

PUBLIC SUBMISSION

As of: April 25, 2014
Received: April 21, 2014
Status: Pending Post
Tracking No. 1jy-8bnw-9rf3
Comments Due: May 12, 2014
Submission Type: Web

Docket: NRC-2014-0040

Monitoring of Neutron-Absorbing Materials in Spent Fuel Pools

Comment On: NRC-2014-0040-0001

Monitoring of Neutron-Absorbing Materials in Spent Fuel Pools

Document: NRC-2014-0040-DRAFT-0002

Comment on FR Doc # 2014-05236

3/11/2014

79FR 13685

(1)

Submitter Information

Name: Matthew Eyre

Address:

NETCO
731 Grant Avenue
Lake Katrine, NY, 12449

Email: meyre@curtisswright.com

RECEIVED

2014 APR 25 PM 2:09

RULES AND PRACTICES

General Comment

Thank you for the opportunity to comment on the Subject draft Generic Letter (GL). I applaud and appreciate the NRC's public safety focus regarding the operation of commercial nuclear power facilities. In reviewing the background and content of the questions that the Nuclear Regulatory Commission (NRC) is proposing for licensees, a question comes forward to me. Shouldn't the NRC have most of this information as part of original plant licensing, License Amendment Request (LAR) submittals and NRC Safety Evaluation Reports (SER)? The information that the NRC may not have at hand (or at least somewhere in the vast labyrinth of ADAMS) appears to be new information that was not contemplated (either by the NRC or the licensee) at the time of original or amended licensing submittals and approvals. As such, the GL as drafted is a combination of licensee record search and new research and analyses. During my review of the draft GL, I identified a number of specific points that I felt should be brought to your attention. My intent with my comments regarding the Subject draft GL is to bring forward my perspective based upon 35 years of nuclear fuel transport, inspection, operation, storage and handling at commercial nuclear power facilities. My hope is that my comments stimulate further consideration and internal and external dialog as part of the finalization of the Subject GL. I offer my personal time and effort to the NRC Staff to assist in composing a final revision of the Subject GL.

Most Sincerely and with Best Regards,

Matt Eyre
Director - NETCO

SUNSI Review Complete
Template = ADM - 013
E-RIDS= ADM-03
Add= S. Krepel (STK1)

Curtiss-Wright NETCO
731 Grant Avenue
Lake Katrine, NY 12449

Attachments

Comments - Draft NRC GL 2014-0040 (04-11-14)



NETCO
731 Grant Avenue
Lake Katrine, NY 12449
Phone 845.382.6900
<http://netco.cwfc.com>

April 11, 2014

Serita Sanders
United States Nuclear Regulatory Commission
Project Manager
NRR/DPR/PGCB
Serita.Sanders@nrc.gov

Subject: Comments Regarding Draft NRC GL 2014-0040 "MONITORING OF NEUTRON-ABSORBING MATERIALS IN SPENT FUEL POOLS," Docket ID NRC-2014-0040

Thank you for the opportunity to comment on the Subject draft Generic Letter (GL). I applaud and appreciate the NRC's public safety focus regarding the operation of commercial nuclear power facilities. In reviewing the background and content of the questions that the Nuclear Regulatory Commission (NRC) is proposing for licensees, a question comes forward to me. Shouldn't the NRC have most of this information as part of original plant licensing, License Amendment Request (LAR) submittals and NRC Safety Evaluation Reports (SER)? The information that the NRC may not have at hand (or at least somewhere in the vast labyrinth of ADAMS) appears to be new information that was not contemplated (either by the NRC or the licensee) at the time of original or amended licensing submittals and approvals. As such, the GL as drafted is a combination of licensee record search and new research and analyses. During my review of the draft GL, I identified a number of specific points that I felt should be brought to your attention. My intent with my comments regarding the Subject draft GL is to bring forward my perspective based upon 35 years of nuclear fuel transport, inspection, operation, storage and handling at commercial nuclear power facilities. My hope is that my comments stimulate further consideration and internal and external dialog as part of the finalization of the Subject GL. I offer my personal time and effort to the NRC Staff to assist in composing a final revision of the Subject GL.

