BWR OWNERS' GROUP

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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-1115), "Demonstrating Control Room Envelop Integrity at Light-Water Nuclear Power Plants"

BWROG Project Number 691

Encl: BWR Owners' Group Comments to Draft Regulatory Guide (DG-1115), 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. A specific observation warrants 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.

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
BWROG CRH Committee
SF LaVie, USNRC

BWR OWNERS' GROUP
COMMENTS TO DRAFT REGULATORY GUIDE – 1115
June 2002

DG-1115 REFERENCE	COMMENT	RECOMMENDED CHANGE
Section B (Discussion), Page 2	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.	Modify this definition to remain consistent with SRP 6.4 and recognize existing plant licensing bases.
Section B (Discussion), Page 2	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 2	In the second paragraph in parenthesis, the term "positive CRE" is introduced with no description.	Change to "positive pressure CRE" and add a footnote similar to footnote #2 (on page 3) to describe this term.

Section B (Discussion), Page 3	In the first sentence of the second paragraph, the statement is made "..have measured in leakage greater than that assumed in the design analyses, …" This should be clarified to read "radiological" in leakage to accurately reflect the type of testing actually performed.	Insert the word "radiological" before "in leakage".
Section B (Discussion), Page 3	In the first paragraph (next to last sentence), there appears to be several inaccurate implications relating to in leakage contamination pathways.	Modify the statement to read "…it cannot assess whether there may be unrecognized contamination pathways."
Section B (Discussion), Page 4	First paragraph (at top of page): The paragraph states that PM's and testing provide "…a level of assurance of adequate CRE performance." This statement should be more global. The scope of PM's and inspections should cover the entire range of equipment important to CRH which includes fans, dampers, etc. All these items could have significant impact to CRH.	Change the word "CRE" to "CRHS."

Section C (Regulatory Position), Subsection 1.1, Page 5	"Component testing" is being disallowed due to the subjective evaluations required and the inability of the test to recognize sources of in leakage. However, the same processes would be used to determine the limiting conditions for tracer gas testing (*i.e.*, subjective evaluations of the variables outlined in Section 2.3). In addition, the guide also states that the component test is an extension of a dP surveillance test. This would appear to be a misunderstanding of the component test method that draws a conclusion not supported by facts. In disallowing component testing, the staff is excluding from use a valuable tool available to improve testing of the CRE.	Modify the stated position such that, where justifiable and based on engineering evaluation, component testing is allowed.
Section C (Regulatory Position), Subsection 1.1, Page 5	At the beginning of the last paragraph, a reference is made to "…an integrated in leakage test…" where the proper reference should be an integrated "baseline" in leakage test.	Insert "baseline" between integrated and in leakage.
Section C (Regulatory Position), Subsection 1.2, Page 5	First bullet: Requires an integrated in leakage test to be performed each time a component test is performed. It is not believed necessary to perform both.	Remove this bullet or modify it to refer to the baseline test only.

Section C (Regulatory Position), Subsection 1.2, Page 6	(Editorial comment): First bullet refers to 95% of the total boundary "leakage", which should read "in leakage". Also, footnote #4 appears incorrect in that filtered air is stated NOT to be considered in the dose calculation. It is believed that dose calculations DO include ingress and egress values. Further, using an integrated in leakage test to determine total boundary leakage and requiring that component testing account for 95 percent of the total boundary leakage determined by the integrated test method does not seem reasonable given the large uncertainty in some integrated test results.	Change "leakage" to "in leakage" in first bullet, and delete the footnote. Modify the stated positions to a more reasonable approach to require that all test methodologies account for total boundary leakage with 95 percent certainty and that 20 percent margin be applied to calculated radiation doses or hazardous chemical concentrations.
Section C (Regulatory Position), Subsection 1.2, Page 6	First full paragraph: The three stated conditions should be identified as *additional* to those in Section 5.3.2.	Change to "...unless all three of these *additional* conditions are met."

Section C (Regulatory Position), Subsection 1.2, Page 6	Second full paragraph states that the staff has "…determined that here should be margin in the analyzed radiation dose or hazardous chemical concentrations to account for the greater uncertainties involved with component testing." This statement implies that tracer gas testing is more accurate than component testing. However, tracer gas testing is believed to have just as much uncertainty as component testing.	Delete this statement.
Section C (Regulatory Position), Subsection 1.2, Page 6	In the third full paragraph, the establishment of a 0.125"water gage differential pressure criterion for areas adjacent to the CRE (including outside atmosphere and inside a building atmosphere) would appear to conflict with existing Tech Specs and design/licensing basis.	Modify the statement to recognize existing Tech Spec and plant licensing bases.

