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U. S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Attn: Richard W. Starostecki, Director
Division of Project and Resident Programs

Ref: USNRC Inspection 50-54/83-01

This refers to the Notice of Violation that was enclosed with the above referenced inspection report. The report contends that during an eight week interval the licensee did not perform monthly surveillance tests on coolant flow, core differential temperature, pool temperature, and pool level measuring channels. These tests should not exceed a six week frequency. The basis for this NRC contention is that UCC did not perform the long form Reactor Console Checklist (RS-01) during an eight week interval.

UCC agrees with the NRC that the long form Reactor Console Checklist (RS-01) was not performed between the dates of 8/05/82 and 9/30/82. This eight week time span between completion of the long form Reactor Console Checklist (RS-01) does not mean though that the monthly surveillance channel tests for coolant flow, core ΔT, pool temperature, and pool level were not performed. UCC believes these channel tests were performed during this period and recorded in places other than in the Reactor Console Checklist (RS-01). The time interval between performance of the long form Reactor Console Checklist (RS-01) was also not a violation of internal UCC procedures. Completion of this checklist has not been required on a monthly basis but only when a reactor shutdown exceeded an eight hour time limit.

Listed below are the four measuring channels for which the NRC contends channel tests were not performed. UCNR's records have been reviewed and our bases for the belief that these tests were performed is presented.

Coolant Flow - As defined in Technical Specification 3.2.2 coolant flow is a measuring channel which is utilized to allow the operator to calculate reactor power. Measuring channels require a monthly channel test, which by Technical Specification definition, requires the introduction of a signal into the channel to verify it responds in a specified manner. During the time interval between 8/05/82 and 9/30/82 coolant flow channel tests were performed numerous times even though the Reactor Console Checklist (RS-01) was not completed.

Between the above noted dates coolant flow was changed approximately one hundred times for power reductions and the subsequent return to power. These flow reductions are recorded in the control room logbook and involve a reduction of flow rate to zero gpm followed by a return to the normal 2250 gpm flow rate. This meets the requirements of a channel test in that the operator changes the core coolant flow rate and verifies that the flow rate channel responds to this change of flow rate.

Besides these numerous flow reductions the coolant flow meter was calibrated satisfactorily on 8/18/82. Coolant flow is also logged hourly and adjusted several times per shift.

Core Differential Temperature - As defined in Technical Specification 3.2.2 core ΔT is a measuring channel which is utilized to calculate reactor power. As a measuring channel it requires a monthly channel test to verify that the channel responds in a specified manner.

As stated above the reactor was made subcritical and the core coolant flow was cut approximately one hundred times during the period 8/05/82 to 9/30/82. Each time the flow is cut the core differential temperature goes to zero. After flow is restored and power increased to 5 MW the core ΔT will respond and increase to approximately $16^{o}F$.

Several times per shift the 5 MW power level is adjusted. Each adjustment of power demand is seen on the ΔT digital and recorder outputs. As outside temperatures change the cooling tower fan speeds are adjusted to compensate for the changes in secondary heat removal. These changes in fan speed can be temporarily seen on the core ΔT output. Each reactor startup also verifies that the ΔT channel is responding correctly. Core ΔT is also logged on an hourly basis.

All of these above operations meet the requirements of a core ΔT channel test because the core ΔT was verified to respond as expected to changes in its input signals.

Pool Temperature - As defined in the Technical Specification 3.2.2 pool temperature is a measuring channel which is utilized to allow the operator to adjust the cooling system to keep pool temperature within range and to adjust the reverse setpoint. The monthly channel test of the pool temperature requires that a signal be introduced into the channel to verify proper response.

Pool temperature is logged hourly. Prior to every normal reactor startup the pool temperature is also logged. After a shutdown of any appreciable length the pool water will cool and the logged pool temperature prior to startup will be appreciably less than the normal running pool temperature. This verifies that the pool temperature channel did respond to a change in pool temperature and meets the requirements of a channel test.

Pool Level - Technical Specifications 3.2.2 defines pool level as a measuring channel. The measuring channel monthly surveillance requirements call for a verificiation that the channel responds to a signal in the correct manner.

UCNR's Daily Checklist (RS-11) logs that pool level and pool level alarms are normal. The short form Reactor Restart Checklist (RS-06) also logs that the pool water level alarm status is normal. During the period from 8/05/82 to 9/30/82 the pool water level was lowered four times to a level six feet or more below normal for routine maintenance. After the level was restored to normal the pool water level alarms were logged as cleared. This reduction of water level and subsequent increase to normal level along with the logging of normal status of level alarms meets the monthly measuring channel surveillance requirements.

In conclusion, UCC believes that the surveillance requirements for a monthly channel test of coolant flow, core ΔT, pool temperature, and pool level were meet during the period 8/05/82 to 9/30/82. UCC agrees with the NRC, though, that performance of these tests could be more clearly documented and organized in our routine checklists. To accomplish this, UCNR's short form Reactor Restart Checklist (RS-06) has been modified to include a channel test of each of the four measuring channels in question. Because either the long form Reactor Console Checklist (RS-01) or the short form Reactor Restart Checklist (RS-06) is required prior to any reactor startup, including these measuring channel tests on both checklists will insure a clearer documentation of test completion.

Sincerely,

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