

NRCREP - Comments on Draft Regulatory Guide 1148 (DG-1148), "Qualification of Safety-Related Battery Chargers and Inverters for Nuclear Power Plants"

From: "RILEY, Jim" <jhr@nei.org>
Date: 10/02/2007 5:59 PM
Subject: Comments on Draft Regulatory Guide 1148 (DG-1148), "Qualification of Safety-Related Battery Chargers and Inverters for Nuclear Power Plants"

October 2, 2007

Chief, Rulemaking, Directives, and Editing Branch
Office of Administration
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, DC 20555-0001

7/31/07
72FR41793
①

RECEIVED

2007 OCT -3 PM 2:52

RULES AND DIRECTIVES
BRANCH
USNRC

Subject: Comments on Draft Regulatory Guide 1148 (DG-1148), "Qualification of Safety-Related Battery Chargers and Inverters for Nuclear Power Plants"

Project Number: 689

On July 31, 2007, the subject draft regulatory guide was published in the Federal Register for public comment (72FR71493). DG-1148 describes a method that the NRC considers acceptable for use in implementing specific regulations for qualification of safety-related battery chargers and inverters for nuclear power plants. The Nuclear Energy Institute (NEI) offers the following comment on the proposed draft regulatory guide.

Regulatory Position (1) states the following:

"Clause 5.2.2.4 of IEEE Std 650-2006 should be supplemented to specify the following criterion for ignoring cycling as an aging factor:

The mechanical cycling of connectors is expected to be less than 10 times during the qualified life or service life of the battery chargers and inverters."

We understand that connectors in this application are PCB type connectors and cages, device connectors (push on, snap, blade etc), and interconnections such as wire harness connectors.

James H. Riley
Director, Engineering

Nuclear Energy Institute
1776 I Street NW, Suite 400
Washington, DC 20006

E-RIDS=ADM-03

Adm = S. Aggarwal (SKA)

SONSI Review Complete
Template = ADM-013
file://C:\temp\GW\00001.HTM

10/03/2007

www.nei.org

P: 202-739-8137

F: 202-785-4019

M: 202-439-2459

E: jhr@nei.org

nuclear. clean air energy.

This electronic message transmission contains information from the Nuclear Energy Institute, Inc. The information is intended solely for the use of the addressee and its use by any other person is not authorized. If you are not the intended recipient, you have received this communication in error, and any review, use, disclosure, copying or distribution of the contents of this communication is strictly prohibited. If you have received this electronic transmission in error, please notify the sender immediately by telephone or by electronic mail and permanently delete the original message. IRS Circular 230 disclosure: To ensure compliance with requirements imposed by the IRS and other taxing authorities, we inform you that any tax advice contained in this communication (including any attachments) is not intended or written to be used, and cannot be used, for the purpose of (i) avoiding penalties that may be imposed on any taxpayer or (ii) promoting, marketing or recommending to another party any transaction or matter addressed herein.

Mail Envelope Properties (4702BF2A.BCB : 12 : 15307)

Subject: Comments on Draft Regulatory Guide 1148 (DG-1148), "Qualification of Safety-Related Battery Chargers and Inverters for Nuclear Power Plants"

Creation Date Tue, Oct 2, 2007 5:59 PM

From: "RILEY, Jim" <jhr@nei.org>

Created By: jhr@nei.org

Recipients

Files	Size	Date & Time
MESSAGE	2674	Tuesday, October 2, 2007 5:59 PM
TEXT.htm	11817	
10-02-07_NRC_Comments on Draft Regulatory Guide 1148 (DG-1148).pdf	43298	
Mime.822	77958	

Options

Expiration Date: None
Priority: Standard
ReplyRequested: No
Return Notification: None

Concealed Subject: No
Security: Standard

Junk Mail Handling Evaluation Results

Message is eligible for Junk Mail handling
This message was not classified as Junk Mail

Junk Mail settings when this message was delivered

Junk Mail handling disabled by User
Junk Mail handling disabled by Administrator
Junk List is not enabled
Junk Mail using personal address books is not enabled
Block List is not enabled



NUCLEAR ENERGY INSTITUTE

James H. Riley
DIRECTOR
ENGINEERING
NUCLEAR GENERATION DIVISION

October 2, 2007

Chief, Rulemaking, Directives, and Editing Branch
Office of Administration
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, DC 20555-0001

Subject: Comments on Draft Regulatory Guide 1148 (DG-1148), "Qualification of Safety-Related Battery Chargers and Inverters for Nuclear Power Plants"

Project Number: 689

On July 31, 2007, the subject draft regulatory guide was published in the Federal Register for public comment (72FR71493). DG-1148 describes a method that the NRC considers acceptable for use in implementing specific regulations for qualification of safety-related battery chargers and inverters for nuclear power plants. The Nuclear Energy Institute (NEI)¹ offers the following comment on the proposed draft regulatory guide.

Regulatory Position (1) states the following:

"Clause 5.2.2.4 of IEEE Std 650-2006 should be supplemented to specify the following criterion for ignoring cycling as an aging factor:

The mechanical cycling of connectors is expected to be less than 10 times during the qualified life or service life of the battery chargers and inverters."

We understand that connectors in this application are PCB type connectors and cages, device connectors (push on, snap, blade etc), and interconnections such as wire harness connectors.

¹ NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

Chief, Rules and Directives Branch

October 2, 2007

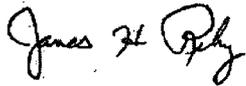
Page 2

All of these connectors center on cage, plug, blade, and slide type connections that use spring type tension (or some type of interference fit) to make sure the mating surfaces remain of sufficient integrity for the electrical conductivity for which they are rated. Repeated cycling of these types of connectors would potentially create a situation where the connector may not have sufficient integrity to withstand thermal/seismic impact without potential for momentary interruption/separation. Note that it is our understanding that bolt and screw type connections are not considered a connector in this context as they do not rely on the stability of a tensioner built into the device for connection integrity.

Our concern exists with respect to a specific numeric limit on the number of lifts, since it is unclear how the number of lifts during the qualified lifetime can be controlled after installation. We feel that the connectors need to be inspected, replaced, or verified acceptable using appropriate methodology, such as thermography, as a guide for their health. From the end user's aspect, this is one more activity that may not be able to be controlled accurately if the craft does not document each lift. We don't favor this approach of limiting lifetime lifts to a specific number because it places restrictions on the end users when making repairs in the field. We should allow for reasonable maintenance and repair without having expensive event tracking.

We request that the Regulatory Position section be re-written to be consistent with the above comments. If any further discussion is desired, please contact me at (202) 739-8137; jhr@nei.org or Gordon Clefton at (202) 739-8086; gac@nei.org.

Sincerely,

A handwritten signature in black ink that reads "James H. Riley". The signature is written in a cursive style with a large, stylized initial "J".

James H. Riley