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U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

ATTENTION: Document Control Desk

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

REFERENCE: (a) 10 CFR 50, Paragraph 50.59(b)

Gentlemen:

As required by the above reference, attached is a report containing discussions of the Changes, Tests and Experiments completed on Calvert Cliffs Unit 1 and/or 2 under the provisions of 10 CFR 50.59(a), including a summary of the safety evaluation of each.

Items in this report are referred to by "Facility Change Request" (FCR) and "Temporary Modification" number. The latter comprise lifted leads and jumpers and temporary mechanical devices deemed to be changes within the scope of 10 CFR 50.59. Additionally, Safety Evaluations associated with other activities are identified respectively under "Miscellaneous 50.59".

This report covers the period from January 1, 1989, through December 31, 1989.

Very truly yours,

GCC/MVP/pjw

Enclosure

cc: D. A. Brune, Esq.
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IE47
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78-1026 (Common)

This change was performed to allow the spent fuel handling machine to access high density poison storage racks in Units 1 and 2 spent fuel pools. The spent fuel handling machine rails were extended and the additional support bracing was installed to facilitate greater east and west trolley travel. The limit switches associated with the SFHM were altered to permit the extended travel and limit switches restricting the auxiliary building's overhead crane were adjusted to further restrict the crane's east and south travel. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

80-0017 (Units 1 and 2)

The salt water system orificed valves, 1(2)-CV-5209 and 1(2)-CV-5214, on the discharge of the service water heat exchanger, were permanently disabled in the fully open position. ESFAS signals (SIAS and RAS) no longer affect these valves. Flow control through the service water heat exchanger and ESFAS-required operation is performed solely by the original control valves 1(2)-CV-5210 and 1(2)-CV-5212. Turbulence-induced erosion problems at 1(2)-CV-5210 and 1(2)-CV-5212 are being mitigated by rubberlining the valves and the affected piping. Safety evaluations evaluated the installation of rubber-lined, flanged spool pieces and locking open the orificed valves with their shafts and discs removed. Further, the removal of ESFAS control from the orificed valves was justified by safety evaluation. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

81-1061 (Common)

This change purchased and installed two larger capacity 250VDC batteries on the Emergency Turbine Lube Oil System. One battery replaced the existing 250VDC battery, which was near end of life, and the other battery will be used as an installed backup for maintenance and testing of the first battery. The 250VDC Battery System is a non-safety-related system described in the FSAR, but it does not supply power to any safety-related equipment. The system is more reliable with the larger capacity battery and the backup battery. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

82-0025 (Units 1 and 2)

This change provided the replacement of the steam generator vents 1-MS-216, 217, 218, 219 (Unit 1) and 2-MS-121, 131, 216, 218. Due to recurrent packing leakage and infrequent use of these valves, flanges were installed to reduce maintenance and improve the reliability of these vents. Safety evaluations were issued to evaluate installation of flanges and the use of a flange and

valve assembly which may be stored and installed during modes 5 and 6. This change resulted in drawing changes in the FSAR (figures 10-1 and 10-9). The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

82-0046 (Units 1 and 2)

Belzona Super Rubber 80 was formally approved for repairs of rubber lined spool pieces under this FCR. A safety evaluation documented the new material as acceptable for repairs on the salt water spool pieces. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

82-0083 (Units 1 and 2)

Underwater lighting in the spent fuel pool and refueling pool was found inadequate due to previous fuel rack modifications and inaccessible fixtures. The existing fixtures were replaced with higher intensity models. The old brackets were removed and new brackets were installed on existing embeds. Appropriate precautions were taken to prevent damaging the embeds or liner plate. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

83-024 (Units 1 and 2)

This change dealt with replacement of the existing (RTD) assemblies, temperature transmitters and temperature recorders for the Shutdown Cooling System with environmentally qualified units for Reg. Guide 1.97. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

84-0001 (Units 1 and 2)

This change added a temporary stabilizing repair to ensure useful life of the charging header tell-tale connections 2-CVC-279 and 280. Additionally, this change analyzed and added as necessary stabilizing members to similar piping configurations in order to extend the life of the associated socket welds. The vibration of these component configurations caused degradation of pressure retaining parts. Safety evaluations and calculations were prepared to evaluate and document these modifications. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

84-125 (Units 1 and 2)

This FCR was written to provide for two (2) 10" diameter holes through the upper deck plate of the Upper Guide Structure to allow installation of two (2) ICI plate guide alignment pins. Centering plates to reduce the hole to 5-3/4" were permanently

welded to the deck plate. The guide tubes are not a permanent part of the upper guide structure. The guide tubes will be stored in the containment, adjacent and attached to the concrete enclosure wall of the pressurizer house.

Safety Evaluation No. 3 addressed the fact that the upper deck plate was not part of the load carrying capability of the upper guide structure; hence, the hole fabrication did not affect the structural/seismic aspects.

