

September 5, 2003

Ms. Sandra Lindberg  
Clinton, IL

SUBJECT: RESPONSE TO YOUR LETTER DATED JUNE 11, 2003, REGARDING THE  
EARLY SITE PERMIT APPLICATION REVIEW PROCESS FOR THE CLINTON  
NUCLEAR POWER STATION

Dear Ms. Lindberg:

This letter responds to the comments made in your letter of June 11, 2003, to Michael Scott, Nanette Gilles, and Thomas Kenyon of the U.S. Nuclear Regulatory Commission (NRC) staff regarding the early site permit (ESP) application review process for the Clinton Nuclear Power Station.

While the subject line of your letter indicates the letter provides comments on the NRC's draft guidance for ESPs, we found no specific references to draft Review Standard RS-002, "Processing Applications for Early Site Permits," in your letter. Nevertheless, we have considered whether your comments would warrant revision to RS-002. Based on our review of your comments, we do not believe the comments warrant changes in our review guidance. However, we have attempted in this letter to respond to your concerns.

We will perform a detailed review of any ESP application against safety criteria established to provide reasonable assurance that issuance of an ESP would not jeopardize public health and safety. This review will only result in issuance of an ESP if the NRC determines that the ESP application meets the applicable standards and requirements of the Atomic Energy Act and NRC regulations.

Comment 1: Storage of nuclear waste, and Comment 2: Disposal of spent nuclear fuel

Your first comment states that the ESP review process should address spent fuel storage issues. The scope of review of an ESP application is limited. Issues associated with storage and disposal of nuclear waste are not addressed in the ESP process.

The Commission has determined that spent fuel generated in any reactor can be stored safely and without significant environmental impacts at the reactor's spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor (10 CFR 51.23). Further, the Commission believes that there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the 21<sup>st</sup> century and that sufficient repository capacity will be available within 30 years of the end of the licensed life for operation of any reactor to dispose of the commercial high-level waste and spent fuel originating in that reactor and generated up to that time. The rule is supported by the Commission's Waste Confidence Decision and its subsequent reviews. Additional information on this topic can be found in the *Federal Register* under the headings,

“Requirements for Licensee Actions Regarding the Disposition of Spent Fuel Upon Expiration of Reactor Operating Licenses” (49 FR 34688, August 31, 1984); “Waste Confidence Decision Review” (55 FR 38474, September 18, 1990); and “Waste Confidence Decision Review: Status” (64 FR 68005, December 6, 1999). (*Federal Register* notices from 1994 to present may be downloaded at <http://www.gpoaccess.gov/fr/index.html>. Information on obtaining older notices can also be found at this site).

Your comment also refers to NRC reports on the consequences of a catastrophic spent fuel pool (SFP) accident at Indian Point and asks whether this assessment would also hold true for the Clinton reactor should a catastrophic SFP accident occur at Clinton. The study we believe was referenced in the New York Times editorial did not specifically address Indian Point, but rather addressed a hypothetical plant site with a very high surrounding population density. The author of the editorial, Mr. Matthiessen, evidently inferred that the report could be addressing Indian Point.

The NRC only allows possession of nuclear materials after concluding that NRC regulations have been met and that there is reasonable assurance that public health and safety will be protected in the event of such use. The Commission recently issued a document that provides perspective on the safety of spent fuel storage. This document, which can be found on the NRC’s web site at <http://www.nrc.gov/reading-rm/doc-collections/congress-docs/correspondence/2003/feiveson-letter.pdf>, concludes that spent fuel stored in both wet and dry storage configurations is safe and that measures are in place to adequately protect the public.

Your letter also states a concern about “ever-increasing” amounts of spent fuel at the Clinton site and asks what the NRC’s upper limit is for onsite storage of spent nuclear fuel there. You stated in your letter that an Exelon representative indicated at the April 2003 meeting that the spent fuel storage pool at Clinton is currently at 60 percent capacity and that Exelon plans to apply for an amendment to their license in order to rerack the spent fuel storage area to increase the capacity to store spent fuel. We have confirmed that these are accurate statements. The current limit for storage in the Clinton spent fuel pool is 2512 fuel bundles. At this time, Clinton does not use dry cask storage.

### Comment 3: Transportation of nuclear waste

Your letter states a concern regarding consideration of nuclear waste transportation issues. During its review of ESP applications, the NRC staff will assess the potential impacts of transportation of nuclear fuel and waste. The staff will document its conclusions in the environmental impact statement concerning the potential ESP. If future shipments of nuclear waste were to occur from a new facility, such shipments would be governed by NRC and Department of Transportation regulations. These regulations govern all aspects of shipment of radioactive materials. Implementation of and compliance with these regulations provide reasonable assurance that public health and safety will be protected in the transportation of nuclear waste.

Comment 4: Plant parameter envelope

Your comment correctly notes that the NRC's regulations for contents of an ESP application do not require an applicant to decide on a specific design at the ESP stage, though the applicant is required to provide design-related information that bears significantly on the acceptability of the site. While we have not yet received an ESP application from Exelon, the company has indicated that it will use a plant parameter envelope (PPE) as a surrogate for specific design information that would otherwise support Exelon's site safety assessment and environmental report. The applicant's PPE values are intended to provide bounding design parameter information for a range of reactor designs.

The NRC staff will assess the adequacy of the proposed site to host a reactor or reactors with characteristics defined by the PPE. Should Exelon apply for and receive an ESP, and decide in the future to build a reactor or reactors, it would need to select a specific design or designs and seek a license to construct a reactor (or reactors) from the NRC. Exelon would then be required to demonstrate that the characteristics of the actual plant or plants to be constructed would be bounded by the PPE. Because of the requirement to verify the actual design against the PPE before beginning construction of a reactor, the use of a PPE at the ESP stage does not represent a risk to the health and safety of the public.

Comment 5: Financial considerations

Your letter expresses concern about the cost of a nuclear power plant and its ability to provide power at a competitive rate. As previously stated, an ESP holder is not authorized to construct or operate a nuclear power plant, so NRC regulations do not require a review of the ESP applicant's financial qualifications to build, operate, and decommission a new nuclear power plant, nor its financial ability to deal with a potential accident. All of these issues must be addressed before the NRC issues a license to construct and operate a nuclear power plant, and the NRC will at that time ensure the applicant is financially qualified for all aspects of owning and operating a nuclear reactor or reactors.

Regarding rate increases, the NRC does not regulate or review electric utility rates. Such issues are usually within the purview of public utility commissions.

Comment 6: Effects on Clinton Lake

Your comment states concern about temperature rises in Clinton Lake as a result of the operation of two reactors there. The NRC will assess the environmental impacts associated with discharge of heat from operation of a new reactor or reactors at the Clinton site into the environment (including such discharge into Lake Clinton) at the ESP stage.

Your letter also asks how the NRC will require Exelon (co-owner of AmerGen Energy Company, LLC) to compensate DeWitt County should security concerns require closure of Clinton Lake. The NRC has no authority to require compensation for any security measure taken.

S. Lindberg

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We hope you have found the answers to your comments to be helpful. If you have any questions regarding this letter, please contact Nanette Gilles at (301) 415-1180.

Sincerely,

***/RA/***

James E. Lyons, Program Director  
New, Research and Test Reactors Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Project No. 718

cc: See next page

S. Lindberg

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ACCESSION NO. ML031950337 \* See previous concurrence

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