

November 10, 2003

Lanson R. Rogers
599 Wooden Lane
Elizabethtown, KY 42701

SUBJECT: RESPONSE TO ELECTRONIC MAIL REGARDING GENERIC SAFETY
ISSUE 191, "ASSESSMENT OF DEBRIS ACCUMULATION ON PWR SUMP
PERFORMANCE"

Dear Mr. Rogers:

Thank you for your electronic mail (e-mail) messages to the Nuclear Regulatory Commission (NRC) dated June 18, August 7, September 24, October 8, 9, 16, 21, and 28, 2003 (all enclosed), regarding Generic Safety Issue (GSI) 191, "Assessment of Debris Accumulation on PWR [Pressurized-Water Reactor] Sump Performance." Your e-mails did not provide any further information from your previous correspondence to the NRC regarding GSI-191.

The NRC staff is actively pursuing resolution of GSI-191. The NRC has internal procedures in place to address the issues related to GSI-191 and is following them methodically. Let me assure you that our processes are deliberate to allow comprehensive and thorough reviews of issues to ensure adequate protection of public health and safety.

In our efforts to increase public confidence, we hold public meetings to obtain input from our stakeholders. We have held several public meetings regarding GSI-191 and we have taken stakeholder input into consideration. Our stakeholders include the public, as well as utility and industry representatives. Additionally, we are scheduled to release a draft Generic Letter (GL) for public comment in spring 2004; this information has been stated at public meetings. The public comment period will provide you an opportunity to express any comments you may have on the draft GL.

Since our letter to you, dated March 21, 2003, the NRC issued Bulletin 2003-01, "Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized-Water Reactors," on June 9, 2003, requesting that licensees respond with either (1) information demonstrating compliance with 10 CFR 50.46(b)(5) within 60 days or (2) information on interim compensatory measures they will put in place to reduce risk until an NRC evaluation to determine compliance is completed. We are currently reviewing the licensees' responses to Bulletin 2003-01.

We are confident that PWRs can be safely operated while we are continuing work to address the potential for the clogging of the containment sump during loss-of-coolant accidents at PWRs. In an October 15, 2003, briefing of the NRC Commissioners, the NRC staff stated that the continued operation of PWRs is "justified until plant-specific analyses are completed."

L. Rogers

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We take our responsibility to protect public health and safety very seriously. We will continue to review your e-mail messages for issues and respond to them if the issues raised warrant additional action on our part, in accordance with our processes and procedures.

Sincerely,

/RA/

John G. Lamb, Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Enclosure: E-mails from L. Rogers

L. Rogers

- 2 -

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John G. Lamb, Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Enclosure: E-mails from L. Rogers

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OFFICIAL RECORD COPY

From: <Coatingsvm@aol.com>
To: <JGL1@nrc.gov>
Date: 6/18/03 1:31PM
Subject: GSI-191

Mr. Lamb,

I continue to follow the progress of the safety concern with the issuance of Bulletin 2003-01. I would stress the importance of these incidents, such as most recent at Davis-Besse, occurring BEFORE any accident or exposure to extreme temperature/pressure/stress conditions. With the new attention being given to public safety through the Homeland Security measures now going on within the NRC, I would hope more attention will be given to this matter. Sooner or later the question will be asked whether existing safety-related paint, or coatings, have been subjected to extreme exposure tests, given their importance, and potential impact on ECCS. I would hope this question is asked before an accident, rather than after. There is no reason that this testing cannot be initiated on representative areas in some plants to determine just what impact they could have if they fail in larger quantities than have been predicted. Also, in different sizes, shapes, densities, etc. and as Los Alamos indicated, some plants would be affected differently, and more dangerously, than others. This information should be valuable for future planning and handling of this issue. I remain ready to help with any plant or contractor who has an interest in a realistic approach to a potentially dangerous threat to ECCS performance. Sincerely, Lanson Rogers

CC: <JGL1@nrc.com>

ENCLOSURE

From: <Coatingsvm@aol.com>
To: <JGL1@nrc.com>
Date: 8/7/03 10:32AM
Subject: GSI-191 Status

