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U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Attn: Rules and Directives Branch
Office of Administration

Subject: BWR Owners' Group Comments to Draft Regulatory Guide (DG-1114), "Control Room Habitability at Light-Water Nuclear Power Plants"

BWROG Project Number 691

Encl: BWR Owners' Group Comments to Draft Regulatory Guide (DG-1114), dated June 2002

Attached is the BWR Owners' Group's (BWROG) comments on the subject Draft Regulatory Guide in accordance with instructions provided in the Draft Guide. Specific observations warrant mention in this cover letter:

- In several places in the draft guide, staff positions appear to reach beyond current plant licensing bases. The issued guide should be clear on not requiring licensees to meet requirements that are clearly beyond current plant licensing bases.
- The draft guide appears to be extending CRE requirements to any plant alternate shutdown panel. The issued guide should be clear to limit the application of CRE requirements to only alternate shutdown panels that have been defined by a plant's licensing bases, to be included <u>inside</u> the current CRE.

It should be noted that, while these comments have been endorsed by a substantial number of the members of the BWROG, it should not be interpreted as representing any individual utility member. Each BWROG member utility must formally provide their own individual comments in order for those comments to represent that member utility.

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Any questions can be directed to the undersigned or to Tom Mscisz (Exelon Nuclear), BWROG Control Room Habitability Committee Chairman at (610) 765-5971.

Sincerely,

JA Gray, Jr., Chairman
BWROG Owners' Group

cc: K Putnam, BWROG Vice Chairman
BWROG EOC
BWROG Primary Representatives
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WM Blumberg, USNRC

BWR OWNERS' GROUP
COMMENTS TO DRAFT REGULATORY GUIDE-1114
June 2002

DG-1114 REFERENCE	COMMENT	RECOMMENDED CHANGE
Section A (Introduction), Page 1	(Editorial comment) The last sentence in the first paragraph is not a proper sentence.	Delete the word "In".
Section A (Introduction), Page 2	(Editorial comment) Paragraph inconsistency.	Insert a blank line between the paragraphs for GDC 4 and GDC 5 to be consistent with the rest of the document.
Section B (Discussion), Page 2	The first paragraph states that "The CRE encompasses the control room and may encompass the alternate shutdown panel and other rooms and areas to which personnel access may be necessary to accomplish plant control functions in the event of an accident." The only alternate shutdown panel area that should be covered by this guide should be any included within the CRE. The typical alternate shutdown panel was not intended to meet the GDC 19 requirements for continuous occupancy and, as stated here, also implies a much broader scope than defined in SRP 6.4. Alternate shutdown panels are also discussed in Section C, and same comments apply.	Modify this statement to limit guidance regarding the habitability requirements of remote shutdown panel areas to only those included inside the CRE and modify this definition to remain consistent with SRP 6.4 and recognize existing plant licensing bases.

Section B (Discussion), Page 3	The last sentence in the paragraph at the top of page 3 states that "In the majority of the CRHS designs, isolation of the CRE atmosphere from that of adjacent areas is fundamental to ensuring a habitable control room." This is believed to be an over-generalization of industry designs. The majority of systems are believed to be pressurized and, therefore, most of the CRE surface leakage would be handled via the pressurization function.	Change the statement to: "In the majority of the CRHS designs, pressurization of the CRE, relative to adjacent areas, is fundamental to ensuring a habitable control room."
Section B (Discussion), Page 3	The last paragraph in Section B states that "Only the sections of NEI 99-03 that are specifically stated in the Regulatory Position should be considered to be endorsed by the staff." It is difficult to see which sections are endorsed and which ones are not endorsed.	The NRC staff should generate a list of NEI 99-03 Sections that they plan to specifically endorse via this issued RG, or as an alternative, indicate in the issued RG those areas where the Staff position is consistent with NEI 99-03, including the exceptions if any.

Section C (Regulatory Position), Subsection 1.2, Page 4	First paragraph: "The staff may find that new or unreviewed issues are created by a particular site-specific application of this guide, warranting review of past staff positions on a particular licensing basis. A licensee who voluntarily seeks to modify its licensing basis through a license amendment is not protected by the back fit as defined by 10 CFR 50.109, 'Back fitting.' Back fitting occurs only when the NRC imposes a new or changed position on a licensee, which is not the case when a licensee voluntarily seeks an amendment." Further, the staff is suggesting that licensees adopt the new approach to CRH in lieu of their existing licensing basis. The publication of a new or revised Regulatory Guide does not revise existing licensing commitments or direct licensees that its existing licensing basis is inadequate. This entire Section fails to recognize the applicability of a plant's existing licensing basis in addressing CRH, therefore, in most situations, deter any or most licensees from adopting these new Regulatory Guides. As long as no new license amendments are required, the preferred method will be to use the previous guidance described in their licensing basis instead of committing to this guidance (i.e., all or nothing).	It is requested that this Guide's proposed implementation text be revised to acknowledge that licensees <u>may</u> be able to implement all or portions of the RG via 10CFR 50.59.

