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Chief, Rules & Directives Branch
Office of Administration, Mail Stop T6-D59
United States Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: COMMENTS SUBMITTED IN RESPONSE TO *FEDERAL REGISTER* NOTICE (MARCH 31, 2004, VOL. 69, NO. 62, PAGE 16980) ABOUT DRAFT NRC GENERIC LETTER 2003-XX: POTENTIAL IMPACT OF DEBRIS BLOCKAGE ON EMERGENCY RECIRCULATION DURING DESIGN BASIS ACCIDENTS AT PRESSURIZED WATER REACTORS

Good Day:

In response to the notice of opportunity for public comment on a draft generic letter about PWR containment sump performance published in the *Federal Register* (Vol. 69, No. 62, pp. 16980-16987), I hereby submit the following comments on behalf of the Union of Concerned Scientists:

1. According to the notice, "In response to these ECCS suction strainer plugging events, the NRC issued several general communications, including Bulletin 93-02... These bulletins requested that BWR licensees implement appropriate procedural measures, maintenance practices, and plant modifications to minimize the potential for the clogging of ECCS suction strainers by debris accumulation..." (page 16981, col. 3). And, "If, in the course of preparing a response to the requested information, an addressee determines that its facility is not in compliance with the Commission's requirements, the addressee is expected to take appropriate action in accordance with the requirements of Appendix B to 10CFR Part 50 and the plant technical specifications to restore the facility to compliance" (page 16984, col. 2). And, "Therefore, the information requested in this generic letter is necessary to confirm plant-specific compliance with 10 CFR 50.46 and other existing regulations" (page 16985, col. 3). And, "Under the provisions of Section 182a of the Atomic Energy Act of 1954, as amended, and 10CFR 50.54(f), this generic letter transmits an information request for the purpose of verifying compliance with existing applicable regulatory requirements (see the Applicable Regulatory Requirements section of this generic letter)" (page 16986, col. 2). And finally, "No backfit is either intended or approved by the issuance of this generic letter" (page 16986, col. 2).

   In sum, the NRC will not be asking PWR owners to meet some new regulatory requirement. Instead, the NRC will be asking PWR owners to state how they do now or will in the future comply with existing regulatory requirements.

   During public meetings conducted by the NRC on May 19, 2004, members of the Nuclear Energy Institute (NEI) and representatives of NRC licensees asserted that the language in the draft generic letter placed an undue burden on them. They argued that the draft generic letter would have them conduct two sets of analyses: (1) to determine if the existing containment sump configuration complied with regulations, and (2) to determine if the existing containment sump configuration

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conformed with net positive suction head margins as calculated using some methodology allegedly to be submitted by NEI and approved by NRC later this year. They asserted that they would perform the second analysis, but opposed doing the first analysis because it was, in the words of Mr. Tony Pietrangelo of NEI, "distracting."

The industry representatives also asserted that the second analysis was overly conservative and would lead to a gross over-design of the containment sump.[1] Consequently, it was their stated view that results from the second analysis indicating that plant medications were necessary did not constitute proof that the existing configuration did not comply with regulations.

The approach advocated by industry is flawed because it would omit any determination as to the compliance of the existing configuration to the regulations. According to the industry representatives, the analysis using the to-be-approved methodology has the remarkable quality of demonstrating compliance with the regulations (a) if the initial screening shows no modifications are necessary, (b) if the initial screening plus "refinements" shows no modifications are necessary, or (c) once modifications to the plant are completed. They contend (or pretend) that results from this methodology can only show "goodness," not "badness." That's preposterous and/or absurd.

The industry argues that the determination of whether the existing configuration complies with regulations is an undue burden on them. Yet in the same breath, they talk about using methodology that biases them towards installing grossly over-designed containment sumps. This cognitive dissonance strains creditability to the point of disbelief.

If the NRC buckles to this industry pressure, there will be adverse consequences. First, absent a plant-specific determination of non-compliance, the NRC lacks the means to compel any licensee who balks about upgrading the containment sump to do so. If the to-be-submitted-and-approved methodology is considered to be "overkill," any analysis using it showing that a plant lacks adequate net positive suction head does not provide the NRC staff with sufficient grounds for compelling that licensee to implement the modifications suggested by the results. After all, the NRC cannot impose such a requirement without a full-fledged cost-benefit backfit analysis.

The other major adverse safety implication from failure to make compliance determinations stems from the NRC's move to risk-informed regulation. Absent a plant-specific determination of non-compliance, there will be no licensee event reports (LERs) about operability impairments. Thus, no LERs will go into the databases on equipment and system reliability/performance. Thus, no LERs will go into the NRC's Accident Sequence Precursor program. Thus, this longstanding safety problem will not appear on the risk radar and future risk-informed regulatory decisions will be based on incomplete information. The fact is that many reactors operated for many years with inadequate net positive suction head for emergency core cooling systems under certain design basis conditions. Compliance determinations are absolutely necessary so as to provide information to the risk databases on which reactors and for how long. Had the NRC stayed with deterministic regulation, then fixing the containment sump problem without compliance determinations would not little consequence. The shift to risk-informed regulation carries with it the obligation on the part of NRC and industry to collect and apply all plant information – not just that information that yields favorable results.