Safety Evaluation No. 4 addressed the installation of two (2) ICI guide tube storage retainer brackets located in the containment, used to secure the guide pins to the concrete wall of the pressurizer house. These brackets have been designed in accordance with Section 5 and 5A of the FSAR for Category I structures, and hence the occurrence of an accident to equipment important to safety is not increased. Also, storage of these pins is substantially the same as that of the reactor head alignment pins.

The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

84-139 (Units 1 and 2)

This change implemented the recommendations of IEN 84-29. The change involved replacing the teflon coated fiberglass sleeve bearings in GE Magne-Blast circuit breakers with aluminum bronze sleeve bearings. A major overhaul was performed on all of the circuit breakers in addition to the sleeve bearing replacement. All work was performed by General Electric at their repair facility in Philadelphia. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

85-0058 (Units 1 and 2)

The upper and lower motor bearing sump drain plugs on the six salt water pumps were replaced with gate valves and piping with removable caps. Due to the difficulty in performing the associated preventive maintenance which sampled the bearing oil, this change was installed to increase the efficiency of the task. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

85-1036 (Units 1 and 2)

This change replaced the Penetration Room Exhaust System fans discharge dampers with gravity type dampers. This change was made to ensure system operability in the event of a fan motor or drive-belt failure. The gravity operated discharge dampers prevent back-flow through a non-operating fan. When the fan(s) is (are) started, the discharge head automatically opens the respective damper(s). In the unlikely event that a gravity operated damper "sticks shut" or fails to open, the system

remains operable because the redundant fan is sized to meet all system demands. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

85-1048 (Units 1 and 2)

This change replaced the Greer Hydraulics Main Steam Isolation Valve actuators with Rockwell A-180 Actuators. It required the replacement of the existing valve internals with a balanced disk globe design. Safety Evaluation #1 discussed the change to the valve internals, the design code and standards for the valve and actuator, the operating modes of the valve and the subcomponent failure evaluation. Safety Evaluation #3 discussed seat leakage testing of the valve. Safety Evaluation #4 discussed the annunciation of the test valve position and the addition of dual channel manual closure. This change modified the safety function of the air sway solenoid valves discussed in Safety Evaluation #5. FSAR change documents were included. The Safety Evaluations concluded there was no unreviewed safety question or change in the Technical Specifications.

86-0015 (Units 1 and 2)

In this change, 4K V BUS undervoltage relays were replaced with an improved model. The manufacturer had issued a 10CFR Part 21 notice due to a tendency for the relays to drift from their setpoint. The existing relays were tested and evaluated and determined to be acceptable; however they were replaced with new models when they were provided by the vendor. This was a similar part changeout and did not involve any changes to the existing circuitry. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

86-130 (Units 1 and 2)

This change replaced the meter/relays which monitor current flow through the reactor trip circuit breakers. The relay function of the devices is to operate position indication of the reactor trip circuit breakers on the range of the Control Room Mimic Display. The range of the metering supplied with the original equipment was 0 to 600 amps. The operating range of the reactor trip switchgear is 0 to 80 amps. This provided meter deflections so far down scale that the control room indication was unreliable. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

87-0026 (Units 1 and 2)

This change was implemented to install a Y-shaped cable guide on the fuel transfer carriage support assembly, located on the spent fuel pool side of the transfer machine. The steel cables which drive the fuel transfer carriage between the refueling pool and the spent fuel pool were not adequately guided. This change provided a drive cable guide to preclude cables slipping and rendering the fuel transfer carriage inoperable. The Safety Evaluation prepared under this FCR concluded the installation of the cable guides would increase the reliability of the fuel transfer system by reducing the probability of the fuel carriage becoming inoperable. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

87-0051 (Units 1 and 2)

This change allows the use of bolted bonnet in lieu of bonnetless or welded bonnet for 2" and smaller stainless steel nuclear service valve applications to facilitate the procurement process. The FSAR referenced construction design codes do not prohibit this action. Further, M-602B provides control of the selection/application process. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

87-0076 (Unit 1)

This change was written to terminate cables at main steam drain isolation 1MOV6621. The valve and operator had been changed earlier with a different type valve and the cables weren't long enough. Safety Evaluation 1 addressed the termination of new cables and overload heater selection. Safety Evaluation 2 addressed the installation of the different valve from a mechanical standpoint. The difference with the new MOV was that it weighed about 60 lbs more than the original MOV. Piping and supports were analyzed and found to be within their design bases (ANSI B31.1-67 and AISC respectively). Q List classification 910 was approved downgrading the MOV to Safety Related pressure boundary only. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

87-0085 (Common)

This change allowed replenishment of plant stock for diesel generator low lube oil temperature switches with the manufacturer's replacement model. The original switches are no longer manufactured and are only being replaced due to parts obsolescence. The new switches either meet or exceed all design requirements of the original switches. The Safety Evaluation

concluded there was no unreviewed safety question or change in the Technical Specifications.