Section C (Regulatory Position), Subsection 1.2, Page 4	General: This entire Section does not recognize the applicability of a plant's existing licensing basis in addressing CRH. Specific-Second paragraph: "The staff believes that only by implementing the integrated package as presented within the Regulatory Positions will the design basis be preserved." It appears unreasonable to limit a licensee response to an "integrated package" approach (i.e., all or nothing) rather than considering any potential alternate (partial) approaches that may be offered by licensees.	Modify this statement to allow partial implementation of this guide to allow use of its guidance as appropriate considering the existing plant licensing/design basis.
Section C (Regulatory Position), Subsection 2.1.1, Page 5	The term CRE is used extensively in this guide. The draft Technical Specification refers to both CRE and control room boundary, which is confusing. Further, the definition of the Control Room Envelope (CRE) implies a much broader scope than SRP 6.4 with potential inclusion of alternate shutdown panel, cable spreading room, process computer room, etc This appears incompatible with existing plant licensing basis, especially plants that are not SRP-designed plants, which could lead to unnecessary analysis/plant modifications. (Same comment as Section B, Page 2 above.)	Standardize on the use of "control room boundary" as the proper technical term and modify this definition to remain consistent with SRP 6.4 and recognize existing plant licensing bases.

Section C (Regulatory Position), Subsection 2.2.2, Page 6	The direction to consider the interactions between the CRE and the adjacent areas needs to be bounded. The ventilation systems for the adjacent areas may NOT be safety-related, therefore, the rules for what needs to be considered concerning failures are not well defined. Lack of clear rules as to what needs to be considered could lead to consideration of multiple, varied failures ultimately resulting in a level of unnecessary conservatism in the design (consideration of single failure and loss of offsite power is complicated when dealing with non-safety related systems which were not specifically required to be designed for those considerations). What seems to be forgotten in this DG is the high level of conservatism inherent already in the design of a plant's response to DBAs. Also, the paragraph, as written, it is not clear as to which systems are being discussed. The paragraph should be rewritten to clarify this.	Modify the statement to allow identification of a bounding in leakage that retains appropriate consideration of the existing design/licensing basis. As for "system clarity", the following wording changes are also recommended: "The conditions that exist in the areas adjacent to the CRE influence ~~the~~ performance of the ~~CRE and associated~~ CRHS~~s~~. Although ~~these~~ systems <u>in adjacent areas</u> might not be expected to operate during an emergency, during a loss of offsite power, or with a single failure, in leakage may be increased if they do operate. Potential interactions between the CRE and adjacent areas that may increase the transfer of contaminants to the ~~CRE~~ <u>control room</u> should be identified. These interactions may be caused by ventilation systems that supply or exhaust air from areas adjacent to the CRE, are located in areas adjacent to the CRE, or have ductwork that traverses the CRE or areas adjacent to the CRE."

Section C (Regulatory Position), Subsection 2.3.1, Page 6	The statement reads: "Performance characteristics are needed to: Establish the operating parameters for incorporation into the licensing basis (for new reactors or those that have modified their CRE or associated ventilation systems)." Previously, Footnote 3 on Page 4 states, "The design bases are a subset of the licensing basis." This appears to result in certain values being incorporated into Tech Specs. All values should not be included in Tech Specs.	Delete this part.
Section C (Regulatory Position), Subsection 2.3.1, Page 6	Second paragraph: "These parameters may include system flow rates, carbon filter efficiencies, actuation signals, and CRE integrity tests." This requirement will add design values to Tech Specs that are not considered necessary.	Delete this requirement.
Section C (Regulatory Position), Subsection 2.3.1, Page 7	Second paragraph: In leakage assumed in "original'" design analyses is not believed to be the issue. The issue, rather, is whether measured in leakage is consistent with the in leakage assumed in "current" design analyses.	The words "the original" {in two locations} should be removed from this paragraph.