Most Sincerely and with Best Regards,

A handwritten signature in black ink, appearing to read 'Matt Eye'.

Matt Eye
Director - NETCO

CC: Scott Krepel, NRR/DSS; Scott.Krepel@nrc.gov
Greg Schoenebeck, NRR/DPR; Greg.Schoenebeck@nrc.gov

Attachment



NETCO

NETCO
731 Grant Avenue
Lake Katrine, NY 12449
Phone 845.382.6900
<http://netco.cwfc.com>

Attachment

Specific comments regarding Draft NRC GL 2014-0040 "MONITORING OF NEUTRON-ABSORBING MATERIALS IN SPENT FUEL POOLS," Docket ID NRC-2014-0040

- The NRC estimate for the time and cost required for commercial power reactor licensees to acquire the information and prepare a response as requested (120 hours) is significantly inadequate. The tone, format and content of the Generic Letter directs the licensee to not only gather information; but also develop information, perform analyses, initiate and conclude research and to then formulate and approve a response. The time required to do so is very much greater than that proposed by the NRC.
- Information such as material qualification test results in many cases is not held by licensees. Many of the suppliers of the neutron absorber materials (Boraflex, Carborundum, Tetrabor, most in-service BORAL) and many rack manufacturers no longer exist, thus power reactor licensees cannot request material qualification test reports from the material suppliers or fuel storage rack manufacturers. In a number of cases, the qualification testing that was documented may not meet the standard of more recent qualification tests.
- Few of the NRC questions can be answered by directly referencing the plant Final Safety Analysis Report (FSAR). Much of the requested information such as detailed technical bases for material monitoring acceptance criteria, applicability, representativeness, etc. do not exist and never did. Many acceptance criteria and test intervals are the results of licensing negotiations between the spent fuel rack designer/fabricator, reactor licensee and the NRC. Perhaps some of those records and rationales are captured in the NRC SER for rack mods, but it is unlikely. In my direct, personal experience, a number of tests and test intervals were from direct fiat from the NRC licensing project manager. In essence the message was, "Do what I say if you want your rack license to be approved." In those cases, no regulatory or technical basis document for acceptance criteria, applicability, representativeness, etc. exists.
- Since the NRC has published significantly on the performance of non-metal based neutron absorbers used in spent fuel storage racks (Boraflex, Carborundum, Tetrabor), it is more a moot point to report on a number of requests such as Appendix A 1.c. Therefore, I recommend that the NRC reevaluate the Generic Letter request for these materials.
- As currently written, the draft Generic Letter Appendix A Section 5 will require licensees to perform additional analyses and research since documentation of the considerations noted in the section are not documented in many FSARs, LARs for re-racks or NRC SERs granting license changes.
- No spent fuel pool inadvertent criticality event has ever occurred. There is considerable margin to criticality in spent fuel pools due to the prior and current analysis methodologies, design and construction techniques and plant operations that have considerable conservatism and margin to a conservatively established acceptance criterion (≤ 0.95 keff). In other words, the considerable defense-in-depth associated with spent fuel pool storage rack criticality obviates the need to provide a detailed element for element deconstruction of the design, analysis, construction and operation of each spent fuel pool storage rack.

- The Appendix A information requested **MAY** be appropriate for new build, new rack or re-rack licensing submittals. If it is the intention of the NRC with the Generic Letter to require the licensee to embark on new research and testing and new analyses, I recommend that the NRC provide the licensees more time in composing a response or to provide a response in a number of stages. These stages could be: current data and records, followed by a plan to perform analyses and research/testing and finally a report the details how the original records and newly generated information answers the Appendix A questions. If the NRC is looking to understand the current state of licensees with respect to fuel storage rack design, analysis and operation, I recommend that the Generic Letter be revised to request what the licensee has in its current records system and to explicitly state that no new licensee analyses, research or testing is required at this time. Even at this level of inquiry, the stated time in the Generic Letter is likely to fall short of the licensee effort to find, gather, review, approve and formally submit a response to the Generic Letter.