

**NUCLEAR REGULATORY COMMISSION****[Docket Nos. 50-237 and 50-249]****Commonwealth Edison Company; Dresden Nuclear Power Station, Units 2 and 3; Environmental Assessment and Finding of No Significant Impact**

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an amendment to Facility Operating Licenses Nos. DPR-19 and DPR-25, issued to Commonwealth Edison Company (ComEd, or the licensee) for operation of the Dresden Nuclear Power Station, Units 2 and 3, located in Grundy County, Illinois.

**Environmental Assessment***Identification of the Proposed Action*

The proposed action would add the Siemens Power Corporation RODEX2A methodology to the Dresden, Units 2 and 3, Technical Specifications (TSs) list of approved methodologies that may be used to determine core operating limits. The proposed action also adds a condition to the Dresden, Units 2 and 3, licenses to limit the maximum rod average burnup to 60 gigawatt-days per metric ton of uranium (GWD/MTU). Adding the RODEX2A methodology to the TSs will permit the use of extended fuel burnup limits. RODEX2A supports maximum rod average burnups to 62 GWD/MTU and uranium-235 (U-235) enrichments up to 5 percent by weight. However, the license condition will limit burnup to 60 GWD/MTU until the completion of an NRC Environmental Assessment supporting increased limits.

The proposed action is in accordance with the licensee's application for amendment dated August 3, 1999, as supplemented by letter dated February 25, 2000.

*The Need for the Proposed Action*

The proposed action is needed in order for the licensee to have the flexibility to use fuel with increased burnup. The changes in operating parameters and limits will allow longer operating cycles and result in fewer fuel assemblies being needed.

*Environmental Impacts of the Proposed Action*

The NRC has completed its evaluation of the proposed action and concludes that, although the extended burnup may slightly change the mix of radionuclides that might be released in the event of an accident, there are no significant adverse environmental impacts associated with the proposed action.

The staff published "Extended Burnup Fuel Use in Commercial LWR's;

Environmental Assessment and Finding of No Significant Impact" on February 29, 1988 (53 FR 6040). This generic environmental assessment of extended fuel burnup in light water reactors found that "no significant adverse effects will be generated by increasing the present batch-average burnup level of 33 GWD/MTU to 50 GWD/MTU or above as long as the maximum rod average burnup level of any fuel rod is no greater than 60 GWD/MTU." In addition, the environmental impacts of transportation resulting from the use of higher enrichment fuel and extended irradiation were published and discussed in the staff assessment entitled, "NRC Assessment of the Environmental Effects of Transportation Resulting from Extended Fuel Enrichment and Irradiation," dated July 7, 1988. That assessment was published in connection with an Environmental Assessment related to the Sherron Harris Nuclear Plant, Unit 1, which was published in the **Federal Register** on August 11, 1988 (53 FR 30355), as corrected on August 24, 1988 (53 FR 32322). In these assessments, collectively, the staff concluded that the environmental impacts summarized in Table S-3 of 10 CFR 51.51 and in Table S-4 of 10 CFR 51.52 for a burnup level of 33 GWD/MTU and enrichments up to 4 weight percent U-235 are conservative and bound the corresponding impacts for burnup levels up to 60 GWD/MTU and enrichments up to 5 weight percent U-235. These findings are applicable to the proposed action at Dresden which will limit burnup to 60 GWD/MTU and allow enrichments up to 5 weight percent U-235.

The proposed action will not significantly increase the probability or consequences of accidents, no significant changes are being made in the types of any effluents that may be released offsite, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential nonradiological environmental impacts, the proposed action does not involve any historic sites. It does not affect nonradiological plant effluents and has no other environmental impact. Therefore, there are no significant nonradiological impacts associated with the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

*Alternatives to the Proposed Action*

As an alternative to the proposed action, the staff considered denial of the proposed action (*i.e.*, the "no-action" alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

*Alternative Use of Resources*

This action does not involve the use of any resources not previously considered in the Final Environmental Statement for the Dresden Nuclear Power Station, Units 2 and 3, dated November 1973.

*Agencies and Persons Consulted*

In accordance with its stated policy, on May 12, 2000, the staff consulted with the Illinois State official, Frank Niziolek of the Illinois Department of Nuclear Safety, regarding the environmental impact of the proposed action. The State official had no comments.

**Finding of No Significant Impact**

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letters dated August 3, 1999, as supplemented on February 25, 2000, which are available for public inspection at the NRC Public Document Room, The Gelman Building, 2120 L Street, NW., Washington, DC. Publicly available records will be accessible electronically from the ADAMS Public Library component on the NRC Web site, <http://www.nrc.gov> (the Electronic Reading Room).

Dated at Rockville, Maryland, this 11th day of September 2000.

For the Nuclear Regulatory Commission.

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