Section C (Regulatory Position), Subsection 2.3.1, Page 7	Last paragraph: "Licensees should establish the performance characteristics of ventilation systems and fix any deficiencies before testing for CRE integrity." This appears to be contrary to the statement in DG-1115, Section 2.3 (page 8) prohibiting "pre-conditioning" prior to performing a scheduled integrity test.	Correct or clarify this apparent inconsistency.
Section C (Regulatory Position), Subsection 2.3.1, Page 7	Footnote #4 indicates that guidance in DG-1113 supercedes the guidance in RG 1.3, 1.4, and 1.25. This leads one to believe that these three RGs are being superceded in their entirety, which is not believed to be the case or the intent of this footnote. It goes on to say that "These guides are presently referenced in Regulatory Guide 1.52." These guides are also referenced in several other guides as well.	If is not the intent to supercede the noted RGs in their entirety, reword the footnote. List all other RGs where these guides are referenced.
Section C (Regulatory Position), Subsection 2.3.2, Page 7	Second paragraph: "Therefore, licensees should perform an analysis of the consequences of each potential radiological accident to ensure that they have identified the limiting event." The group of accidents analyzed should be those identified in FSAR Chapter 15.	Limit the accidents to be analyzed to those identified in plant FSAR Chapter 15 and allow appropriate qualitative assessments regarding limiting accident determinations.

Section C (Regulatory Position), Subsection 2.4, Page 8	First sentence states: "…..accidents identified in Regulatory Position 1.2……." There appears to be no accidents identified in RP 1.2.	The statement should refer to accidents identified in the current licensing basis.
Section C (Regulatory Position), Subsection 2.5, Page 8	First paragraph: This section makes reference to RG 1.78 and then goes on to "quote" several recommendations from it. Further, RG 1.78 encourages licensees to conduct periodic surveys of stationary and mobile sources of hazardous chemical in the vicinity of their plant sites, whereas this DG is specifically requiring such survey "….at least once every 3 years or more frequently as applicable." Periodicity requirements are not identified in RG 1.78, and are, therefore, not part of a licensee's current licensing basis.	The reference should provide "stand-alone" guidance as well as being consistent with RG 1.78. Also, flexible guidance for sites located in remote areas should be provided. Further, if a survey periodicity is to be installed, such periodicity should be based on location conditions and assessment of risk and licensee's should be allowed to evaluate their specific plant conditions and establish the appropriate frequency based on risk.
Section C (Regulatory Position), Subsection 2.7.1, Page 9	Specific discussion of maintenance of the CRE and CRH systems does not seem necessary, as this discussion appears to create an inconsistency with the current Maintenance Rule.	If discussed at all, maintenance should be discussed in the context of the current Maintenance Rule as safety-related main control room ventilation systems are currently under the scope of the maintenance rule.

Section C (Regulatory Position), Subsection 2.7.1, Page 9	The first sentence of second paragraph implies that a proposed Tech Spec Surveillance Requirement (SR) is the preferred way of accomplishing CRE integrity testing. There are several ways to accomplish CRE integrity testing other than solely via Tech Spec SRs, and licensees should be given the option to use other methods to accomplish this goal.	Do not limit CRE integrity testing to Tech Spec SRs as the only acceptable way to conduct this testing. Other methods are via the CRH Program, a TRM requirement, a Ventilation Filter Testing Program (VFTP) requirement, or a licensing commitment.
Section C (Regulatory Position), Subsection 2.7.2, Page 10	The Staff is not endorsing App. K of NEI 99-03, rather implying that use of Tech Specs is required to establish an appropriate breach control program. An appropriate CRE boundary/breach control program can be done effectively without implementing a Tech Spec.	This DG should endorse App. K of NEI 99-03 as an acceptable method for program breach control.
Section C (Regulatory Position), Subsection 2.7.3, Page 10	Editorial comment for first paragraph: Self-contained breathing apparatus is abbreviated as "SCUBA" instead of SCBA as is used elsewhere in this guide.	Correct typo to read "SCBA"

Section C (Regulatory Position), Subsection 2.7.3, Pages 10 & 11	The draft guide states that TMI Action Item III.D.3.4 actions were allowed to remain open for some licensees until AST rulemaking and regulatory guidance were published. It goes on to state further, that since these regulatory actions have been completed, all affected licensees should take the appropriate actions defined in this guide to close these outstanding commitments. Closing regulatory commitments seems to be a "requirement" that should be handled through another mechanism, not this proposed regulatory guide.	Remove these statements.
Section D (Implementation)	The last sentence allows use of the RG if plant licensees voluntarily commit to all of the provisions of this guide. The guide contains many good guidance provisions but licensees should be allowed the flexibility to commit to those provisions in the guidance that are consistent with their current licensing bases.	Remove this restriction and allow licensees the provision to commit to portions of the RG consistent with their current licensing bases.

