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VICE PRESIDENT
SUPPLY

June 15, 1981

Director
Region I, U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
631 Park Avenue
King of Prussia, PA 19406



Subject: Calvert Cliffs Nuclear Power Plant
Units Nos. 1 & 2, Docket Nos. 50-317 & 50-318
Report of Changes, Tests and Experiments

Gentlemen:

As required by 10 CFR Part 50 Paragraph 50.59, attached is a report of all changes, tests and experiments made on Calvert Cliffs Units 1 and/or 2 under the provisions of that Part and covering the period from our last such report through May 1, 1981. It is our intent at this time to submit another report in later 1981.

Items in the attached are referred to by "Facility Change Request (FCR)" number.

Very truly yours,

cc: Director of Inspection and Enforcement (39 copies)
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
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Changes, Tests and Experiments Made In Accordance With
10 CFR 50.59 for Calvert Cliffs Units 1 and/or 2

- 74-131 This FCR provided for the redesign and change of materials of the CEA Extension Shafts and Gripper Operating Tool. Because there is no change in the function or operation of the equipment and likewise no decrease in the quality of material or performance, no unreviewed safety question exists.
- 75-144 This FCR replaced the Tave indication on MCB 1&2C05 with an autoneered (highest) T_C indication. The safety analysis concluded that this FCR does not constitute an unreviewed safety question because: T_C is the limiting condition for safe operations and not Tave; the T_C signal output is isolated from the remainder of RPS, so no adverse effects on RPS or ESFAS; no new systems are being added.
- 75-1093 This FCR added a bypass damper around the Emergency Core Cooling System and the spent fuel pool charcoal filter. The new damper was required because the leak rate of the existing damper was too high. The change did not constitute an unreviewed safety question since it restored the system to a condition consistent with original design criteria.
- 75-1105 This FCR replaced the purification filter isolation gate valves with globe valves in order to induce flow through the boronometer with a clean filter. The valve type change does not change the safety related function of the valve or the system and thus does not increase accident probability.
- 76-83 This FCR added pre-engineered metal buildings at the Containment Structure Equipment Hatch Access Openings. These metal buildings provide a laydown area for shielding and equipment during maintenance, modification and refueling periods. These buildings provide protection from the elements and improve cleanliness and security. These buildings were erected independently of the containment structure, and as a result, this FCR does not constitute an unreviewed Safety question.
- 76-119 This FCR was to modify 2-CV-306 to remove jackscrew, thus eliminating means to lock open the valve. Removal of jackscrew does not affect ability of the valve to operate. Further, the seismic design is not affected as the weight of the jackscrew is negligible compared to the weight of the valve.
- 76-148 This FCR provided shielding to reduce exposure in vicinity of the reactor head laydown area during Vessel Head "O" -Ring replacements. Since there was no change to safety related equipment and since the only safety related portion was concrete drilling in the Elevation 69'-0" slab, consistent with original design, the effect was negligible and does not constitute an unreviewed safety question.

- 76-152 To minimize interference with upper guide structure (UGS) inspection, ladder #3 in the refueling pool was modified to make a portion removable above the flange elevation. There is no real change in the function or strength of the ladder, and hence, there is no unreviewed safety question.
- 76-167 This FCR modified the containment atmosphere radiation monitoring system. The technical specifications require this system to be operable for reactor coolant system leakage detection. The loss of both the particulate and gas detectors in this system requires the reactor to be in hot standby within 6 hours. The addition of bypasses around each detector allows maintenance work on one detector while the other is still operable. Also the installation of a second sampling pump in parallel with the existing one allows essentially continuous operation should one of the pumps fail. This modification is not an unreviewed safety question since the system is non safety related but shown in the FSAR.
- 76-188 Original condenser fan motors for the switchgear room HVAC were replaced with more reliable motors. A high failure rate of the original dripproof type motors required replacement with weatherproof type motors. The change increased the reliability of the switchgear room HVAC system, therefore, it does not constitute an unreviewed safety question.
- 76-1010 This FCR added isolation amplifiers for signal transmission from the Nuclear Instrument (NI) channels to the Fourier Analyzer. The safety analysis concluded that this change did not constitute an unreviewed safety question, because the isolation amplifiers prevent equipment interaction (between safety-related and non safety-related), and because the equipment is seismically qualified.
- 76-1011 This FCR replaced the diaphragm, O-rings, air regulator, solenoid valve, and limit switches on CV-517. The safety analysis concluded that this FCR does not constitute an unreviewed safety question, because the change does not degrade the functioning of RPS, ESFAS, nor CV-517 and because no new systems, equipment, or operations are being added.
- 76-1067 This FCR relocated the steam generator snubber tubing to avoid interference with other piping. The safety analysis concluded that this FCR does not constitute an unreviewed safety question because the rerouting was done in accordance with the original design criteria.
- 77-81 This FCR revised four piping and instrumentation diagrams, bringing the drawings up to date, adding information and clarity. No physical work was involved.
- 77-142 This FCR added flanges to lines on either side of relief valves RV-430 and RV-431 (safety injection system) to facilitate their removal for periodic testing. The safety analysis concluded that the stresses in the system with this change will remain essentially the same as before. The modification is performed in accordance with the governing codes. This change did not constitute an unreviewed safety question.
- 77-144 This FCR added flanges to the lines on either side of relief valve RV-311 (CVCS) to facilitate removal for periodic testing. The safety analysis

