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Strategic Teaming and Resource Sharing

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**STRATEGIC TEAMING AND RESOURCE SHARING (STARS)
COMMENTS ON DRAFT REGULATORY GUIDE DG-1111, "ATMOSPHERIC
RELATIVE CONCENTRATIONS FOR CONTROL ROOM RADIOLOGICAL
HABITABILITY ASSESSMENTS AT NUCLEAR POWER PLANTS"**

Docket Number: PRM-50-74

Gentlemen:

Attached are comments from the Strategic Teaming and Resource Sharing (STARS)¹ nuclear power plants on the subject draft regulatory guide issued in December 2001. The STARS utilities appreciate the opportunity to comment on the draft guide. If there are any questions regarding these comments, please contact me at 254-897-6887 or dwoodla1@txu.com.

Sincerely,

D. R. Woodlan

D. R. Woodlan, Chairman
Integrated Regulatory Affairs Group
STARS

Attachment: STARS Comments on DG-1111

Template = ADM-013

*FRIDS = ADM-03
Add - A. Beranek (AFB)
S. LaVie (SFL)*

¹ The STARS group consists of six plants operated by TXU Generation Company LP, AmerenUE, Wolf Creek Nuclear Operating Corporation, Pacific Gas and Electric Company, STP Nuclear Operating Company and Arizona Public Service Company.

STARS COMMENTS ON DG-1111

	Section of DG-1111	Comment	Proposed resolution
1	A. Introduction. Page 2. First full paragraph	States new or revised chi/Q values should be determined using methodology in this new RG. Page 4 under Regulatory Position C.1 states that licensees can continue to use the current licensed methodology for determining chi/Q values for new source-receptor combinations or re-generating the approved chi/Q values using more recently collected met data sets. This appears to be a contradiction.	Revise Section A. to be consistent with Regulatory Position C.1.
2	Section 2.2.4	The discussion of diffuse area sources assumes the release is from a building volume. Other types of releases, however, can behave as a diffuse source, especially if the receptor (i.e., the control room HVAC intake) is nearby. Specifically, the steam release from a set of PWR steam generator relief valves usually creates a cloud of steam in the vicinity of the release point. This cloud generally stays together for some time and meanders about over adjacent building surfaces. To a nearby receptor, such a large cloud would appear as a diffuse source. The adjustment of the cloud dispersion coefficients (sigmas) by the cloud dimensions would be applicable in this scenario (using equations 1 and 2 in Section 2.2.4.4).	This treatment would reduce the overly conservative results which are usually obtained by the Staff for this type of release (see also the Regulatory Analysis, I. Statement of Problem, bulleted item 6, page 34).
3	Regulatory Position (RP) 2.2.4.3	Discusses scope beyond that of this draft regulatory guide. The focus of this draft regulatory guide is development of chi/Q and not the assessments performed using the chi/Q. The use of the chi/Q is more the subject of a regulatory guide or SRP on the calculation of post-accident doses.	At most, this paragraph should be limited to discussing the potential for subsequent misapplication of a diffuse source chi/Q when a discrete point release chi/Q would be more appropriate.
4	Regulatory Position 2.3.2	There are a couple of instances where the draft regulatory guide is written as if it were providing instructions on designing systems rather than analyzing layouts. For example, in Regulatory Position 2.3.2, the statement "The outside air intakes should be located with the intent of providing a low contamination intake regardless of wind direction". This type of statement more appropriately belongs in SRP 6.4 if it belongs in any form of regulatory guidance.	This paragraph should be rewritten to provide examples or descriptions of the various configurations of intakes and the restraints imposed on each type.
5	Regulatory Position 2.3.2.3	Discusses the application of the results of the chi/Q calculations when it discusses the timing and selection of the appropriate chi/Q for use in assessing multiple intakes.	The paragraph should limit its position to stating that chi/Qs for all intake points and all release points/types should be calculated for all times of interest.
6	Section 2.3.2.3	This section deals with manual operator actions to manually select the least contaminated outside air intake as a source of makeup air. The first paragraph requires that "... this protocol is acceptable only if ... there are redundant, ESF-grade radiation monitors within each intake, with control room indication and alarm, to monitor the intakes." When discussing assumptions for the delay times to be assumed for operator actions, the second	In an accident scenario, the operators would probably not have the time to order a "channel check" of the monitors. In most plants, this terminology has Tech Spec connotations that would require rigorous testing. If the Staff's intent is to have these

		paragraph states that "[t]his delay period should consider: (1) the time for the operator to recognize the radiation monitor alarm and <i>determine its validity (e.g., channel check), ...</i> " [emphasis added].	ESF-grade radiation monitors required per Tech Specs, along with the necessary surveillances, then the fact that the monitors are operable, per Tech Specs, should be sufficient for their use in accident scenarios. The additional time to perform a Channel check should not be required to be assumed in the analysis.
7	Regulatory Position 3.5	Make fonts/characters used consistent – there appear to be slight differences in some of the characters. Also, it is suggested to not use the upper case "D" in equation 11 to avoid potential confusion in later dose calculations. Rather, a lower case "d" or a different letter (r, s) which is also generally associated with distance would be a better choice.	
8	Section 3.5	This section uses releases from "atmospheric dumps" as a possible type of an intermittent puff release that could last over one minute and should be modeled as a continuous point source. As expressed in the comment on Section 2.2.4 (1), above, this type of release could be modeled as a continuous diffuse source release.	
9	Section 5	As a benefit for new construction, it would be nice to see a section similar to Regulatory Position 5 discussing acceptability of a plant-specific computational fluid dynamics assessment. Details of the actual plant structures could be included as a modification of the actual site meteorological data taken prior to construction of the facility.	
10	Section 5.1.	For experimental programs, credentials in air "pollution" dispersion meteorology and modeling are considered a standard. Is the word "pollution" necessary?	Is there a more general acceptable term for the credentials desired?
11	Part D. Implementation	The implementation discussion on page 22 indicates that any confirmatory calculations done by the NRC regarding LARs would only be using ARCON 96. Would this mean that licensees would have to submit new met data or building arrangement information?	Licensees should not have to submit the information. The NRC should clarify this in the guide.