

April 24, 2008

Mr. Mike Schoppman
LATF Coordinator
Nuclear Energy Institute
1776 I Street, NW, Suite 400
Washington, DC 20006-3708

Dear Mr. Schoppman,

The Nuclear Regulatory Commission (NRC) has reviewed the Nuclear Energy Institute Position Statement (Draft Revision 4), Guidance to Licensees on Complying with the Licensed Power Limit, dated 3/18/2008 (ADAMS ML080850463).

Enclosed you will find NRC comments and questions that will help us better understand the reasons for some of the specific guidance. A response to these questions may help us align our inspection guidance with the Licensee guidance you are proposing.

Please contact Mr. Tim Kolb at 301-415-1428 or e-mail Timothy.Kolb@nrc.gov to arrange for a public meeting to discuss the responses.

Sincerely,

/RA/ Timothy Kolb for

Timothy Kobetz, Chief
Reactor Inspection Branch
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation

Enclosure: as stated

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1.0 ISSUE DESCRIPTION

On August 23, 2007, the NRC published Regulatory Issue Summary (RIS) 2007-21, "Adherence to Licensed Power Limits," to remind licensees 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 (i.e., the "licensed power limit"). In addition, the RIS notes that internal NRC inspection guidance is provided for use by NRC inspectors and is not intended as operational guidance to licensees.

The RIS recognizes that normal changes in plant parameters can cause small fluctuations in thermal power. However, licensees are expected to take prompt action to reduce thermal power whenever it is found above the licensed limit. More importantly, licensees may not intentionally operate or authorize operation above the maximum power level specified in the license.

2.0 CURRENT SITUATION

The NRC is in the process of revising its guidance to the regional inspection staff for use in determining when enforcement action related to exceeding the licensed power limit is appropriate. Previous NRC guidance dating from the 1980s has been superseded. The revised inspection guidance will be used in conjunction with the Reactor Oversight Process (ROP) to screen and disposition performance issues related to exceeding the maximum power level for a reactor.

The purpose of this NEI Position Statement is to provide guidance to licensees that will complement NRC guidance to inspectors with respect to compliance with the licensed power limit.

3.0 INDUSTRY POSITION

Rather than attempting to define "steady state reactor core thermal power level" in a way that would apply to all operating reactor designs and operating practices, this paper proposes a standard framework for identifying; evaluating, correcting, and reporting overpower situations.

4.0 GUIDANCE TO LICENSEES

4.1 Steady State

The term "steady state" implies that temperatures, pressures, and flows are stable such that the nominal value of reactor power remains stable, subject to statistical uncertainties and normal fluctuations, including bi-stable flow for BWRs.

4.2 Licensed Power Limit

Operating reactor compliance with the Licensed Power Limit (LPL) is demonstrated by the following process:

- (1) No actions are allowed that would intentionally raise core thermal power above the LPL for any period of time. Small, short-term fluctuations in power that are not under the direct control of a license reactor operator (e.g., fluctuations caused by bi-stable flow in some boiling water reactors) are not considered intentional.
- (2) Closely monitor thermal power during full power operation with the goal of maintaining the two-hour thermal power average below the LPL.
- (3) If the core thermal power average for a shift is found to exceed the LPL, take timely action to reduce core thermal power to less than or equal to the LPL. A shift can be no longer than 12 hours.

4.3 Pre-planned Evolutions

For pre-planned evolutions that could affect primary or secondary temperatures, pressures, or flows:

- (1) Determine if the evolution is expected to cause a transient increase in reactor power.
- (2) If the evolution is expected to cause an increase in actual reactor power that could exceed the LPL value, prudent action based on prior performance or evaluations should be taken to reduce power prior to performing the evolution.

4.4 Performance Deficiency Examples

- (1) Intentionally raising power above the LPL for any period time.
- (2) Failure to recognize that a 2-hr average exceeds the LPL.
- (3) Permitting the core thermal power average for a shift to exceed the LPL.
- (4) Not recognizing the potential for pre-planned evolution to cause a power increase.
- (5) Failure to take prudent action prior to a pre-planned evolution.

4.5 Reporting

Comply with the reporting requirements of 10 CFR 50.72 and 10 CFR 50.73.

NRC Comments:

- 1) Section 3.0 – Consider revising this statement since the reason for this guidance is to provide a definition of “steady state” as it applies to maintaining steady state power at or below the licensed thermal power limit.
- 2) Section 4.1 – This statement does not address a time frame or what to monitor for ensuring steady state operation. Would it help to add these as part of the statement?
- 3) Section 4.2 (2) – Explain why you chose 2 hours and not 15 min, 30 min or 1 hour as a goal for maintaining average power below the licensed limit. These shorter time frames are capable of being trended on process computers.
- 4) Section 4.2 (2) – Explain what is meant by “goal”.
- 5) Section 4.2 (2) – Explain why the 2 hour goal is to maintain power “below” the LPL and not “at or below” the LPL.
- 6) Section 4.2 (3) – This appears to allow operation above the licensed limit without taking prompt action to reduce power below the LPL. Example: A dilution is performed which results in power increasing above LPL and then letting Xenon build up to lower power such that the shift average power is below the LPL but the 1 hour or 2 hour average is above the LPL.
- 7) Section 4.4 – Explain if this is intended to be an all-inclusive list of performance deficiencies.
- 8) Section 4.4 (3) – Explain how you would get to this point and not already have a performance deficiency for exceeding the LPL.
- 9) Should Section 4.2 items coincide with Section 4.4 as performance deficiencies?
- 10) Determine if you need guidance to ensure licensees are not exceeding their licensed limit if the process computer or thermal power indication is not operational.