Appendix A, (General)	The Appendix refers to a CRHS and a CREFS. It is understood that this pertains to the main control room envelope. However, other sections of the draft guide include additional areas that require occupancy by plant operators. Parameter values are being proposed to be included in Tech Specs. Areas such as the remote shutdown panel outside of the CRE are not specifically addressed regarding a dose analysis period or other parameters.	See comments to Section C, Subsection 1.1 and Section C, Subsection 2.3.1 (Page 6) above. Definitions should also be added to the Guide.
Appendix A, Page A-3	New Condition "D": This requires shutdown of the reactor within 6 hours.	Do not require a plant shutdown under the new Condition D.
Appendix A, Page A-3	Condition E may require placing CREFS in both the "toxic gas" and "emergency" mode. For plants with a pressurized emergency mode design, it is not possible to "isolate" and "pressurize," leading to a contradictory requirement.	Provide guidance in the BASES. Clarify that radiological and toxicological events are not independently postulated.
Appendix A, Page A-5	SR 3.7.10.4 requires the value for unfiltered in leakage to be in Tech Specs. This value should be controlled within the CRH Program. The CRH program warrants referencing in the Tech Specs, but not the value itself.	Delete this requirement.

Appendix A, Page A-5	The SR has only one value for in leakage. However, it is believed that to be completely accurate, there must be two values of in leakage in the SR-one for radiological and one for the most limiting chemical hazard.	Add, to the SR, a value for the most limiting chemical hazard.
Appendix A, Page A-5	This SR deletes the original pressurization test that has value in verifying the pressurization system is capable of pressurizing the control room boundary. The original test needs to be retained to assure design capability of system.	Retain the original SR requirement.
Appendix A, Page A-5	This SR refers to control room envelope where the two Condition statements refers to control room boundary. This can cause confusion between conditions statements and the SR.	Modify the statement so the SR refers to control room boundary so that the condition statement and the SR will be consistent.
Appendix A, Page A-5	The requirement for periodic testing of the CRE may be more restrictive than the original licensing basis for many plants. Regulatory Guide 1.78, Appendix A (6/74) requires periodic testing only for those plants with control rooms with air exchange rates of $\leq 0.06\ hr^{-1}$. This was left unchanged at 0.06 hr^{-1} in Revision 1.	Revise the requirements for periodic testing to allow for accepting the original licensing basis.
Appendix A, Page A-6	Editorial comment: The sentence at the top of the page contains some extraneous brackets.	Remove the brackets

Appendix A, Page A-6	4th Paragraph (middle of page): "… without exceeding a 5 rem whole body dose or its equivalent to any part of the body."	There should be a reference to up to 50 rem thyroid as discussed in DG-1113.
Appendix A, Page A-7	Under "Background", in the second paragraph, the first sentence is shown as being deleted. This is part of the design basis and should not be deleted.	Retain the sentence so that the design basis within the Tech Spec bases is maintained.
Appendix A, Page A-8	Under "LCO", the fifth paragraph lumps "in leakage" together with components that make up the control room boundary. "In leakage" is not a component, rather a design input value. OPERABLE component requirements cannot be applied to a design input value.	Delete "in leakage" from this paragraph, but retain the components listed.
Appendix A, Page A-9/10	C1/C2/C3 uses "control room envelope" and not boundary. This is not consistent with Tech Specs.	Change to "control room boundary".
Appendix A, Page A-12	The second paragraph under "SR" appears to be inappropriate verbiage in a SR requirements paragraph.	Delete this paragraph.
Back fit Analysis, Page RA-1	In the fourth paragraph, in leakage assumed in "original'" design analyses is not believed to be the issue. The issue, rather, is whether measured in leakage is consistent with the in leakage assumed in "current" design analyses.	The words "the original" should be removed from this paragraph as it refers to "the original design analyses".

Back fit Analysis, Page RA-5	(Editorial Comment) Second bullet, third sentence uses the word in "existence." Appears to be a typographical error.	Change "existence" to "existing".
Back fit Analysis, Page RA-6	The next to last sentence in the top paragraph states that, for plants that voluntarily commit to this new regulatory guide, changes to existing technical specification surveillance requirements would be necessary. This may not be correct.	Delete this requirement.
Back fit Analysis, Page RA-8	It says that this guide does not require a back fit analysis because it does not impose a new or amended provision. It also states that it "does not require the modification or addition to …". Implementation of this guide will, however, require changes to Tech Specs and procedures. Section 2.7.3 (pages 10 & 11) also says that TMI Action Item III.D.3.4 action items are to now be closed out as defined in this guide.	Re-assess the back fit analysis.