GPU Nuclear

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April 3, 1992

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Dear Sirs:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Inspection Report 91-32
Reply to a Notice of Violation

A reply to a Notice of Violation was provided on 12/17/91 by GPUN in accordance with 10 CFR 2.201. Further evaluation of the issues surrounding the NOV indicated clarification of the events may be appropriate. Enclosed is a revised response; the changes have been identified by a single vertical line in the right margin. It should be noted, however, this revision does not cause the corrective actions to be altered, nor does it change the assessment of activities previously discussed.

If further information is required, please contact Mr. Thomas Blount, Licensing Engineer, at (609) 971-4007.

Very Truly Yours,

John J. Barton
Vice President and Director
Oyster Creek

JJB/TB/jc
cc: Administrator, Region 1
Senior NRC Resident Inspector
Oyster Creek NRC Project Manager

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I. **VIOLATION A.**

Criterion III, 'Design Control,' of 10 CFR 50, Appendix B requires that measures shall be established to assure regulatory requirements and the design basis for those structures, systems and components to which this appendix applies are correctly translated into specifications, drawings, procedures and instructions. Further, measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems and components. The design control measures shall provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of simplified calculational methods, or by the use of a suitable testing program.

Contrary to the above, measures were not established for the selection and review for suitability for pressure oscillation dampeners(snubbers). Between March 19 and April 11,1991 Chemiquip model 25SD pressure oscillation dampeners (snubbers) were replaced with Cajon model SS-8-SA-EW snubbers in the isolation condenser line break sensors without the appropriate engineering review. Subsequent licensee evaluation determined that the installed Cajon model SS-8-SA-EW snubbers rendered the isolation condenser condensate return line break sensors for both isolation condensers inoperable due to extended response times. These and other snubbers have not been included in design specifications or drawings.

This is a Severity Level IV Violation (Supplement I)

RESPONSE:

GPUN concurs with this violation as stated.

The snubbers had been replaced with snubbers of a different manufacturer and type without performing an evaluation to assess the impact on the sensor response time. As part of the Refuel Outage 13R, Job Order 22826 was scheduled to replace all Barton dP Indicating Switches, including the Isolation Condenser Indicating Switches (IB05s and IB11s). During the replacement of the Isolation Condenser instrument line tubing and snubbers, two different types of snubbers were removed from the system. One type was a Chemiquip 25SD and the other a Cajon SS-4-SA-EW. The Chemiquip was rated for heavy oils and the Cajon was rated for water and light oils. Instrumentation & Controls (I&C) Management reasoned that since it was designed for water application, the Cajon brand snubber was better suited for installation in the Isolation Condenser System. After replacement indicating switches were installed, the instrument technicians experienced difficulty connecting the instrument sensing lines due to space limitations.

Instrumentation and Controls (I&C) Maintenance Management decided to select a new snubber body style to facilitate installation. A Cajon SS-8-SA-EW was ultimately chosen as the replacement for all previously installed snubbers since it could be physically adapted to the application. This selection only changed the (Cajon brand) snubber housing size from 1/4 inch to 1/2 inch, not the filter element, and thus was considered a "replacement in kind" by the I&C Department. Subsequent investigation and testing identified the significant difference in flow characteristics between the Chemiquip and the Cajon type snubbers. Further, these differences were not readily apparent by review of the manufacturers catalog ordering information. This contributed to an improper selection.

Replacement of plant components is procedurally governed. In this instance the snubbers were treated as fittings with the resulting conclusion that a fitting capable of performing the same primary function must be the same as the original and therefore does not require engineering evaluation.

The lack of understanding of the impact snubbers have on instrument response has been identified as the underlying reason for this violation.

The immediate corrective action taken to address the Design Control issue was to identify the type and location of snubbers used in sensors for safety-related systems. This resulted in identification of snubbers in the main steam line break sensors and the core spray system differential pressure sensors. Concurrently, the snubbers in the isolation condenser line break sensors were removed. An initial assessment of the snubbers applicability in the main steam and core spray systems was performed with the result substantiating their use. Subsequently, a qualitative test was implemented to evaluate the response characteristics of the line break instruments.

Additional corrective actions taken consisted of a root cause evaluation, an independent review of the deviation reporting process, and a review of applications where snubber devices are used on critical plant instrumentation. This review was conducted to ensure that where snubbers are used, the appropriate device is identified and documented consistent with design control procedures. A subsequent review will also evaluate the need for enhanced programmatic controls and where necessary recommend such improvements. In each case the recommendations provided will be assessed for benefit and viability.

To ensure proper actions are taken, when a component is identified as not being under design configuration control, guidance will be promulgated to maintenance, engineering, and operation personnel.

The date when full compliance will be achieved is restart from 14R outage.

II. VIOLATION B.

TECHNICAL SPECIFICATION 3.1 requires that the plant protective instrumentation listed in TABLE 3.1.1 to be operable. Table 3.1.1, Item H.2 specifies that the isolation condenser condensate return line high flow sensors shall be operable in the run mode.If an isolation condenser condensate return line high flow sensor is inoperable, the affected isolation condenser is required to be isolated.

Contrary to the above, from June 25, 1991 until September 26,1991 the isolation condenser condensate return line high flow sensors for both isolation condensers were inoperable and the isolation condensers were not isolated.

This is a Severity Level IV Violation (Supplement I)

RESPONSE:

GPUN concurs with this violation as stated.

During the 13R outage the sintered metal snubbers (gauge savers) were replaced in the instrument lines to the Isolation Condenser line break detection instruments while implementing a system modification. Due to the type of snubber installed, if a line break had occurred in the condensate header of the IC's a significant time delay between the condition requiring action and the instrument sensing this condition existed. These snubbers created an instrument line restriction which was sufficient to preclude the isolation of the break within the sixty seconds specified in the UFSAR.

The reason these snubbers were used was because inadequate design controls were in place which allowed replacement of these devices with snubbers from a different manufacturer and of a different type. The snubbers which were installed were intended as replacement in kind. Only after subsequent investigation and testing was the instrument response delay known.

It should be noted that although the condensate line sensors would have introduced an extended time delay, the steam line sensors would have initiated the necessary isolation signal to shut the isolation valves. In essence the steam line sensors provided the redundancy to ensure that a break in the condensate line would be isolated in a timely manner. In addition, follow up testing and evaluation initially indicates that the sixty seconds for valve closure may be overly conservative. These aspects support the position that the safety significance is minimal.

The immediate corrective actions taken included commencing a reactor shutdown when it was postulated that the snubber performance might influence the sensor response time. Additionally, snubber use was evaluated which ultimately led to removal of the snubbers from the IC pipe break sensors. The use of instrument line snubbers on other safety related systems was immediately evaluated and determined to be appropriate for the current applications.

The completion of these corrective measures placed the plant in compliance with Tech Spec 3.1 Table 3.1.1 Item H2 which required no further action.

The date when full compliance was achieved was September 26, 1991.