concluded that the stresses in the system with this change remain essentially the same as before. The modification is performed in accordance with the governing codes. This change did not constitute an unreviewed safety question.

- 77-175 This FCR designed and installed steel resting pads for storage of the core support barrel lift rig. There is no unreviewed safety question concerning this FCR. Since there was no change in the location of the rig, no structural review was required and the structural integrity of the plant systems was not impaired. Anchor bolts in safety-related concrete were installed per existing civil standards.
- 77-176 This FCR replaced a heat exchanger relief valve in the component cooling system with a temporary valve until the original valve could be repaired. The temporary replacement was set at the same pressure. The safety analysis concluded that the modification did not constitute an unreviewed safety question since the temporary replacement valve exceeded requirements.
- 78-35 Fabricated hanger brackets for the weld inspection pole and mounted on reinforced concrete wall. The hanger brackets were designed and located to prevent damage to the pole. Concrete anchors were installed in safety-related reinforced concrete wall in accordance with existing civil standards. Safe shutdown of the plant is not impaired and hence there is no unreviewed safety question.
- 78-77 This FCR replaced the existing main steam flow transmitter root valves with sealed diaphragm-type valves. The previous valves were non-isolable. The safety analysis concluded that the modification did not constitute an unreviewed safety question. The replacement valves had higher pressure ratings than the previous one.
- 78-98 This FCR provided a portable elapsed time indication for the Emergency Diesel Generator. It does not constitute an unreviewed safety question since this equipment plugs into circuitry (via relay cabinet) of the specific EDG being tested. The equipment is only used during tests.
- 78-102 This FCR was issued to fabricate and install weld sleeve to repair cracked heat exchanger piping at RCP cover housing. The sleeve acts to reduce stresses in the heat affected zone of the repair weld and reduce possibility of weld failure. Safety analysis concluded no unreviewed safety question because effect of the failure would be to create a leak similar to that being repaired.
- 78-119 This FCR encapsulates a 45° lateral tee on the suction line from #22 charging pump. Since neither the function nor the operation of the system is affected by this modification and the line has axial restraint to prevent separation, this is not an unreviewed safety question.
- 78-121 The packing of the salt water pumps was replaced with a Chesterton-style packing to prevent damaging the shaft sleeves on the pumps. Since the operation and function of the salt water pumps were not changed, it was concluded that this FCR did not constitute an unreviewed safety question.

