EDO Principal Correspondence Control

FROM: DUE: 03/21/05 EDO CONTROL: G20050150
DOC DT: 02/28/05
FINAL REPLY:

Paul Gunter
Nuclear Information and Resource Service
(NIRS)

David Lochbaum
Union of Concerned Scientists

TO:

Commission

FOR SIGNATURE OF : ** GRN ** CRC NO: 05-0103

Dyer, NRR

DESC:

Followup to NRC Briefing on Nuclear Fuel Performance - Significance Determination Process (SDP)

DATE: 03/03/05

ROUTING:

Reyes
Virgilio
Kane
Merschoff
Silber
Dean
Burns/Cyr
Caldwell, RIII

ASSIGNED TO: CONTACT:

NRR Dyer

SPECIAL INSTRUCTIONS OR REMARKS:

Add EDO and Commission on for concurrence.
Chairman and Commission to review response prior to dispatch.

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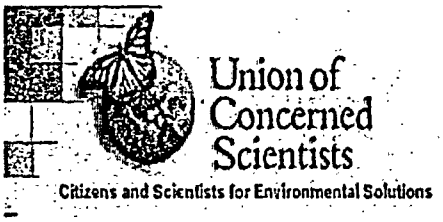
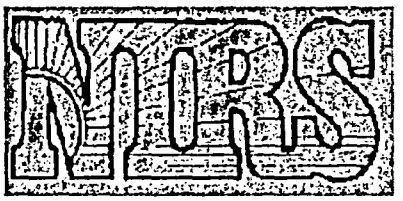
OFFICE OF THE SECRETARY
CORRESPONDENCE CONTROL TICKET

Date Printed: Mar 03, 2005 08:36

PAPER NUMBER:	LTR-05-0103	**LOGGING DATE:**	03/02/2005
ACTION OFFICE:	EDO		
AUTHOR:	Paul Gunter		
AFFILIATION:	UCS		
ADDRESSEE:	Nils Diaz		
SUBJECT:	Followup to NRC briefing on Nuclear Fuel Performance --Significance Determinatin Process (SDP)		
ACTION:	Direct Reply		
DISTRIBUTION:	RF, SECY to Ack		
LETTER DATE:	02/28/2005		
ACKNOWLEDGED	No		
SPECIAL HANDLING:	Commission should review response prior to dispatch		
NOTES:	Made publicly available in ADAMS via SECY/EDO/DPC		
FILE LOCATION:	ADAMS		
DATE DUE:	03/24/2005	**DATE SIGNED:**	

EDO --G20050150





February 28, 2005

Dr. Nils J. Diaz, Chairman
Dr. Gregory B. Jaczko
Dr. Peter B. Lyons
Mr. Edward McGaffigan, Jr.
Mr. Jeffrey S. Merrifield
United States Nuclear Regulatory Commission
Washington, DC 20555

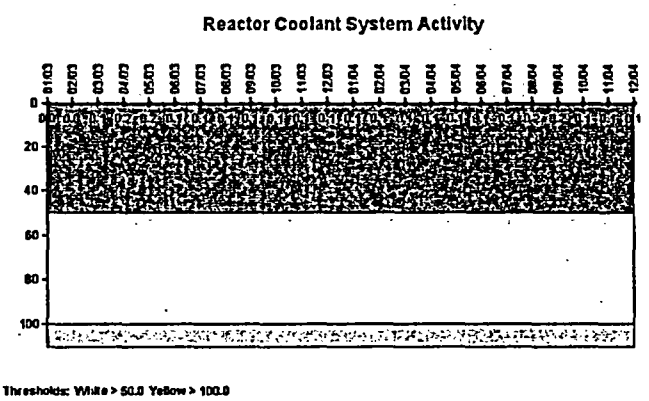
By Email: SECY@nrc.gov and U.S. Postal Service

Dear Mr. Chairman and Commissioners:

On February 24, 2005, in the closing of the Commission Briefing on Nuclear Fuel Performance a question was raised on the regulatory interface with the power reactor operators and nuclear fuel vendors with regard to the Significance Determination Process (SDP). Nuclear Information and Resource Service (NIRS) stated that it would submit a formal question for a response from the Commission and staff given the late hour of the meeting. Attached please find related questions submitted in follow-up by both NIRS and the Union of Concerned Scientists.

