

From: STEVENS Tom -NUCLEAR <tom.stevens@opg.com>
To: Owen Gormley <OPG@nrc.gov>
Date: 10/22/01 10:44AM
Subject: RE: Draft Regulatory Guide DG-1108

9/7/01
66FR 46849

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Dear Mr. Gormley:

Attached are a few comments we would like to raise regarding the subject draft regulatory guide. I thought it best - especially as they are outsider comments - to send them via an e-mail attachment to yourself rather than attempt to post them directly. An attempt was made to give my colleagues their opportunity for input. Today is, I believe your due date for comments.

Once again, thanks to you and Ms. Beranek for the opportunity to respond. We shall watch your web site for further developments.

<<Comments on Draft DG-1108.doc>>

Tom Stevens
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-----Original Message-----

From: Ann Beranek [mailto:AFB@nrc.gov]
Sent: Friday, September 28, 2001 4:15 PM
To: tom.stevens@opg.com
Cc: Owen Gormley
Subject: Re: Draft Regulatory Guide DG-1108

Mr. Stevens ?

We would be very grateful for your comments. I'm attaching the URL to the web site that is interactive, you can submit comments and read other's comments on the particular guide. More information and other addresses are given for submitting comments in the logo information at the bottom of the first page of the guide. This may be moved around to a different location on the electronic version of the guide, but it should still be on the first page.

The technical project manager of the guide is Owen Gormley, you may also mail comments or questions directly to him at <OPG@NRC.GOV> .

Thank you for your interest.

Ann Beranek, RES

>>> STEVENS Tom -NUCLEAR <tom.stevens@opg.com> 09/27/01 09:31AM >>>
Hello,

template = ADM-013

F-RTDS = ADM-03
Add = A. Beranek (AFB)
O. GORMLEY (OPG)

I have been on your web-site trying to find where to post comments on the subject draft regulatory guide. Before drafting any, however, I should ask whether our comments would be of any use to you. Our Canadian Nuclear Safety Commission takes great interest in what goes on elsewhere in the World and, especially, in the U.S. So what you decide to do could well affect us in the not-too-distant future.

However, our perspective as piping engineers; on a technical issue such as seismic analysis will likely be rather similar to that of your own people.

In any event, if there is any point in our sending in our comments, please let me know where they should go ; whether to a site or a person.

Cheers!
Tom Stevens
Senior Design Engineer - Piping & Engineering

Analysis
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<< File: WordPerfect 6.1 >>

CC: "Ann Beranek" <AFB@nrc.gov>, VIJAY Devendra -NUCLEAR <devendra.vijay@opg.com>, MANNING Bruce -NUCLEAR <bruce.manning@opg.com>, LAZIC M Mr -NUCLEAR <mike.lazic@opg.com>

MR. O.P. Gormley

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October 5, 2001>

ONTARIO POWER GENERATION

700 University Avenue Toronto, Ontario M5G 1X6

October 22, 2001
File: N-04974.15T3

MR. O.P. Gormley,
Technical Project Manager DG-1108,
Rules and Directives Branch
Office of Administration
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Our Comments Pertaining to Draft Guide DG-1108

Dear Sir:

Thank-you for the opportunity to provide feed-back on the subject document. Our Canadian Nuclear Safety Commission takes a keen interest of what happens within the regulatory environment of other jurisdictions and, in particular, in the United States. So, what you decide to do on a subject as generic as seismic analysis is likely to affect us sooner or later.

It had been my hope to find other examples of commentary on DG-1108 on your web site. However, I did not find any and so must apologize in advance if this simply goes over old ground. Let us divide these comments into two sections: probable typos and more substantive technical detail.

Typos:

1. Section 1.1.2; line 4-5: (ω_j, ω_k) were undoubtedly meant to be $\omega_j \omega_k$
2. Section 1.1.2 ; equation (3): subscripts j and k became () and a prime sneaked in on the wrong side of the first entry. I believe the foot-note to the equation was intended to read

$$\omega_j' = \omega_j [1 - \beta_j^2]^{1/2}$$

$$\beta_j' = \beta_j + \frac{2}{t_D \omega_j}$$

3. Section 1.2.1 Lindley-Yow Method: Equation (5) lost a subscript on the left hand side.
4. “ “ “ “ Equation (9) should be Rp on the left hand side.
5. Top of page 9. I believe you want $\alpha \rightarrow 1.0$ rather than $a \rightarrow 1.0$
6. Page 10; one line up from bottom: Two more ω 's have become ?'s.

Technical

1. At the top of page 7, “closely spaced modes” are defined. However, nothing is said about what to do with them – in this document. The rest of the DG suggests that the concept is to be superseded by the more detailed examinations of the

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methods described. Mention of closely spaced modes seems to imply that the new methods for combining out-of-phase contributions will devolve into RSS in the event that this definition of closely spaced modes should not apply. This was more in keeping with the old rules of DG 1.92 where there was clear instruction as to what was to be done with closely spaced modes and it was self-evident that when modes were *not* closely spaced, one would get RSS. I have not done a careful limit analysis to see how accurate the devolution statement remains with the currently proposed methods – but I think that someone entering the discussion using only your new proposed regulatory guide will find the comments in there now a source of confusion. My suggestion is that you either say a lot more about closely spaced modes, (duplicating some of the options in the old DG 1.92?) or say a good deal less about them.

2. Next, a question. Our perspective is that of piping analysts. So we generally get secondary response spectra from Civil engineers who have analyzed the building structure. Sometimes, these spectra have two peaks of comparable significance. Sometimes too, a piping analyst who uses a secondary spectrum from Civils will have to generate tertiary spectra for a smaller decoupled piping system which picks up its excitation from the parent pipe. These can have multiple peaks corresponding to the several significant modes of the parent pipe. In the case of two or more peaks to the spectra, would one take the “low frequency” range to be below the *first* peak and the “high frequency” range above the *last* significant peak? Presumably, this proposed design guide is intended to apply to piping as well as civil structures. If so, you might wish to elaborate further on the description of the sundry frequency ranges.

In closing, let me thank you as well for your list of references. They have enabled me to establish for my own edification a few theoretical linkages between what we have been doing and my impressions of what analytical methods are applied in the U.S. The concept of “modal mass” was always elusive to me mathematically speaking. Now, at last, I have seen its precise description.

Sincerely,



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