



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, IL 60532-4352

August 4, 2016

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

Dear Mr. Kraft:

This is the response of the U.S. Nuclear Regulatory Commission (NRC) to the letter dated June 16, 2016, from you to Ms. Cynthia Pederson, Regional Administrator of the NRC Region III Office. In my acknowledgment letter to you dated June 29, 2016, I had stated that the NRC would be providing you answers to the questions in your letter.

The requirements for power reactor decommissioning may be divided into three phases: initial activities, major decommissioning activities, and license termination activities. The initial activities phase of decommissioning includes the effective date of permanent cessation of operations and encompasses the activities before the licensee either places the power reactor in a storage mode or begins major decommissioning activities. The second phase encompasses activities during the storage period or during major decommissioning activities (i.e., decontamination and dismantlement), or some combination of the two. The third phase consists of the rest of the activities that the licensee undertakes to terminate the license. Further discussion of the decommissioning process can be found in NUREG/BR-0521, "Decommissioning Nuclear Power Plants" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14210A472). Guidance related to the first two phase activities can be found in Regulatory Guide (RG) 1.184, Revision 1, "Decommissioning of Nuclear Power Reactors" (ADAMS Accession No. ML13144A840), and a discussion on the termination phase can be found in RG 1.179, Revision 1, "Standard Format and Content of License Termination Plans for Nuclear Power Reactors" (ADAMS Accession No. ML110490419).

Question 1

Question 1(a): Are we correct in understanding that it requires BOTH the utility's announced written letter of intent AND the removal of fuel from the reactor that constitute the conditions required for permanent closure?

Response: Yes. The regulations in Title 10 of the *Code of Federal Regulations* (CFR) 50.82(a)(1) specify two actions that the licensee must take to permanently shut down a nuclear power plant. Once the decision is made to permanently cease operations, the licensee must provide a certification to the NRC, in writing, within 30 days. In accordance with 10 CFR 50.4(b)(8), the notification must contain the date on which the power generation operations ceased or will cease. Following permanent shutdown, the licensee must remove the fuel from the reactor vessel and submit a second written certification to the NRC confirming its action.

The regulations do not specify a time limit for the permanent removal of fuel or the schedule for submitting the corresponding certification to the NRC. Pursuant to 10 CFR 50.82(a)(2), following the NRC's docketing of the two certifications, the 10 CFR Part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel.

Question 1(b): And, to follow up for clarity, that either alone would not constitute an act sufficient enough to result in permanent, irreversible termination of the operating license by NRC and resulting closure?

Response: Filing of a certification, pursuant to 10 CFR 50.82(a)(1)(i), of a determination to cease operations alone would not be sufficient to result in permanent cessation of operations. If the licensee has not submitted its certification of permanent removal of fuel from the reactor vessel, pursuant to § 50.82(a)(1)(ii), there is no regulation that would prevent the licensee from changing its decision to cease operations by retracting its certification to permanently cease operation. As noted in the response to Question 1(a) above, in accordance with 10 CFR 50.82(a)(2), once a licensee has submitted both certifications of permanent shutdown and permanent removal of fuel from the reactor vessel and the NRC docket both certifications, the license no longer authorizes operation of the reactor or emplacement of the fuel back into the reactor vessel.

The docketing of the two certifications will result in a permanent cessation of operations but will not result in permanent irreversible termination of the operating license. A facility that has permanently ceased operations and removed fuel from the reactor vessel and is being decommissioned maintains the same license that it had during operations. Pursuant to 10 CFR 50.51(b), the license for a facility that has permanently ceased operations will continue to be in effect beyond its expiration date until the Commission notifies the licensee in writing that the license is terminated.

As a practical matter, once major decommissioning activities begin, there will be a point in time in which major structures, systems, and components will be dismantled and shipped offsite and the possibility that a licensee would consider applying to the NRC to reauthorize operation would become significantly less likely.

All power reactor licensees must submit an application for termination of the license pursuant to 10 CFR 50.82(a)(9) (termination is Phase 3 of the decommissioning process). The operating license cannot be terminated until the licensee has demonstrated to the NRC that the licensee has met the applicable regulatory criteria for site release. The licensee must demonstrate that the facility has been radiologically decontaminated in accordance with the NRC-approved license termination plan. The NRC will determine if the dismantlement has been performed according to the approved termination plan and will verify the licensee's final radiation surveys by reviewing and/or conducting separate surveys before considering termination of the license.

Question 2: Many reactors currently operating have been in inoperable conditions for years at a time for various reasons, yet retained their operating licenses and restarted at a later date. Is there anything in the 10 CFRs or NRC regulations that would prohibit Exelon from placing a reactor in a state of voluntary "extended outage" without terminating the operating license, provided that during that period, Exelon continued to meet all safety and security conditions and regulations of an operating reactor? If yes, please cite the 10 CFR sections referenced.

Response: No, the NRC's regulations do not prohibit a licensee from voluntarily placing its facilities in an extended shutdown, while continuing to meet all safety and security requirements as outlined in the facility's operating license, without terminating the operating license.

Question 3: NRC is well known for its vast generosity in granting license waivers and variances for a myriad of conditions and reasons, if petitioned by a utility to do so. In fact NRC is currently permitting the Indian Point reactor to continue operating WITHOUT a valid license, via these highly discretionary methods. Is there anything in the [10 CFR] or NRC regulations that would explicitly prohibit Exelon from PETITIONING NRC for a license variance or waiver that would reverse an initial termination of license, provided the reactor was still able to meet all operational criteria for restart at a later date? If yes, please cite the 10 CFR sections referenced.