As background, Jim Malone, Vice President, Nuclear Fuels, Exelon Generation Company, LLC stated to the Commission (slide 33 of the industry panel's presentation) that "We experienced an unacceptable number of fuel defects in Exelon Units" [emphasis in original]. Quad Cities 1 replaced defective 233 assemblies after becoming the industry leader in radiation exposures to its workforce.

Mr. Malone confessed to you that Exelon experienced an "unacceptable" number of fuel failures that caused them to replace 233 defective fuel assemblies at Quad Cities Unit 1. Curiously, the Reactor Coolant System Activity performance indicator (PI) submitted by Exelon for Quad Cities Unit 1 at least looked acceptable:



Exelon did not provide the NRC with any comments accompanying this PI. One might have expected unacceptable conditions warranting the replacement of 233 defective fuel assemblies might have been reflected in this PI or in the "comments" field for this PI.

Data presented to you during the February 24th briefing indicates that 20 to 25 percent of the reactors in the United States are operating with defective fuel. The Commission briefing reflects the response undertaken by the industry and the NRC staff to this problem. Yet the Reactor Coolant System Activity PI has never been greater than Green. Never.

In our view as public safety advocates the function of the fuel rod cladding clearly has not only an operational role but clear safety functions to include providing the first barrier for retention of fission products and providing structural integrity to ensure effective cooling of the reactor core geometry. As the principle barrier in a multi-barrier system, degradation of fuel cladding constitutes erosion in the agency's defense-in-depth philosophy and practice.

The question comes up as to whether this same number of fuel cladding defects experienced at Quad Cities 1 was acceptable or unacceptable under the current NRC oversight process? If it was acceptable, please explain why?

With regard to the oversight of operational environment impact on the overall fuel performance cycle, at what point in the SDP is fuel cladding failure during reactor operation which adversely affects overall fuel performance such that the agency issues a RED as an "Unacceptable Performance Band"?

Mr. Malone, Exelon, on Slide 39 of his presentation to the Commission reports "Dose increases not significant." The transcript of the briefing will indicate that Commissioner Merrifield questioned if Quad Cities was also the industry leader for worker radiation exposures during this same time frame and answered in the affirmative. Why should the public not view this as a significant disconnect in agency and industry's portrayal of this issue as an economic issue versus a safety matter?

Is the Reactor Coolant System Activity PI an effective metric if it has failed to track conditions deemed "unacceptable" by the industry?

We greatly appreciate your attention to responding to this issue.

Paul Gunter, Director
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From: "Paul Gunter" <pgunter@nirs.org>
To: <SECY@nrc.gov>
Date: 2/28/05 4:29PM
Subject: Letter to Chairman & Commissioners re: SDP & defective fuel

Hello,

Please find attached a joint letter from Nuclear Information and Resource Service and Union of Concerned Scientists addressed to the Chairman and Commissioners in request of a response to follow-up questions from the Commission Briefing of Fuel Performance February 24, 2005.

The attached letter is being posted through regular mail as well.

Thank you,

Paul Gunter, Director

Reactor Watchdog Project

Nuclear Information and Resource Service

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Washington, DC 20036

Tel. 202 328 0002

CC: "Lochbaum/ David" <dlochbaum@ucsusa.org>

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Subject:	NIRS-UCS letter 02282005 corrected
Creation Date:	3/1/05 1:03PM
From:	"Paul Gunter" <pgunter@nirs.org>
Created By:	pgunter@nirs.org

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