

**Preliminary comments on NEI 08-08 [Draft revision 0], Generic FSAR Template
Guidance for Life Cycle Minimization of Contamination**

Section	Page	Comment or question	Reviewer	Resolved (yes/no)
General	n/a	Template appears to focus on “design” features when the intent was to address the operational guidance aspects of RG 4.21, if the DCD did not address those features	CH/JCD/EHR	
General	n/a	The template needs to address surface water. In many instances, surface water is also impacted after spills and leaks. Also, some systems can leak directly into surface water and have little or no impacts on ground water.	JCD	Surface water is addressed in 3.1.6. However, why is it treated differently then ground water?
1	1	The section should address NEI 07-07(Ref 3) in more detail since NEI 08-08 makes frequent reference to it.	CH	No
1	1	There should be an upfront section that indentifies the relevant elements of RG .4.21 and NEI 07-07, and then explain why these are important in the context of this template. They should be ranked in order of applicability and importance. In referencing the objectives of NEI 07-07 (GWPI), there are a need to discuss why these specific objectives were selected and how do they address these particular portions of the life-cycle of a plant. The template should also acknowledge and discuss the implications of RIS 2008-03 on previously discharged radioactive effluents.	JCD	No
1	1	3 rd paragraph discusses consideration of RG 4.21 A following sentence in the same Para, states that; “... a COL applicant’s program consistent with this guidance document is an acceptable alternative to RG 4.21.” Which elements or concepts were not considered from RG 4.21? Why were these elements not considered? Insert “NEI 08-08, Rev 0” in place of “this guidance document”, for clarification	EHR	Changed to state the template implements RG 4.21. However, there are many parts of RG 4.21 that are not incorporated into the template.
1	1	Please discuss in Section 1, that where design features do not exist to minimize contamination, as practicable, the COL applicant should describe operational programs, processes, and/or procedures which address the element or concept.	EHR	No
3.1.1	3	The information in the double parentheses in Section 3.1.1 is not needed since this template applies to all of these facilities.	CH	Yes

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3.1.1 et al	3	The information under “Note” in each of these sections should be in bold letters to be consistent with the information in the “Note” in Section 3.2.1. (Fonts are inconsistently used in Appendices)	CH/EHR	Yes
3.1.4	3	The discussion on SSC needs to include condensate storage tanks; as such tanks can contain several hundred of thousand gallons of radioactive water.	JCD	No
3.1.4	3	The information in the double parentheses states that the applicant should identify the design features based on the risk of the potential for contamination. This should state that all or most design features should be listed, ranked by risk. The current wording implies that the applicant can determine the risk and arbitrarily list only those features that have the greatest risk for potential contamination (i.e., where is the risk cutoff?).	CH	NA, section as been modified.
3.1.4	3	The discussion on SSC needs to address the use of temporary liquid and solid waste processing systems and their operations and how leak/spill prevention would be integrated into overall precautionary measures. (Should such systems be installed in bays or cubicles with sumps and steel liners? If not, how should such needs be identified and what types of protective measures should be considered (e.g., temporary waste processing skids)?	JCD	No
3.1.4	3	Work practices should be described (or identified in a procedure or program where the actions are controlled) in a manner which addresses how they will evaluate all SSCs or site specific features.	EHR	No
3.1.4.a	3	The double parentheses should tell the COL applicant to provide a listing of the <u>DCD sections</u> (see Appendix B) that describe the design features, not the features themselves.	CH	No, removed Appendix B
3.1.4 b-f	4	There are no apparent site-specific items addressing these details or referencing a procedure which will contain these details.	EHR	Appears to be addressed. Site specific for whole 3.1 section.
3.1.4 b-f	4	Items b through f asks the applicant to identify methods, enhancements, etc. If these items are not in double parentheses, then how will NRC staff to determine the methods, enhancements, etc. selected by the COL applicant?	CH	Appears to be addressed. Site specific for whole 3.1 section.

