC transitioned the plant to the Licensee Response Column (Column I) on October 1, 2012, the NRC has determined that additional inspection is warranted and deviation from the Reactor Oversight Process is appropriate (ADAMS ML12306A367). Approximately 1,000 additional hours of inspections will focus on two areas. The first focus area for inspection is related to follow-up on the licensee's actions to address the finding and observations of the 95002 supplemental inspection team (NRC inspection report, 05000255/2012011). Although the NRC did not find any significant weaknesses in the areas inspected, some of the corrective actions to improve the organization and strengthen the safety culture at the site had not been fully implemented when the supplemental inspection ended. While the NRC found the safety culture adequate to support safe operations, we will inspect future site activities to ensure that the licensee is implementing appropriate corrective actions to improve the organization and strengthen the safety culture on site, as well as assessing the sustainability of these actions. The second focus area for additional inspection is to review several ongoing technical issues at the site. Although these issues, thus far, do not appear to have other than very low safety significance, it is imperative that the causes of these issues, and the licensee's planned corrective actions, are understood to provide reasonable assurance that these issues will not lead to more significant safety concerns. Palisades continues to operate safely.

In summary, the NRC takes actions every day to monitor the operations at power plants to ensure the health and safety of the public, and the environment, are protected.

2. **Your public notification memo of 9/26/12 stated that NRC inspectors "independently verified that the leak did not challenge public health." Please**

Enclosure

describe the methods you chose for verification, and why you believe they are “independent.”

The NRC resident inspectors closely monitored the upward trend in unidentified leakage that developed after the site restarted on July 10, 2012. Through daily reviews of plant activities, the resident inspectors assessed the licensee’s actions to locate the source of the leak. When the licensee shut down on Sunday, August 12, 2012, an NRC inspector was present to visually inspect areas inside containment that were inaccessible during power operation. The inspector independently assessed the location of the leak and what equipment was potentially affected.

The NRC dispatched a Special Inspection team on August 15, 2012, to evaluate the circumstances surrounding the leak from the Control Rod Drive Mechanism (CRDM). The team reviewed technical and design documents, procedures, maintenance records, and corrective action documents; interviewed station personnel and consultants; and performed walk downs of plant equipment. In addition, the Agency contracted an independent laboratory (Pacific Northwest National Laboratory (PNNL)) to perform a review of the licensee’s ultrasonic data generated during the inspections of the CRDM housings to review the results provided by the licensee. Our independent reviews are based on the best available information and were not influenced by the licensee’s conclusions. Information related to the conference calls held between the licensee and the NRC are documented in ADAMS at ML12300A410 and ML12305A255. Additional information is contained in the NRC Special Inspection Report 05000255/2012-012 (ADAMS ML12291A806).

The response to this question was also provided in the October 1, 2012, Public Meeting Summary document through (ADAMS ML12299A383).

- 3. On June 20, 2011, the head of the IAEA Yukiya Amano said in response to the Fukushima disaster, “Even the best safety standards are useless unless they are actually implemented.” Does NRC agree or disagree with this statement?**

I agree with the statement, “Even the best safety standards are useless unless they are actually implemented.” We expect the licensees to implement required safety standards and apply these standards in quality procedures and licensee operations.

- 4. Have you identified the root cause for the perpetual seal leaks at Palisades? If so, do these repetitive leaks not constitute “significant conditions adverse to quality,” as defined by Criterion XVI of Appendix B, CFR Part 50? How many times has Palisades been granted an exemption from the requirement to not just implement corrective actions, but implement action “to preclude repetition” of the seal leaks?**

The licensee believes small particulate debris entering between the control rod drive rotating and stationary seal faces to be the root cause of seal degradation and eventual failure. During the 2009 refueling outage Palisades modified the ventilation to the upper reactor head to increase cooling. Additionally, Palisades worked with the seal vendor to modify composition of the seal faces. The licensee expected this modification to improve CRDM cooling and reduce seal leakage. The modification has not resolved the issue, but has improved seal performance. The most recent outage to repair the seals occurred January 5, 2012. There have been no additional seal repairs since the

refueling outage during the spring of 2012. It is reasonable to conclude that there is improvement in seal performance.

Criterion XVI of Appendix B, CFR Part 50

As you stated, 10 CFR 50 Appendix B, Criterion XVI requires the licensee to establish measures to preclude repetition for “significant conditions adverse to quality.” For conditions that are deemed to be “adverse to quality,” but not “significant,” the licensee is required to promptly identify and correct these conditions.

