GPU Nuclear

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October 18, 1985

Director, Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Sir:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Technical Specification Change Request No. 142

At 10:00 A.M. on Wednesday, September 16, 1985, a conference call was conducted between Messrs. J. N. Donohew and J. T. Beard of your staff and GPUN. Based on that discussion, it was determined that a supplemental letter was needed to:

1. Revise our Technical Specification Change Request (TSCR) No. 142, and

2. Document our response to questions raised during that conversation.

With regard to Item 1., revision to TSCR No. 142, in order to more clearly define our actions, Note gg to Table 3.1.1 should be revised to state, "These functions are not required to be operable when secondary containment is not required to be maintained or when the conditions of section 3.5.B.1.a, b, c, and d are met, and reactor water level is closely monitored and logged hourly. The Standby Gas Treatment System will be manually initiated if reactor water level drops to the low level trip setpoint". The changes to the TSCR are attached to this letter. Please note that we are requesting that TSCR No. 142 be applicable only for the duration of the Cycle 10M outage.

With regard to Item 2, it was requested that the following items, which were discussed during the conference call, be documented:

A question was raised regarding the acceptability of the existing water level instrumentation to accurately measure Reactor Water Level during cold shutdown conditions.

The level monitoring instrumentation used during 10M outage will consist of redundant channels. Each channel is density compensated. The assumptions for density compensation are that the Reactor water is saturated at the reactor pressure at all times. These instrument loops have separate indicators in the Control Room. One channel inputs to a recorder. The recorder has an alarm point corresponding to 146" TAF water level. (The Lo Level set point is 137" TAF).

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The other channel will be temporarily modified to install an alarm unit to indicate alarm condition when water level drops to +146 TAF. The alarm from both the level monitoring channels will be separately annunciated on the main Control Room alarm display system.

The calculations indicate that with the existing calibration of the transmitters (for the 10M outage level monitoring system) the additional error due to cold condition will not be appreciable (approximately 0.6 inches in the conservative direction). This is due to the pressure compensation (density compensation) of the measured differential pressure. These calculations were done using Reactor Water Temperature at 140°F and Drywell Temperature at 80°F.

The transmitters for the 10M outage level system were calibrated within the last week. A loop calibration will be performed for the channel with temporary alarm unit, and level indicators will be compared with other level monitoring instruments prior to tag-out.

In addition to the above, when the LOW level alarm is received, the operator will observe both the single wide and narrow range water level instruments and take appropriate actions if either instrument reaches the LOW level trip setpoint.

The next Item discussed was in regard to the Actuation or Control Functions listed in Table 7.6-1 of the FSAR for both LOW and LOW-LOW level switches. It was requested that GPUN verify that justification existed for the loss of each actuation or control function listed. The justification for each item is presented below:

Reactor LOW Water Level Instrument Functions

1. Reactor Scram - This function is not required when the reactor is in the SHUTDOWN mode per Item A.4 in Tech Spec Table 3.1.1. The reactor will be maintained in COLD SHUTDOWN with all control rods inserted.

2. Turbine Trip - This function is not required as above. With reactor maintained in COLD SHUTDOWN the turbine will be off-line.

3. Annunciators - LOW level annunciation will be maintained utilizing different water level indicators wired to the annunciator panel.

Reactor LOW-LOW Water Level Instrument Functions

1. Core Spray initiation - Core Spray system auto initiation is not required to be operable when the requirements for reduced availability are met per Technical Specification 3.4.A.

2. Containment Spray initiation - "If primary containment integrity is not required, the containment spray system may be made inoperable". T.S. 3.4.C.6

3. Reactor isolation - Currently the action statement for Item B.1 of Table 3.1.1 states "close main steam isolation valves and close isolation condenser vent valves, or place in cold shutdown condition." The status of the plant will be "cold shutdown" during replacement of LOW-LOW instrumentation.

In addition, we have proposed in the TSCR that Note gg to Table 3.1.1 should be added under the shutdown mode. This provides the added assurance of monitoring reactor water level.