Section C (Regulatory Position), Subsection 1.2, Page 6	The last sentence of this Section discusses the need for margin for temperature and pressure gradients caused by accident-induced leakage or ruptures that cannot be adequately simulated in a test. Such statement implies that these only relate to component testing, when these conditions would actually apply to both component and tracer gas testing methods. Further, the basis for the larger dP criterion and limiting condition with regard to CRE integrity testing needs clarification, and the option for using a lower pressure for dP testing has been excluded. This statement has the potential to require testing of configurations well beyond design basis.	Remove this statement, or allow lower dP criteria considerations on a case-by-case basis.
Section C (Regulatory Position), Subsection 2.2, Page 7	In this Subsection, placing systems in an abnormal alignment to develop a dP across the CRE boundary for neutral systems is discussed. This position appears to be contradictory to all the other guidance where this conflict is neither recognized nor explained.	Remove the statement.

Section C (Regulatory Position), Subsection 2.3, Page 7	The definition of limiting condition given in this Section is not consistent with the definition given in DG-1114, Section 2.3.2. In this Section, the limiting condition is identified as the licensing basis configuration that results in the maximum amount of in leakage. In DG-1114, Section 2.3.2, however, it is identified as the configuration that results in the maximum consequences, which may not be the configuration that results in the maximum amount of in leakage. Additionally, the definition provided in this Section is not consistent with Section 2.4, which indicates that determination of the maximum allowable in leakage should be based on consequence analyses. Further, there may be more than one limiting condition. For example, the limiting condition for a radiological event may be normal ventilation system operation followed by manual initiation of pressurization, whereas for a hazardous chemical event, it may be automatic initiation of isolation and recirculation. Lastly, Footnote 6 does not provide the intended clarification.	The definition of "limiting condition" should be changed to be consistent with DG-1114. The factors identified in Footnote 6 should be included with the bullet items in the main text.

Section C (Regulatory Position), Subsection 2.3, Page 8	The prohibition of pre-conditioning (fixing the CRE) prior to CRE integrity testing only makes sense if a Tech Spec is in place and the baseline test has already been done. This statement also appears to be inconsistent with: 1) documented NRC staff comments regarding baseline CRE integrity testing and 2) DG-1114 Section C, Subsection 2.3.1, Page 7 that states that "Licensees should … fix any deficiencies before testing for CRE integrity."	Establish a consistent position in both Guides that states that fixing the CRE is allowed prior to baseline testing of CRE integrity.
Section C (Regulatory Position), Subsection 2.4, Page 8	Second paragraph: Many current designs exclude or reduce ingress/egress leakage based on an "airlock" type design. "Analyses" {used here}implies numerical results; however, it may be possible to group events by evaluation such that one or a bounding set of analyses may be performed. Assumption of forced consideration of 10 cfm may exceed original licensing basis.	Modify the statement to state that ingress/egress leakage should be excluded when precluded by design.

Section C (Regulatory Position), Subsection 3, Page 9	First Paragraph: The testing interval is specified as 24 months without any performance assessment. Further, the DG states that the Staff will reconsider this guidance (with interested stakeholders) to develop an appropriate performance-based frequency. This approach appears not to be truly performance-based methodology. The frequency to be used in the final guide should either be performance- based and risk-based or the NRC should justify a specific frequency.	Modify the statement to allow licensees to use a test frequency based on performance where the licensee is required to justify such performance-based periodicity.
Section C (Regulatory Position), Subsection 3, Page 9	Second Paragraph: Next to last sentence mentions "limiting condition" with no clear indication of what this means. Requires clarification.	Modify to state that if accident conditions should change such that the most limiting condition may change, then testing may be warranted. Doing so will clarify the limiting condition as the most limiting analyzed condition.
Regulatory Analysis, Section III, Page 14	First paragraph at top of page: First sentence states "..into the control room and associated rooms and areas at nuclear power reactors." This statement appears too broad, as it could be read to expand beyond the normal boundary of the control room envelope.	Modify the sentence to read "..into the control room boundary."