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August 25, 1997 6730-97-2221

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

Dear Sir:

Subject: Oyster Creek Nuclear Generating Station Docket No. 50-219 Licensee Event Report 96-14, Rev 1; Four Main Steamline Sensors Found Below Technical Specification Limits

Enclosed is Licensee Event Report 96-14, Revision 1. The changed portions are indicated by a bar in the right margin. This event did not impact the health and safety of the public.

If any additional information or assistance is required, please contact Mr. John Rogers of my staff at 609.971.4893.

Very truly yours,

Michael BRoche

Michael B. Rocha Vice President and Director **Oyster** Creek

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MBR/JJR Enclosure

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Oyster Creek NRC Project Manager CC: Administrator, Region I Senior Resident Inspector

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During the performance of a routine surveillance on December 9, 1996, the four Main Steamline Low Pressure sensor setpoints were found to be less than that required by the Technical Specifications. This is considered reportable under 10 CFR 50.73(a)(2)(i). The apparent cause of this occurrence is sensor setpoint drift due to changes in relative humidity.

Immediate corrective actions were taken to recalibrate the switches to within Technical Specification required setpoints. Additionally, the quarterly surveillance on these switches was continued at a monthly frequency.

A new design, hermetically sealed switch was selected. On March 28, 1997, the new switches were installed to replace the four existing switches. As-found data collected since the installation indicated that the drifting problem had been solved. No further corrective actions are planned.

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DATE OF DISCOVERY

The condition described in this report was discovered on December 9, 1996.

IDENTIFICATION OF OCCURRENCE

During the performance of a routine surveillance test on the main steamline pressure sensors, four low pressure switches were found to have setpoints below that required by the Technical Specifications. This event is considered reportable under 10 CFR 50.73(a)(2)(i).

CONDITIONS PRIOR TO DISCOVERY

The reactor was operating at approximately 100% power. System pressures and temperatures were normal for full power operation.

DESCRIPTION OF OCCURRENCE

Technical Specification Table 3.1.1, Section B.5, requires Low Pressure Main Steamline (EIIS SB) protection from two channels in each of two Reactor Protection Systems (EIIS JC). During the performance of a routine surveillance on December 9, 1996, the setpoints of these four sensors (EIIC PS) were found to be less than that required by the Technical Specifications.

APPARENT CAUSE OF OCCURRENCE

The cause of the setpoint drift on the four sensors was a decrease in the ambient humidity in the area where the switches are located. The relationship between relative humidity and setpoint drift for these switches is known based on industry experience. The setpoint drift is such that as humidity goes up, the setpoint goes up and as the humidity goes down, the setpoint goes down. The existing design pressure switch was originally installed in February 1991, due to the unavailability of spare parts for the original sensors. Since February 1991, several spurious sensor actuations have occurred.

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APPARENT CAUSE OF OCCURRENCE (Cont.)

The calibration records for the previous three months were reviewed. During the October and November surveillances, the plant was in an outage condition. During the December calibration, the plant was operating at full power. This significantly changes the environmental conditions where the switches are located. This change in relative humidity lowered the setpoint and caused it to decrease below the Technical Specification allowed limit.

A contributory cause of this event is the construction of the internal microswitch in the sensor. The microswitch has no moisture seal which allows the switch to be affected by the relative humidity.

ANALYSIS OF OCCURRENCE AND SAFETY SIGNIFICANCE

The four main steamline low pressure switches initiate a main steam isolation valve closure at 825 psig, decreasing, when in the RUN mode. This protects against a rapid depressurization and cool down of the reactor vessel.

The significance of this event is considered minimal: 1) Although the four sensors were found below the Technical Specification operating limit of 825 psig, they were above 814.7psig, which is the Technical Specification safety limit. Therefore, the MSIV closure would have occurred above the safety limit; and 2) these switches are only considered in the cooldown of the vessel and are not included in the considerations for a main steamline break. Protection from a main steam line break is provided by other instrumentation.

CORRECTIVE ACTION

IMMEDIATE CORRECTIVE ACTION

Immediate corrective action was taken to adjust all four sensors to the proper setpoints.

SHORT TERM CORRECTIVE ACTION

The switches which are required to be calibrated each quarter were previously changed to a monthly surveillance, in response to a spurious trip in June 1996. This frequency was continued.

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CORRECTIVE ACTION (Cont.)

LONG TERM CORRECTIVE ACTION

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A new design, hermetically sealed switch was selected. On March 28, 1997 the new switches were installed to replace the four existing switches. As-found data collected since the installation indicated that the drifting problem had been solved. No further corrective actions are planned.

SIMILAR EVENTS

- LER 94-012; Electromatic Relief Valve Setpoints exceed Technical Specification Limits due to drift
- LER 94-008; Electromatic Relief Valve Setpoints exceed Technical Specification Limits due to drift
- LER 92-012; Electromatic Relief Valve Setpoints exceed Technical Specification Limits due to drift
- LER 92-006; Electromatic Relief Valve Setpoints exceed Technical Specification Limits due to drift