4. Containment isolation - Not required to be operable when primary containment integrity is not required to be maintained. - T.S. Note U to Table 3.1.1.

5. Recirculation Pump Trip - not in Tech Specs - not required unless in RUN mode.

6. Isolation Condenser initiation - not required if reactor coolant temperature is less than 212°F per T.S. 3.8.A.

7. SGTS initiation - T.S. we are attempting to change with TSCR No. 142, "Not required when secondary containment integrity is not required" - T.S. 3.5.B.2. Note that Standby Gas Treatment would be initiated should we lose the normal reactor building ventilation system.

8. Annunciators - do not perform a safety function and are not required by Technical Specifications to be operable. The LOW level annunciator will be operable to alert the operator if water level starts dropping.

9. Isolates Cleanup System - same as reactor isolation.

10. Isolates Shutdown Cooling System - same as reactor isolation.

11. Isolates RBCCW to drywell - same as containment isolation.

12. Isolates Air/N2 to drywell - same as containment isolation.

The above items 2 and 6 will not be manually initiated upon achieving the LOW level trip setpoint as those actions are not required when the reactor is maintained in the COLD SHUTDOWN condition.

The automatic functions normally initiated at LOW-LOW water level condition will be manually initiated when the LOW water level trip setpoint is observed. Manual initiation of the LOW-LOW level functions at the LOW level setpoint will result in approximately a 51" conservatism between normal and proposed actuation levels and will account for: 1) the delay in the manual actuation time as compared to automatic actuation time; and 2) inaccuracy in the water level indication, if any.

It was also requested that we discuss in greater detail why both trip systems must be made inoperable in order to accomplish the modification.

The LOW-LOW Reactor Water Level instrumentation hydraulic and control logic is shown in the attached sketch.

The logic for the LOW-LOW water level interlock for the control of SGTS and MSIVs is one-out-of-two-twice.

RE02A through D are the instruments that change state when the reactor water level reaches the LOW-LOW setpoint. RE02A&B, located on RK01, share a common header with RE05A and RE05/19A. RE02C&D, located on RK02 share another common header with RE05B and RE05/19B. RE02A and C input to control logic channel 1 and RE02B and D input to control logic channel 2.

The EQ modification scheduled for the upcoming outage will replace the RE02's, RE05's and RE05/19's with the new Environmentally Qualified transmitter switches. The modification will replace RE02's one for one. RE05's will be replaced by two switches each, and RE05/19's will be replaced by one transmitter and two switches each. To accomplish this the tubing will be cut upstream of the existing valve manifolds. Therefore, the manifolds cannot be used for isolating the instruments.

Technical Specifications (Table 3.1.1, Item J.4) require at least one complete trip channel to be operable during shutdown. Because of the tubing layout of the level monitoring instruments, it is necessary that one instrument out of each trip channel be disabled to accomplish the modification. Therefore, a complete channel cannot be maintained operable during the modification.

In addition to the above, it was also requested that we consider an alternate approach. The alternative, which was previously considered by GPUN and deemed unacceptable, would be to modify the existing LOW-LOW level instrumentation logic to put A and B sensors into one logic channel and C and D sensors into the other logic channel. This would allow the modification to be implemented on one rack at a time. The logic modification would however be subject to a single failure and would, in our opinion, render the instrumentation inoperable. The change would constitute an unreviewed safety question and as such would require NRC review and approval prior to implementation. In addition, and more importantly, the scheduled outage time would be increased.

The EQ modification is scheduled for 24 days duration and it is the critical path item. This plan is based on working two ten hour shifts/day and working on both racks (RK01 and RK02) simultaneously. If the logic is changed, assuming NRC approval, and one rack is worked on while the other is maintained operable, the outage duration would be doubled to 48 days.

As shutdown will commence on October 18, 1985 and preparations to allow the modification to proceed will begin the following day any delay in issuance of our proposed Technical Specifications (past 12:00 P.M. on Saturday, October 19, 1985) will result in a day for day increase in the outage length. This work, as mentioned previously, is the outage critical path.