Mr. Lamb,

I would appreciate any info you may have on progress, if any, on this issue. I have seen the Inspection Report on the Davis-Besse sump (2003-15) and would hope this would increase the awareness of the potential ECCS safety risks associated with coating and other debris. I would stress that this "improper coating" material became detached without the extreme conditions which would come from a DBA/LOCA event. Tests performed at TVA, Oak Ridge, and in my test lab, show that many "approved" coatings will delaminate during these extremes. Additionally, the industry lacks testing on these "approved" coatings, and the coatings which now exist in all U.S. nuclear plants, which have now gone through extended aging and exposure to low level radiation, both of which are known to affect a coating's physical properties and adhesion. I hope you will consider these points and take them to the highest management level at the NRC, to insure the awareness of those who need to make important, public-safety-related, decisions. I think every plant should have a scientifically-determined estimate of the volume of coatings and other debris which would be generated in a LOCA, and then offer scientifically-determined proof that their ECCS would handle that material. This is an absolute minimum needed to resolve the subject issue, and can only be satisfied with some in-plant testing and evaluation, other than visual walk downs.

Please consider the above and inform me of any progress.

Thanks,

Lanson Rogers

From: <Coatingsvm@aol.com>
To: <JGL1@nrc.com>
Date: 9/24/03 9:34AM
Subject: New York Times Article (GSI-191)

Mr. Lamb,

I would refer you to an article, "A New Risk at Reactors", which appeared in the Sept. 20 New York Times, and ask you to read it, if you haven't. I still follow, as best I can, the progress on the debris/ECCS issue. I remain concerned that proper evaluation into the effects aging and long term low level radiation exposure have on the integrity and adhesive properties of containment coatings. I will remind you that the NRC's Dr. James Davis and others, along with members of the ASTM D-33 Committee were shown a demo video which introduced IN-SITU testing of existing coatings technology. This was in the fall of 1996. It has always been known, and a concern of many, that aging and radiation would degrade coatings and decrease their adhesion to both concrete and steel.

Many nuclear plants now have 25+ years on both qualified and unqualified coatings, and most do not know how much of either due to poor records, additional top coats, and other practices.

This In-Situ testing can be readily available to the NRC and the plants on short notice, and will give immediate results for consideration and evaluation. Please contact me for more information. I encourage a more immediate path than I see being followed, given NASA's recent experience.

Thank you,

Lanson Rogers
270-766-2771, Cell
270-737-2543, Office/Home

From: <Coatingsvm@aol.com>
To: <opa1@nrc.gov>
Date: 10/8/03 9:47AM
Subject: Containment Sump Issues

I would like to know who to contact re: potential sump clogging and ECCS impairment due to paint failures inside containment. I have test results which indicate that due to aging and long term low level radiation exposure, large volumes of paint chips and debris can be anticipated after a LOCA/DBA. I have contacted your John Lamb, but with no apparent action. I feel that this is a very serious concern with the aging of plants and the condition of many safety-related coatings. My name is Lanson Rogers, and I served as TVA's Nuclear Power Coatings Engineer for many years. I would like to start a dialogue with someone who can make a difference in assessing the severity of this potentially devastating issue. Thanks

From: <Coatingsvm@aol.com>
To: <RBE@nrc.gov>
Date: 10/9/03 2:23PM
Subject: ECCS Sump Debris

Hi Rob,

Your name was given to me by Neil Sheehan, of the Office of Public Affairs. I believe we met back around 1996 re: potential coating safety issues. I met with you, Jean Lee, and James Davis, as I recall. I recently saw an editorial in the NY Times, "A New Risk at Reactors", and felt I should again express some concerns. At this point, many nuclear plants are 25 years old, and older and their safety-related coatings only pose more potential to delaminate, peel, or otherwise fail their intended application, causing a threat in ECCS blockage or flow impairment.

