

From: PAUL M. BLANCH <PMBLANCH@ix.netcom.com>
To: John Zwolinski <JAZ@nrc.gov>
Date: 7/31/96 6:46pm
Subject: CY PROBLEMS

7/31/96

John A. Zwolinski,
Deputy Director
Division of Reactor Projects -I/II
Office of Nuclear Reactor Regulation
Washington, DC 20555-0001

John:

The following letter was received today by regular mail. The only editing I did was to remove the author = B9s name and address. I will be interested in seeing your response to his concerns.

Sincerely,

Paul M. Blanch
135 Hyde Rd.
West Hartford CT. 06117
860-236-0326

7/31/96

Wayne D. Lanning
Director - Millstone Oversight Team
Nuclear Regulatory Commission
475 Allendale Road,
King of Prussia, PA 19406

SUBJECT: SAFETY CONCERNS AT CONNECTICUT YANKEE

The purpose of this letter is to clarify the safety concerns identified in the information package I sent to you on 7/10/96. I identified three safety concerns in the package.

The first concern involved the Reactor Vessel Level Indication System, which is a system that is required to safely shut down the plant in the event of a loss of reactor coolant. NRC Regulatory Guide 1.97 requires the system to provide redundant monitoring from the top of the reactor core to the top of the reactor vessel.

The way the technical specifications are written at CY, most of the indication is allowed to be lost with no corrective action required. When one indicator is lost, it is like driving at night with one headlight, you can still see. At CY in the late 1980's and early 1990's, both primary and backup indicators were lost at several locations from the top of the core to the top of the vessel. It was like driving at night with no headlights. CY responded by changing the emergency procedures to use alternate, less accurate indication. It was like telling the operators to hold a flashlight out the car window. Although it was questionable whether there was enough indication to handle a loss of reactor coolant accident, this was not my concern. My concern was after the lights went out, it seemed to take months to hand the operators a flashlight. The change I tried to make in 1992 would require a timely update of the emergency procedures when critical indication is lost. This change should be implemented before the plant restarts.

The second safety concern involves the technical specifications for eleven reactor trip setpoints. Concerns about the quality of the setpoint calculations were raised in the mid 1980's, but were ignored until 1994. According to the latest industry guidelines for calculating setpoints, the setpoint allowable values in a number of the CY technical specifications are not valid. The invalid values include: RCS Low Flow Reactor Trip, Steam/Feed Flow Mismatch Reactor Trip, Steam Line Break Flow Reactor Trip, VLPSC Reactor Trip, Hi Pressurizer Level Reactor Trip, HCP Reactor Trip, PORV Actuation, Core Deluge Actuation, RHR Valve Permissive, NIS Power Range Permissive, P7 & P8 Permissives.

The present operations manager at CY suppressed these concerns for years by ignoring them when he was the plant instrumentation manager. When I raised the concerns to him personally in a 1994 meeting, he simply claimed the setpoints were safe, and refused to discuss the reasons they might be unsafe.

An automobile comparison would be like a town manager refusing to review speed limits to the latest safety standards. Assume a car stops 50 feet on dry pavement after you apply the brakes. If new safety information comes out that says you should leave an additional 25 feet for adverse road conditions, and an additional 25 feet for the driver to react, then you should allow $50 + 25 + 25 = 100$ feet of stopping distance to be safe. The present CY allowable values are based on 50 feet. CY should correct the technical specifications, and have NRC approval of the changes before they continue to operate.

The improper allowable values leads to the final safety concern. It is not

possible to do proper safety evaluations with improper allowable values. When instrument error (such as drift) is checked during shutdown at CY, it is sometimes found outside the limits calculated to be safe, limits referred to as the acceptance criteria. This is common at all plants and has happened hundreds of times at CY. The concern is when this happens at CY, there is no method in place to evaluate whether safety limits were violated, and whether a setpoint change is needed to ensure safe operation in the future.

To use the automobile analogy again, assume the CY setpoints have been updated to the latest safety standards, and leave 100 feet for the car to stop. The procedures still say the brakes should stop the car in 50 feet, which is fine. Now assume when braking distance is checked, it is sometimes found to be 80 feet. With the evaluation method at CY, they would say: "no problem, since we have 100 feet to stop, we have 20 feet to spare". Wrong. If you need 80 feet for braking, 25 feet for road conditions and 25 feet for driver reaction, $80 + 25 + 25 = 130$. You now need 130 feet to stop safely.

What do I expect from the NRC? I expect the concerns to be reviewed by the NRC with experts, and I expect to be contacted for more information. I expect the NRC to determine in a few weeks whether the concerns are valid, and whether CY should resolve these concerns.

At the August 7th NRC public meeting in Waterford, I will listen for any progress made investigating these concerns.

Former CY Design Engineering

cc: Paul Blanch, Greg Wingard

CC: ERNIE HADLEY <ECHADLEY@aol.com>

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