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3.2	4	The discussion should clearly define the boundary of plant systems, e.g., LWMS and SWMS, etc. For example, the boundary of the LWMS begins at the interface from plant systems provided for the collection of process streams and radioactive wastes to the point of controlled discharges to the environment or point of recycling to primary or secondary water system storage tanks. The discussion should note that releases of radioactive material (as liquids, etc.) outside of these defined boundaries are unmonitored and uncontrolled releases and that it is the purpose of this template to identify precautionary measures. See guidance of Regulatory Guide 1.143 for more details.	JCD	No
3.2.2	4	In selecting the placement of monitoring wells, one should note that the boundary defined in the FSAR is not necessarily the one that would be defined by a GW/SW site conceptual model. Established release points described in the FSAR may be, in part, irrelevant since the objective is to locate wells at locations where SW/GW flows are governed by different flow regimes.	JCD	No
3.2.2.c	5	The discussion needs to be expanded to address possible changes in the scope of environmental media being sampled, and recognize that the suite of radiological analyses and detection limits may change as well. The point about dispute resolution is too negative. Shift the argument to point out that these issues need to be addressed to ensure a common understanding of sample results and consistent interpretation of results when compared to NRC limits and other acceptance criteria.	JCD	No
3.3	5	Section lacks site-specific brackets for COL applicant to describe either the site specific items or where programs containing the protocol/aspects of Section 3.3.2 are addressed.	EHR	No
3.3.2.c	5	Last sentence in this item is confusing and unclear.	CH	No

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3.4.3	6	Lacks site specific brackets or information. How will the operational ALARA program do this? See NEI 07-08, the focus is operational health physics, with minor references to contamination control.	EHR	Section now includes site specific information. However, no additional information on how ALARA will accomplish this.
3.5	6	The seven lines of text are insufficient coverage of the topics	JCD	Appears to be addressed
3.5.1	6	Lacks site specific brackets or information	EHR	Yes, site specific section added.
3.5.2	6	Lacks site specific brackets or information	EHR	Yes, site specific section added.
4.1	6-7	NRC will solicit input from hydrology branch	EHR	See attachment.
4.1.5	7	Explain what is meant by "substantial" in items a-d.	JCD	Added to section 4.1.1. Should add to Section 7.
4.2		The four lines of text are insufficient coverage of the topics.	JCD	Appears to be addressed
4.2	7	There are no site specific brackets or references to actual PM or surveillance programs the COL applicant should implement.	EHR	No
4.3.3	8	The protocol for response to leaks and spills should be site specific, reference 3.3.2 and 3.5.2, neither reference site specific brackets.	EHR	NA, line item was modified.
5	8	The discussion needs to consider the guidance of NUREG-1757, especially those addressing the historical site assessment process in reconstructing past operational practices and events, recognition of the needs to conduct scoping and characterization surveys to make up for incomplete or lost data, etc.	JCD	No
5	8	If decommissioning is invoked in addressing residual levels of radioactivity, then one needs to refer to the criteria of Part 20.1402. Similarly, the discussion could note that the annual dose limit of 25 mrem/0.25 mSv could be applied in deriving an interim cleanup criterion before the onset of decommissioning.	JCD	No
5.1.1	8	Decommissioning is described in Env. Report of COL applicant. Site specific information should be referenced.	EHR	No

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5.2	8	Appears to require site specific records retrieval information.	EHR	No
6		The discussions should refer to specific NRC guidance addressing the interim storage of LLW, e.g., waste form stability and containerization to prevent internal and external container corrosion and leaks, etc. See SRP Section 11.4 and its references.	JCD	No
6.1	9	Section appears to reference a site-specific waste management plan, approach, or program. Inconsistent use of terminology and no site specific information required.	EHR	No
6.2.1	9	Should describe <u>process</u> for determining and obtaining additional onsite waste storage.	EHR	No
6.2.2	9	Should reference where site specific periodic assessments are required or controlled.	EHR	No
7	9	There are important terms in the body of the template that should be added to the definitions, e.g., boundary of discharge or release path for liquid effluents, site conceptual model, substantial, etc.	JCD	No
7	9	Add definitions for: Surface Water and Waste Management Program	EHR	No
APP A	11	Should line items 6 and 7 be preceded with an item a)? Is there something missing? On the second page, line item 4, should the discussion also include inaccessible pipe chases in addition to trenches?	JCD	No, pipe chases were not added to line item 4. Line items 6 and 7 appear to be addressed by editorial correction.
App A	11	- Add "AND PROCEDURAL" AFTER "OPERATIONAL" in the title.	CH	Yes
App B	14	Add to the listing the following systems: LWMS, SWMS, GWMS, condensate storage tanks, refueling water storage tanks, established discharge blowdown lines, etc. The listing should be expanded to include systems commonly used at existing plants and others described in current DCD applications.	JCD	Appendix B was removed.
App B	14	The list of systems listed should be expanded.	CH	Appendix B was removed.
App C	15	The four entries are insufficient coverage of the topics.	JCD	Appendix C was removed.