- 78-138 This FCR replaces piano hinge on containment cooling duct fusible link doors with storage hinges. The door must open on LOCA. Stronger hinges will not affect opening therefore, no unreviewed safety question exists.
- 78-153 15/16" nuts were installed on the reactor coolant pump seal vent valves in place of handwheels. Opening and closing of the valves is done with the use of a wrench. Safety analysis concluded that this modification did not constitute an unreviewed safety question.
- 78-1023 This FCR repaired the damage on the main steam isolation valve hydraulic piping supports and evaluated other main steam isolation valves to determine if generic problems existed. The design was analyzed and found to be consistent with the original design so this FCR did not constitute an unreviewed safety question.
- 78-1032 This FCR allowed for the installation of replacement cam followers to be used in the containment personnel air locks. The safety analysis concluded that this FCR does not constitute an unreviewed safety question because there was no change in design or function.
- 78-1034 This FCR changed the material of the component cooling pump impeller wear ring at the recommendation of the pump vendor. The safety analysis concluded that this does not constitute an unreviewed safety question because the pump operation is unchanged, no pressure retaining parts are affected and the new material is equally resistant to wear and corrosion.
- 79-8 This FCR revised drawings to show the correct size for the condenser neck extraction piping. A minor drafting error had been made. Safety analysis concluded that this modification did not constitute an unreviewed safety question.
- 79-15 Various relief valves on the component cooling side of the sample coolers were replaced. The new valves were capable of being adjusted when the lift setpoint is out of tolerance. This FCR did not constitute an unreviewed safety question since the replacement relief valves are suitable for the design conditions.
- 79-17 This FCR changed the tensile strength of the fuel transfer tube blank flange O-ring from 1500 psi to 1000 psi at the recommendation of the manufacturer. The safety analysis concluded that this did not constitute an unreviewed safety question. The tensile strength of the subject gasket is irrelevant for this application since the gasket is under compression. The new 1000 psi tensile strength will still control the fillers in the gasket material within the desirable limits to insure the important physical properties are not affected.
- 79-24 This FCR allowed "Furmanite" repairs to the feedwater check valve (FW-130). Keeping the size of the injection holes to 5/16" dia maximum and at least 6 inches apart, the stresses in the valve body are still below the allowable limit. The safety analysis concluded that this FCR does not constitute an unreviewed safety question.
- 79-36 This FCR allowed for drilling and tapping various locations on the auxiliary feedwater pump turbine trip and throttle valve operators to accommodate alemite grease fittings. Routine lubrication would reduce

failures of operating mechanisms. The safety analysis concluded that the valve operation is unchanged and the modification did not constitute an unreviewed safety question.

- 79-57 This FCR deleted spare limit switches and gear boxes from 1 & 2-MOV-403 and 405. These spare limit switches were not wired and were not necessary. The MOV's are safety related from a pressure boundary standpoint only. The removal of the spare limit switches were not significant to the seismic qualification of the MOV's.
- 79-62 This FCR allowed for the machining of the low pressure safety injection pump bearing housing/stuffing box extension interface. This was done to reduce clearances that were excessive. Safety analysis concluded that this FCR did not constitute an unreviewed safety question.
- 79-149 This FCR placed a temporary shield wall for the high level primary sampling station as required by the TMI LLTF requirements. The wall provides no safety related function and structurally could not damage Safety Related equipment if it did fall and therefore no unreviewed safety question exists.
- 79-1005 This FCR allowed a change of material of the cylinder of Type B Crosby relief valves from SS 316 to SS 316 L. The change was suggested by the vendor. The safety analysis concluded that the substitute material has better corrosion resistance and the same physical strength properties. The change does not affect operation of the relief valve. This is not an unreviewed safety question.
- 79-1014 This FCR changed the material to be used for the packing gland studs and bonnet retainer screws of the main steam isolation valves. The operation of the main steam isolation valve is unchanged and the FCR did not constitute an unreviewed safety question.
- 79-1026 Change drawing to reflect "as-built" condition of spray ring. The Unit 1 inner ring has 89 instead of 90 nozzles. The function of the ring remains unchanged and the design conditions are still met. Therefore, no unreviewed safety questions exist.
- 79-1055 This FCR modified the control circuits for the containment isolation valves so that resetting ESFAS will not inadvertently reopen the valves. The safety analysis concluded that this FCR does not constitute an unreviewed safety question, because: the change does not affect RPS; the original design criteria for ESFAS regarding separation and seismic still applies; fail-safe on loss of power still applies to the containment isolation valves and control circuits; design does not allow inadvertant closure of containment isolation valves; no new systems nor operations are being added; and, the containment isolation valves' closure times are not changed.
- 79-1065 This FCR replaced the existing H.P. Pump Unloader Solenoid valves in the MSIV Hydraulic Unit with environmentally qualified solenoid valves and provided vital power to them. Valve replacement improved the quality of the system. Accumulators serve as adequate redundancy should existing unloader valves fail. This is not an unreviewd safety question.

- 80-76 This FCR replaced a worn section of Wide Range NI drawer test signal cable with a jumper. Replacement is at drawer connection. The change did not affect Engineered Safety Features and is being done in accordance with the original design criteria for the RPS. The Signal Path was recalibrated after modification.
- 80-94 This FCR provided flanges for the letdown heat exchanger inlet relief valve so that repairs and testing would be more easily accomplished. The addition of the flanges maintained the integrity of the piping system and the FCR did not constitute an unreviewed safety question.