According to the editorial and other information I have seen recently, much debris is being found in sumps, much as I found back when employed at TVA. As I noted before, this is in the absence of harsh temperature extremes from LOCA/DBA incidents. This was my concern in 1996, and even moreso now. To think that ECCS might be compromised by large amounts of failed coatings and other debris is alarming, I'm sure, to you, and others.

I would remind you of the technology developed and shown to you and others at the NRC, and how it could be used to evaluate existing coatings and their performance during extreme temp/pressure conditions. This could be done by the plants' personnel, or contractors, or both, and in just a few weeks, testing results would be available for any plant with the same coating system(s). I would think this would be very valuable information, particularly if it showed that some coatings would fail extensively producing large volumes of debris, which some tests at TVA and Oak Ridge have indicated in the past.

Please consider this information in light of the new and ongoing concerns, and if I can be of any help, I certainly will. I can be reached by email, or at 270-737-2543. Thanks, Lanson Rogers

CC: <MXM2@nrc.gov>

From: <Coatingsvm@aol.com>
To: <RBE@nrc.gov>
Date: 10/16/03 10:20AM
Subject: GSI-191 Issues

Hi Rob,

This is a follow-up to my last email, since I haven't heard back from you. I have been reading all of the latest info that I can find on the potential risk of debris vs. ECCS, and have a few comments. I haven't seen any evidence that the NRC has considered the possibility of 7200 lbs. of coating debris being available for ECCS suction pumps. Simple math will show that that is the minimum amount of paint that can be inside containment, and there can be many times that, depending on repairs, recoats, etc. While you and others will say that it can't all delaminate, I would say, how do you know it won't? Everyone knows that paint gets brittle and less adhesive with age, UV exposure, and low-level, long term radiation accelerates paint deterioration. All of those "qualified" coatings are now 20+ years old, and there is nothing to say they will remain in place in a DBA/LOCA. Nothing. When I see in the Los Alamos parametric study that 12 lbs. of coating debris, with insulation and other debris can cause problems, I am shocked that they would even be looking at such a small quantity, when so much more is not only probable, but most likely. Before I get re-involved in these matters, I need some assurance that the path being taken to resolve this by 2007 is better than I am seeing. Please contact me ASAP. Thanks, Lanson Rogers

CC: <MXM2@nrc.gov>

From: <Coatingsvm@aol.com>
To: <JGL1@nrc.gov>
Date: 10/21/03 7:07AM
Subject: GSI-191

Mr. Lamb,

It seems that now, more than ever, the NRC needs to be looking for other and better ways to close this safety issue. From the attention the citizens groups and the press are giving, it is a matter of time that someone is going to wonder why the aged and questionable coatings have not been tested to see just how bad the situation really is. Realizing that the ECCS at any plant just might have to deal with 7000 lbs of coating debris in a LOCA is cause to take every action to see that it doesn't happen. I would like to discuss ways of testing and evaluating these coatings with the NRC, rather than having others force the issue thru the media and other ways. Is there any one else I need to be in contact with to discuss these matters? I got a name, Ralph Architzel, but no email address. Please advise. Thanks, Lanson Rogers

From: <Coatingsvm@aol.com>
To: <JGL1@nrc.gov>
Date: 10/28/03 9:19AM
Subject: GSI-191

Mr. Lamb,

This will be my last transmission to you directly, unless I hear back from you, directly. You will hear more from me, either way, directly or indirectly. I am tired of feeding a "black hole"

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I do not understand, given the risk to human life and safety, why the NRC is not interested in finding out exactly how serious the threat to ECCS, paint and other debris really is. I understand why plants do not want to know, it would be costly in repairs and lost power generation. I understand why inspectors do not want to know, they are employed by the plants. I do not understand why the NRC does not want to know. With the risk of thousands of pounds of paint and other debris ending up in ECCS sumps and pumps, how can you take such a chance? By testing the now 20+ year old paint, which is bound to fail in large quantities, the NRC could know in weeks, just how serious the problem is, but chooses to ignore? Please take this to your decision-makers, and either contact me, or I will go to other investigative means. I can't ignore this serious safety issue any longer. Respectfully, Lanson Rogers

CC: <doctorg@bbtel.com>