Very truly yours,

Peter B. Fiedler
Vice President and Director
Oyster Creek

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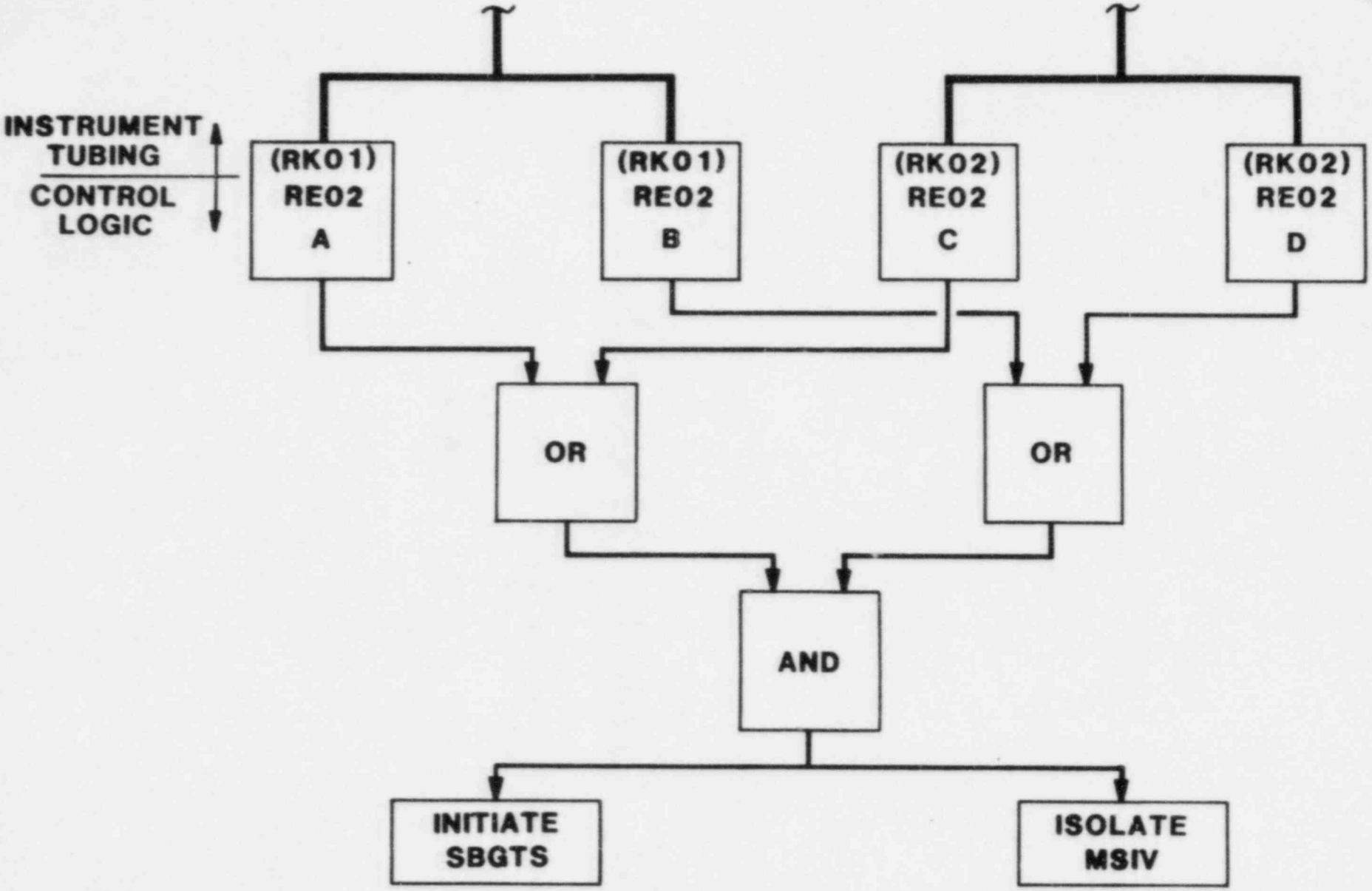

LO-LO WATER LEVEL TUBING & CONTROL LOGIC SET-UP