

PUBLIC SUBMISSION

As of: 2/22/17 2:54 PM
Received: February 21, 2017
Status: Pending_Post
Tracking No. 1k1-8uv7-yzrr
Comments Due: February 21, 2017
Submission Type: Web

Docket: NRC-2016-0268
Spent Fuel Heat Generation in an Independent Spent Fuel Storage Installation

Comment On: NRC-2016-0268-0001
Guidance: Spent Fuel Heat Generation in an Independent Spent Fuel Storage Installation

12/23/2016

Document: NRC-2016-0268-DRAFT-0004
Comment on FR Doc # 2016-30896

81 FR 94431

Submitter Information

Name: Justin Wheat
Address:
40 Inverness center parkway
Birmingham, AL, 35242
Email: jtwheat@southernco.com

4

REMOVED

92 11 2015

RULES...

General Comment

See attached file(s)

Attachments

NL-17-0243

SUNSI Review Complete

Template = ADM-03

E-RID = ADM-03

Add = A. Sotomayor-Rivera (AXS14)



Justin T. Wheat
Nuclear Licensing Manager

40 Inverness Center Parkway
Post Office Box 1295
Birmingham, AL 35242
205 992 5998 tel
205 992 7601 fax

jtwheat@southernco.com

FEB 21 2017

Cindy Bladey
Office of Administration, Mail Stop OWFN-12 H08
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555-0001

NL-17-0243

Comments on Draft Regulatory Guide DG-3050, "Spent Fuel Heat Generation in an Independent Spent Fuel Storage Installation (ISFSI)," [Docket ID NRC-2016-0268]

Dear Ms. Bladey:

The Nuclear Regulatory Commission (NRC) requested comments on a draft regulatory guide as noticed in the Federal Register (81 FR 94431; Docket ID NRC-2016-0268). The draft regulatory guide is DG-3050, "Spent Fuel Heat Generation in an Independent Spent Fuel Storage Installation (ISFSI)."

Southern Nuclear Operating Company (SNC) has reviewed the draft regulatory guide and has provided comments as detailed in the attachment to this letter. In general, SNC is supportive of the proposed revision and anticipates overhead cost savings in the performance of fuel heat load versus utilization evaluations based on the increased flexibility in methodology.

This letter contains no NRC commitments. If you have any questions, please contact me at 205.992.5998.

Respectfully submitted,

Justin T. Wheat
Nuclear Licensing Manager

JTW/KMO/lc

Attachment: SNC Comments on Docket ID NRC-2016-0268

cc: Southern Nuclear Operating Company
Mr. M. D. Meier, Vice President – Regulatory Affairs
Mr. B. J. Adams, Vice President – Engineering
Mr. J. J. Hutto, Fleet Nuclear Fuel and Analysis Director
Mr. J. B. Williams, Nuclear Fuel Director
Mr. C. Channell, Dry Cask Storage Manager
SNC Document Services RType: CGA02.001

Comments on Draft Regulatory Guide DG-3050, "Spent Fuel Heat Generation in an Independent Spent Fuel Storage Installation (ISFSI)," [Docket ID NRC-2016-0268]

Attachment

SNC Comments on Docket ID NRC-2016-0268

Comments on Draft Regulatory Guide DG-3050, "Spent Fuel Heat Generation in an Independent Spent Fuel Storage Installation (ISFSI)"
[Docket ID NRC-2016-0268]

ID	Section, Page, and Paragraph	Comment	Proposed Resolution
1	Appendix A, Section A.1.4, Page A-3	$\hat{\beta}_1$ is incorrectly reported as 1.848×10^{-2} W/kgU in Table A.5	$\hat{\beta}_1$ should be reported as 1.848×10^{-1} W/kgU
2	Section C.1.2.2, Page 12	<p>The third and final condition for values of H(t) to be conservative is:</p> <p>"The power density, in units of kilowatts per kilogram of uranium, is less than 5 times the enrichment in wt% U-235"</p> <p>This does not cover the relevant parameter ranges given in Table 7 for enrichment and average power density [$2 \leq E_s < 5$ and $12 \leq S_{avg} \leq 50$]. Assembly C-64, the subject of Appendix A's sample calculation, does not meet the aforementioned condition either.</p>	Please investigate this condition for accuracy.
3	Section C.1.1, Page 6	The 23-group coefficients α_{ij} and λ_{ij} of Equation 3 are referred to in the text as "a _{ij} " and "l _{ij} " rather than with the i and j indices as subscripts	The 23-group coefficients should be referred to as α_{ij} and λ_{ij} in the text
4	Section C.1.2.1, Page 11-12	Φ_K is defined as being dependent on the average specific power (S_{avg}) in Equation 11. Based on the usage of Φ_K in Equation 9, it would make more sense to define it based on S_K	Change Equation 11 to be the following: $\Phi_K = \frac{S_K}{\alpha} \times 2.58 \times 10^{10}$
5	Section C.1.2.1, Page 12	S_{avg} is defined in Equation 7 as the average specific power over the entire operating history of the fuel, but later in Equation 11 as the specific power density. This repeated elsewhere in the document.	Be consistent in the definition of S_{avg} , whether it be using both specific power and specific power density as the definitions or choosing only one to use
6	Section C.1.3, Page 14	The actinide coefficient β_n is written as " β_n "	Correct it to β_n
7	Section C.1.1	Explicitly defining as $S_{ik} = S_k \cdot S_i / S$ would make this section more clear.	
8	Section C.1.4, Page 16	Equation 6 is written with an extra parenthesis: $P_S(t, T) = A(t)P_F((, t, T)$	Remove the extra parenthesis from the equation

Comments on Draft Regulatory Guide DG-3050, "Spent Fuel Heat Generation in an Independent Spent Fuel Storage Installation (ISFSI)"
[Docket ID NRC-2016-0268]

ID	Section, Page, and Paragraph	Comment	Proposed Resolution
9	Section C.1.2.1	The statement "When applied to BWR fuel, they yield conservative results" suggests that the overall conservatism for BWR (vs PWR) is increased due to the use of the PWR fuel spectrum. How does this compare to the Correction Factors computed with Table 4?	Perhaps F_S could be redefined for PWR and BWR separately to yield more accurate results for BWR.
10	Appendix A	Adding some more input parameters with the corresponding output decay heats would be very beneficial in qualifying in-house implementations.	Suggest an example I/O table for both PWR and BWR.
11	Section C.1.1, Page 8	<p>"The user should also ensure that the sum of relative power fractions S/S for each irradiation interval is not less than unity (because of interpolation error)"</p> <p>In the case of interpolation error, how should interpolation be handled? Are there severely non-linear regions of Table 3 that should be interpolated differently?</p>	
12	Section C.2, Page 18	The applicability of SS clad fuel is mentioned, what about the applicability of SS dummy rods? An assembly average Cobalt concentration could be specified so the user can determine if a non-standard assembly is applicable.	