

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION  
WASHINGTON, DC 20555-0001

August 23, 2007

**NRC REGULATORY ISSUE SUMMARY 2007-21  
ADHERENCE TO LICENSED POWER LIMITS**

**ADDRESSEES**

All holders of operating licenses for nuclear power reactors, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

**INTENT**

The U.S. Nuclear Regulatory Commission (NRC) is issuing this regulatory issue summary (RIS) to remind licensees of the regulatory requirement to adhere to the Maximum Power Level identified in their respective plant licenses. This RIS requires no action or written response on the part of an addressee.

**BACKGROUND**

Nuclear power reactors in the United States are authorized to operate through facility operating licenses issued by the NRC. Each license specifically addresses the maximum power level at which the respective reactor may be operated. While the exact wording in the license section titled "Maximum Power Level" has varied over time, each license identifies the maximum power level stated in megawatts thermal.

Typical wording of the maximum power level section includes authorization to operate the facility:

- "at steady-state power levels up to a maximum of xxxx megawatts (thermal)."
- "at steady state reactor core power levels not in excess of xxxx megawatts thermal."
- "at reactor core power levels not in excess of xxxx megawatts thermal (100 percent rated power)."

The wording differences from one license to another coupled with the recognition that slight changes in thermal power may occur due to expected variances in plant parameters, led to the decision to provide the NRC inspection staff with guidance on how to disposition instances where the thermal power limits were marginally exceeded for brief periods.

By memorandum dated August 22, 1980, E.L. Jordan, the Assistant Director for Technical Programs in the NRC's Office of Inspection and Enforcement, provided regional inspection staff with specific guidance for use in determining when enforcement action related to exceeding

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licensed power limits was appropriate. The enforcement guidance was based on the recognition that there was a need for NRC inspectors to have a uniform basis for enforcing maximum licensed plant power limits.

That guidance was intended for NRC inspection staff, but some licensees have used the guidance for the operation of their nuclear power plants. For example, during a routine inspection in late 1989, inspectors found that the licensee intentionally operated the reactors at the Sequoyah site above the licensed limit of rated thermal power (i.e., over 100 percent) for brief periods. The licensee exceeded the maximum licensed power levels for the reactors because it had inappropriately used the enforcement guidance as operational guidance. At that time, NRC's technical staff reviewed the guidance that had been provided and confirmed that the information was never intended as operational guidance for licensees and had been provided solely as ***enforcement guidance to NRC inspectors***.

More recently, NRC inspections uncovered similar issues at the Kewaunee nuclear power plant in 2005 and at the Dresden Unit 3 nuclear power plant in 2006. At Kewaunee, although reactor power was recognized to be above the thermal power limit, operators did not take action to immediately reduce power. When the power dropped to below the licensed limit, the operators took action to raise the power above the licensed limit. The NRC staff attributed both of these operator actions to the licensee's site operating philosophy that inappropriately used enforcement guidance intended for NRC inspectors as operational guidance. At Dresden, the licensee also provided operational guidance based on the NRC's 1980 internal enforcement guidance to inspectors. At both Kewaunee and Dresden, each licensee had inappropriately authorized operation of the facility in excess of the maximum power level as specified in the license. Although the maximum power level was only marginally exceeded, and the safety significance was very low, the licensees were in violation of their respective facility operating license.

Following the issuance of the enforcement guidance on maximum power level in 1980, significant changes have been made in the NRC's inspection program and its approach to determining if enforcement action is warranted. The staff has considered the current need for the enforcement guidance on exceeding the maximum power level promulgated in 1980 and has determined that the guidance is no longer needed. The existing Reactor Oversight Process (ROP) tools contain the appropriate guidance for screening and dispositioning performance issues related to exceeding the maximum power level for a reactor. For example, the Kewaunee and Dresden issues discussed above were both addressed by the ROP significance determination process. Accordingly, the guidance provided in the 1980 memorandum has been superseded.

## **SUMMARY OF ISSUE**

Licensees are reminded that there is no existing regulatory guidance condoning or authorizing operation of any nuclear power plant in excess of the maximum power level specified in the facility's operating license. While recognizing that thermal power may rise slightly due to normal changes in plant parameters, operators are expected to take prompt corrective action to reduce thermal power whenever it is discovered to be above the licensed limit. Licensees may not intentionally operate or authorize operation above the maximum power level as specified in the license.

## **BACKFIT DISCUSSION**

The NRC has evaluated this RIS against the criteria of Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.109 and determined that it does not represent a backfit. Under section 50.109, a backfit can be defined as a proposed action that is a modification of the procedures required to operate a facility and may result from the imposition of a regulatory staff position that is either new or different from a previously applicable staff position.

The E.L. Jordan memorandum, dated August 22, 1980, is not considered an "applicable staff position" for several reasons. The Jordan memo does not convey a staff position that applies to licensees. The text of the Jordan memo constitutes enforcement discretion guidance and explicitly provides that the guidance in that memo was for only internal NRC use. Licensees had no basis for relying on the Jordan memo for their operating procedures. Further, the NRC has taken enforcement action against licensees that have exceeded the maximum power level specified in their operating license, and the NRC has not explicitly approved a licensee's practice of intentionally exceeding the maximum power level specified in its operating license. Allowing NRC inspectors to permit licensees to exceed the maximum power level in certain situations, as the Jordan memo suggests, is not considered a "staff position" when the NRC staff has also taken enforcement action against licensees when they have intentionally exceeded the maximum power level in their licenses.

In this case, the "applicable staff position" for maximum thermal power limit is the operating license. Explaining that the ROP supersedes the guidance in the 1980 Jordan memo and reminding holders of operating licenses for nuclear power reactors to adhere to the maximum power level identified in their respective operating licenses, do not represent a new or different staff position or otherwise constitute a backfit under 10 CFR 50.109.

## **FEDERAL REGISTER NOTIFICATION**

A notice of opportunity for public comment on this RIS was not published in the *Federal Register* because this RIS is informational, and does not represent a departure from current regulatory requirements.

## **PAPERWORK REDUCTION ACT STATEMENT**

This RIS does not contain any information collections and, therefore, is not subject to the requirements of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501, et seq.).

## **CONGRESSIONAL REVIEW ACT**

This RIS is not a rule as designated by the Congressional Review Act (5 U.S.C. §§ 801-886) and, therefore, is not subject to the Act.

## CONTACT

This RIS requires no specific action or written response. If you have any questions, please contact the technical contacts listed below or the appropriate regional office.

**/RA/**

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