Another adverse consequence from failure to make compliance determinations relates to the to-be-submitted-and-approved methodology being advertised as overly conservative and yielding grossly over-designed containment sumps. Left unchallenged by compliance determinations showing the

[1] UCS hastens to point out that this industry assertion is more boast than fact. UCS reminds the NRC that the original criterion for containment sump design (i.e., the prescriptive assumption of 50 percent blockage) was thought to be overly conservative when it was adopted. The industry today lacks the quantitative analysis to back up its boasting just as the NRC and industry lacked quantitative analysis to back up the 50 percent blockage assumption. The NRC must not fall for this "overly conservative" boast twice.

extent of the safety problem, this would permit the industry from pointing to this matter as an example of NRC's alleged regulatory excess. The compliance determinations are necessary to shield the NRC from industry's future charges of NRC "ratcheting" up the safety levels.

The NRC must either require compliance determinations or abandon its risk-informed regulatory initiatives.

2. The draft generic letter discusses containment walkdowns. For example, "...provide a statement of whether or not you plan to perform a containment walkdown surveillance in support of the analysis of the susceptibility of the ECCS and CSS recirculation functions to the adverse affects of debris blockage" (page 16984, col. 3).

   The draft generic letter's treatment of potential debris sources is unduly limited. Containment walkdowns serve a useful function in establishing the current condition of potential debris sources. Anything that should not be within containment, like the unqualified coatings applied inside the Davis-Besse containment or the "temporary" materials found lingering within the DC Cook containments, should be identified by the walkdowns and either removed or justified in-place.

   But the draft generic letter fails to look into the future so as to provide sufficient protection against potential debris sources down the road. **To remedy this fundamental flaw, the draft generic letter must be supplemented with explicit requirements for PWR owners to identify the procedural measures (e.g., foreign material exclusion, housekeeping, design reviews for modifications within containment, inspection programs for containment coatings, etc.) that provide reasonable assurance that potential debris sources will continue to be properly controlled.**

   Comment (2) overlaps to a certain extent with Comment (1) above. If PWR owners satisfied their legal obligations to report non-compliances with existing regulatory requirements for PWR containment sumps, the recurrence control section of the licensee event reports would delineate the procedural measures taken to prevent future problems. Failing to satisfy their legal obligations for reporting, the owners make it less likely that the procedural measures would remain intact and also less likely that future NRC inspectors would audit conformance with commitments that otherwise would have been made in the LERs.

3. The section of the draft generic letter titled *Related Generic Communications* (beginning on page 16985, col. 3 and continuing through page 16986, col. 2) lists more than two dozen bulletins, generic letters, and information notices relevant to the subject. This listing is incomplete because it does not include NRC Generic Letter 91-18, Rev. 1, dated October 8, 1997, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions." This generic communication is pertinent to the PWR containment sump issue. As stated in GL 91-18, Rev. 1, its stated purpose included guidance for resolving degraded and nonconforming conditions at nuclear power plants:

   > *This guidance provided a process for licensees to develop a basis to continue operation or to place the plant in a safe condition and to take prompt corrective action.*

   GL 91-18, Rev. 1 had NRC Inspection Manual Part 9900, "Technical Guidance," attached. Thus, the NRC provided PWR owners with its rulebook on handling degraded and nonconforming conditions. Section 4.4. of Part 9900 states:

   > *In the course of its activities, the licensee may discover a previously unanalyzed condition or accident. Upon discovery of an existing but previously unanalyzed condition that significantly compromises plant safety, the licensee shall report that condition in accordance with 10 CFR 50.72 and 50.73, and put the plant in a safe condition.*

For a previously unanalyzed condition or accident that is considered a significant safety concern, but is not part of the design basis, the licensee may subsequently be required to take additional action after consideration of backfit issues (see Section 50.109(a)(5)).

As noted above, the draft generic letter contains the NRC staff's express determination that fixes to the PWR containment sump problem are not a backfit. Therefore, this significant safety concern is part of the design basis and licensees "shall report that condition in accordance with 10 CFR 50.72 and 50.73."

Comment (3) overlaps with Comment (2) above because it provides necessary guidance on how to handle the non-conforming conditions that will be identified. **The draft generic letter must explicitly reference Generic Letter 91-18, Rev. 1, because this document establishes the NRC's expectations for dealing with degraded and nonconforming conditions such as those that may be discovered in response to the generic letter.**

4. The draft generic letter mentions revisiting the adequacy of compensatory measures taken in response to last year's bulletin and to revise/supplement them as applicable. By letter dated April 22, 2004, Mr. James Dyer of the NRC informed Mr. Jim Riccio of Greenpeace that the NRC believes "failure to meet a commitment in itself does not constitute a violation of a legally binding requirement." If that indeed is the NRC's position (as unbelievable as it seems), then the compensatory measures that licensees commit to take, either in response to the bulletin or generic letter) are unenforceable by NRC and therefore little or no credit in safety space should be accorded to them. **If the NRC is to place any reliance on compensatory measures as risk reduction features, the NRC must issue Confirmatory Orders to ensure the agency can compel licensees to do them.**

Sincerely,

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