Response: Indian Point Nuclear Generating Unit Nos. 2 and 3 ("Units 2 and 3") filed a timely application for license renewal, and are continuing to operate under the "timely renewal" provisions of Section 558(c) of the Administrative Procedure Act ("APA") and 10 CFR 2.109. The regulation in 10 CFR 2.109, "Effect of timely renewal application," paragraph (b) states the following:

If the licensee of a nuclear power plant licensed under 10 CFR 50.21(b) or 50.22 files a sufficient application for renewal of either an operating license or a combined license at least 5 years before the expiration of the existing license, the existing license will not be deemed to have expired until the application has been finally determined.

The NRC received the Indian Point Units 2 and 3 license renewal application on April 30, 2007, and determined it was sufficient for review on July 25, 2007. The current operating licenses for Indian Point Units 2 and 3 were set to expire at midnight on September 28, 2013, and December 12, 2015, respectively. Because Entergy Nuclear Operations, Inc. filed a timely and sufficient application, it is allowed to continue to operate Indian Point Units 2 and 3 under its existing operating licenses until the NRC makes a final determination on the license renewal application. Therefore, Indian Point is operating under a valid license in accordance with the APA and NRC regulations.

There are no regulations that would prohibit a licensee or any individual from requesting an exemption from the applicable NRC regulations related to termination of a license or following the certification that fuel has been permanently removed from the reactor vessel. If such an exemption to regulations in Part 50 of 10 CFR were requested, the applicant for the exemption would have to meet the regulatory requirements for an exemption that are set forth in 10 CFR 50.12. The exemption process continues to ensure protection of public health and safety of the environment for transitioning plants. Exemption requests are reviewed by the NRC on a license specific basis and, for decommissioning, are typically requested to reflect the reduction in risks as an operating reactor transitions to decommissioning.

Question 4: Is there anything in the 10 CFRs or NRC regulations that would explicitly prohibit NRC from granting a reversal of license termination (or, put another way, a "reinstatement" of a terminated license) at a later date, provided a reactor was still able to meet all operational criteria for restart and operation at a later date? If yes, please cite the 10 CFR sections referenced.

Response: No. There is nothing in the NRC regulations that would explicitly prohibit the NRC from granting a reversal of license termination. As discussed above in the response to Q.1(b), the NRC shall terminate the license in accordance with 10 CFR 50.82(a)(11), once the NRC determines that the dismantlement has been performed according to the approved termination plan and will verify the licensee's final radiation surveys by reviewing and/or conducting separate surveys before considering termination of the license.

With respect to the certification that fuel has been permanently removed from the reactor vessel, there are no regulations that would explicitly prohibit NRC from reauthorizing operation. The licensee would have to apply to the NRC to authorize operation and demonstrate that they meet all of the 10 CFR part 50 requirements. The NRC would have to determine whether there is reasonable assurance that all of the requirements have been met.

Question 5: Please list the conditions under which NRC might REFUSE to accept Exelon's request for terminating these licenses.

Response: A request to terminate a license must be accompanied by a license termination plan. The NRC will approve the license termination plan in accordance with 10 CFR 50.82(a)(10) if the licensee can demonstrate that the remainder of decommissioning activities will be performed in accordance with the associated requirements, will not be inimical to the common defense and security or to the health and safety of the public, and will not have a significant effect on the quality of the environment. A more detailed discussion of the specific criteria for termination can be found in RG 1.179 and NUREG-1700, Revision 1, "Standard Review Plan for Evaluating Nuclear Power Reactor License Termination Plans," (ADAMS Accession No. ML031270391). The NRC will terminate the license in accordance with 10 CFR 50.82(a)(11), once the NRC determines that the dismantlement has been performed according to the approved termination plan and will verify the licensee's final radiation surveys by reviewing and/or conducting separate surveys before considering termination of the license. Should the licensee be unable to demonstrate they meet these requirements, the NRC will make the licensee address the outstanding items then grant termination of the license once the criteria have been met.

The NRC has no authority to prevent a licensee from deciding to permanently cease operation and permanently remove fuel from the reactor vessel. As stated previously, by regulation, once both those certifications are docketed by the NRC, the licensee is no longer authorized to operate the reactor. Upon transitioning from an operating reactor to decommissioning, the licensee is expected to take actions necessary to decommission and decontaminate the facility while continuing to maintain the facility in a safe condition. The NRC, however, has the authority to deny a request to terminate a Part 50 license, unless and until the required conditions for such termination have been satisfied.

While the NRC cannot prevent a licensee from electing to cease operation and transition to decommissioning, the NRC can stop decommissioning activities in certain situations. The

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NRC's regulation at 10 CFR 50.82(a)(6) states that the licensee must not perform any decommissioning activity that: (1) forecloses release of the site for possible unrestricted use; (2) causes any significant environmental impact not previously reviewed; or (3) results in there no longer being reasonable assurance that adequate funds will be available for decommissioning. If any decommissioning activity could not meet these conditions, the licensee is prohibited from undertaking the activity until it submits a license amendment request that describes the proposed activity and the potential impact associated with that activity.

Please feel free to contact Ms. Prema Chandrathil with any further questions. Ms. Chandrathil can be reached at 630-829-9663.

Sincerely,

/RA Christine Lipa Acting for/

John B. Giessner, Director
Division of Nuclear Materials Safety

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/RA Christine Lipa Acting for/

John B. Giessner, Director
Division of Nuclear Materials Safety

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