The NRC does not consider identified control rod drive (CRD) seal leakage at Palisades as a “significant condition” adverse to quality for the following reasons: First, it does not challenge the core cooling safety function. Second, the control rod drive safety function is not impacted by this issue. Leakage from the CRDs has historically started small and slowly risen over time, typically over several months. The licensee monitors CRD seal leak-off temperatures each shift and this parameter has proven to be a reliable, real time indicator of seal degradation. Based on these and other indications discussed below, operators have always had advance indications of seal leakage approaching an amount that, by procedure, requires action. The leakage from CRDs is monitored to ensure leakage is well below the Technical Specification limit of 10 gallons per minute (gpm), which is well within the capacity of coolant makeup systems. We reviewed five years of data and in all cases the plant was shut down before the leakage reached 2 gpm. The administrative limit set by plant procedures requires the plant to shut down when this value is reached. Therefore, the core cooling safety function is not significantly challenged by this seal leakage. In our review, we determined the safety function of the rod drive system is to rapidly insert rods ‘in’ on a reactor trip signal. This safety function depends on the ability of the mechanical gear system to operate under gravity with power removed. Therefore, the rod drive safety function is not impacted by this issue. On this basis, the CRD elevated seal leakage, while an adverse condition to quality does not cause a loss of, or significant challenge to, system safety functions; and consequently, we do not conclude that the seal leakage is a significant condition adverse to quality.

In conclusion, a degraded seal, causing seal leakage higher than design, is not a desirable condition, in that, it requires NRC and licensee resources to monitor and respond when the plant shuts down for planned repairs. The NRC continues to monitor licensee actions with respect to CRD seals and will enforce the regulations that govern those activities to ensure the safety of the plant and the public. There are no exemptions needed for the seals as they are in compliance with regulations, and have corrected the seal leakage when it was identified.

- 5. During the May 2012 site inspection of Palisades by then Chairman Greg Jaczko, he characterized the problems at Palisades as dealing with “the fundamentals” of nuclear power plant operation. When pressed for more details, he described these as 1.) “the basics of management,” 2.) “cross-cutting issues,” dealing with the machine personnel interactions; and 3.) equipment challenges and failures.**

Entergy has owned this plant for 5 years. It boasts hundreds of reactor-years worth of nuclear power operating experience. Yet, according to the former Chair of the Commission, Entergy is still unable to implement the “fundamentals” of nuclear power plant operation.

Please explain in detail how and why the NRC tolerates this contradiction in performance? Does NRC now accept this standard of inability to grasp “the fundamentals” of nuclear plant operation from veteran industry operators as the new norm for permissible operation of nuclear power plants, since you are content to keep the reactors operating while Entergy masters “the fundamentals”?

Since the FAA and the airlines ground defective planes, and auto manufacturers institute recalls of cars for repairs which must be made BEFORE allowing either planes to fly or cars to operate again, why does NRC exempt nuclear power plants from this common industry standard and safety philosophy?

I did not attend Chairman Gregory Jaczko's May 2012 meeting at Palisades. However, I do believe that fundamentals of nuclear power plant operation are very important and play a significant role in plant safety. NRC oversight and inspections of a nuclear power plants occur on a continuous basis, and we evaluate specific violations of rules, and the safety risk that these violations present. The NRC conducts this evaluation of fundamentals using the Reactor Oversight Process (ROP). We believe this is an objective process and we use the information from the ROP to place the plant in one of five columns (I-V) in the action matrix. The higher number columns represent more significant safety issues, which require increased NRC oversight and inspections. Columns I through IV characterize plants that continue to operate safely. The agency reserves Column V for plants that are unsafe to operate and would, therefore, need to shut down. NRC resident inspectors, who are assigned to the site, conduct frequent inspections to ensure that the plant is operating in accordance with its license and with Federal regulations. The resident inspections are randomly conducted during the day, at night, during weekends and during holidays. Staff from the NRC's Region III office and headquarters supports the Palisades resident inspectors. You can find additional information about the NRC's operating reactor oversight program and the ROP action matrix at <http://www.nrc.gov/reactors/operating/oversight.html>.

The NRC has regulations similar to those of the FAA for defective parts. The requirements for reporting defective equipment is contained in *Title 10 Code of Federal Regulations* (CFR) Part 21, “Reporting of Defects and Non-Compliance.” The information related to this regulation can be found at <http://www.nrc.gov/reading-rm/doc-collections/cfr/part021/>. Based on the safety significance of the report, the NRC requires licensees to take appropriate action as required by regulations.

Please be assured that the NRC is providing close oversight of the Palisades Nuclear Plant. The NRC has concluded the plant operates safely. This assessment is performed continuously. The agency expects the licensee to fully address any identified shortcomings, and the NRC will take actions as necessary to ensure the facility continues to be operated safely.

Issues at Byron Plant

We thank you for your observations and your recommendations in this area. We wanted to add that any time we receive information related to issues of potential safety or security concern to the NRC - be it a newspaper article or another source - we review those materials, determine the need for further action and conduct follow-up reviews as necessary. We took appropriate action in response to the Japan Times article related to Byron nuclear plant. If we come across any information that questions the conduct of NRC employees, we refer those concerns to the Office of the Inspector General (OIG). This particular case was referred to OIG as well. We take allegations of discrimination and retaliation against plant employees for raising safety concerns very seriously and pursue those allegations aggressively. We employ a range of actions to ensure plant employees are able to bring such allegations to the attention of the NRC with confidence and that we will take actions to protect their identity. For that reason, we would not take action on third-party allegations of discrimination since we need permission from the individual allegedly discriminated against to pursue an investigation.