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App C	15	This list does not address all potential sources	EHR	Appendix C was removed.
General	n/a	Many of the site specific information items require the applicant to identify site procedures. Applicants should not only identify site procedures, but should describe them as well.	KS	
1	1	Where does an applicant provide site specific design information explaining what falls outside of their specific DCD description?	EHR	
1	1	It is not clear how FSAR section 13.4 will be used to specify site specific information (Section 1 – last paragraph)	EHR	
1	1	Paragraph 1: Consistency in usage of tense. Change “developed and implement” to “develop and implement”.	NDT	
1	1	Paragraph 4: Change “Each license’s” to “Each licensee’s”	NDT	
3.1.2	3	The template states clean areas will be segregated from contaminated areas, however it does not describe how it will reduce cross contamination between the two. Guide 4.21, A-1 b., describes isolating radioactive material processing areas through use of compartmentalization and access controls to reduce the potential for cross-contamination. Describe a method to reduce cross contamination between clean and contaminated areas.	KS	
3.1.4	3	The template needs to address SSCs that have a potential to leak to any site environs, not just SSCs that have a credible mechanism for the licensed material to reach ground water.	KS	
4.1.1	7	Change Section 2 to Section 2.4	NDT	
4.1.1	7	The list of references fails to mention NUREG 0800 SRP Section 2.4 and 10 CFR 100.20(c)(3) which are the basis for site characterization.	NDT	
4.3.1	8	For completeness the template needs to mention the need to incorporate the update of the CSM using as-built information in the appropriate sub-sections of Section 2.4 of the FSAR consistent with the requirements for proper site characterization.	NDT	

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4.3.1	8	If the applicant intends to use chemicals that have the capability to modify site characteristics such as chelating agents, considerations for their impact need to be incorporated as part of the update of the analysis for site characteristics important for transport and pathways	NDT	
4 /4.1/4.3		It would be appropriate if it was stated in this template that the current site conditions are not the only things to be considered in development of the conceptual model. As part of the development of the conceptual site model the applicant should also try to account for any potential impacts of construction and operation to the groundwater flow conditions. Since there is uncertainty in these analyses of future impacts perhaps a set of alternative conceptual site models could be presented. Since a separate section 4.3 discusses final site configuration which in fact could be under the same heading as conceptual site model development, we recommend considering merging those two sections.	DB/NDT	
4.1.1 (a)	7	We suggest modifying this bullet as follows: Perform hydrogeologic and geologic studies to characterize hydrogeology of the site, determine predominant ground water flow characteristics and gradients, and characterize parameters important to transport of potential releases.	DB	
6.2	10	RG 4.21 A-4 specifies life-cycle planning for waste management should define the strategy for its conditioning, storage, or disposal. The template only addresses onsite storage when other disposal or treatment options are not available and periodic assessments of the waste storage should be performed. The template needs to address a strategy for storage for all facilities. Additionally, a strategy for conditioning and disposal should also be discussed.	KS	
6.2	10	Describe outside storage of radioactive materials and waste.	KS	
7	10	Define the meaning of the term "substantial" used in Section 4.1.1 in the definitions.	ER	

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General	NA	How did you answer/resolve the previous comments provided?	ER	
General	All sections	Ensure each section has an opportunity for site specific information to be “identified and described.” If a section does not need site specific information, please explain.	ER	