87-0115 (Units 1 and 2)

FCR 87-0115 was issued to develop enhancements to the drains on the steam supply to the Auxiliary Feedwater (AFW) System Terry Turbines. Supplement 0 (Safety Evaluation No. 1) was issued to extend existing drains on the Unit 1 Main Steam lines supplying the AFW System to provide accessibility for manual isolation valves.

The design incorporated a moisture collection tank, steam trap, associated drain piping and supports (providing automatic drain capability to the AFW Room Sumps) to the Main Steam inlet lines for the AFW Pump turbines. The intent of this design was to reduce or eliminate the quantity of condensate (slug) reaching the turbine governor during initial starts. Water entering the governor during fast, cold starts was held to be responsible for difficulties in controlling the turbine speed.

The safety evaluation discussed the installation as an extension of existing Main Steam piping and, as such, meets the requirements of vessels. It further pointed out that the entire drainage addition was designed for thermal and seismic category I load considerations and to ensure that stresses remain within B31.1 code limits during the postulated events. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

87-0129 (Common)

This change was implemented to repower the new plant computer room air conditioners from emergency diesel generator #12 to meet the requirements of NUREG-0737. Existing spare relay contacts and circuit breakers were used with new conduit and cable installed. The evaluation concluded there was acceptable electrical load evaluation and adherence to electrical separation criteria. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

87-132 (Units 1 & 2)

This change replaced the lifting attachments on the Intake Structure equipment hatch covers. The original attachments were U-bolts. The U-bolts were replaced with standard welded lift lugs because the U-bolts had been bent during previous lifts due to inability to withstand the lateral forces imposed by the lifting slings. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

87-0133 (Common)

This change was implemented to lower the intake structure ambient temperature by exhausting hot air through the circulating water pump equipment hatch and thus protecting the circulating water pump equipment from overheating. Additionally, a bracket was welded to the equipment hatches to support a temporary rig used for opening and holding open the square panels at the center of the large hatch. A screen was installed beneath the square panels to prevent unauthorized entry. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

87-0137 (Units 1 & 2)

FCR 87-0137 was issued to remove the door opening springs from Containment Air Cooler fan discharge duct fusible link plate doors. The springs were adding excessive and unnecessary opening force to the duct doors and contributed to accelerated failure of the fusible links which hold the doors shuts.

The Safety Evaluation concludes that the opening of the duct doors is not dependent on the pressure of the springs and that their removal would not increase the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety previously evaluated in Section 6.5 of the FSAR.

It elaborated on three points: (1) the spring installation was not part of the original plant design; (2) the doors, and hence the springs, serve a limited role in safe operation of the plant, and (3) the effect of air flow against the door is sufficient to open the door. Post-maintenance testing was stated as required to determine the ability of the doors to open with the springs and fusible links removed. These tests were performed successfully and demonstrated that such factors as door fit or hinge resistance would not interfere with door opening. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

87-0144 (Units 1 and 2)

This change lowered the drop out setting of the undervoltage relays on the reactor trip switchgear from 192V to 162V. The original setting had been too high, i.e., too close to the normal operating voltage range and had caused unnecessary plant trips. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

88-0001 (Units 1 & 2)

This change was implemented to allow the use of injectable sealing compounds (using approved procedures) on a case-by-case

base to facilitate leak repair. Two safety evaluations were prepared under this change and each evaluation specifically identified valves to be repaired. The first safety evaluation addressed repair of the steam generator blowdown isolation valves, 1-PS-101, 102, 103, 104, 125, 127, 136, and 138. The second evaluation was prepared for 1-MS-153, a normally closed drain valve which taps off of main steam line drain #5. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

88-0003 (Units 1 and 2)

FCR 88-003 allowed material changes on various plant components. When ordering or manufacturing replacement parts, it is sometimes necessary to allow the use of a different material.

Safety Evaluation No. 1 evaluated the change of stud material for the pressurizer spray valves 100E/F and the spray bypass valves RC-219/220 to SA-453 GR 660 Class A material. It also evaluated the change of the Flexatallic gasket from 0.125" thick to 0.135" thick for 100E/F and the change of bonnet gasket material for both 100E/F and RC-219/220 as well as the seat gasket for CV-100E/F and the cage gasket for RC-219/220.

Safety Evaluation No. 2 evaluated the use of a modified cage on 1/2-CV-517. The valve cage was modified by the vendor, ITT-Hammel Dahl, due to a change in the manufacturing process. The new cage is now made of a different material, ASTM A-276 Type 316L, which was evaluated as equivalent. The new cage no longer bears a specially machined window or positioning lugs which had been necessary in the manufacturing process previously employed.

Safety Evaluation No. 3 evaluated the use of slightly modified main feedwater check valves in containment. The former check valves were cast A216 Gr WCB and the replacement valves are A216 Gr WCC. The replacement valves include a six inch drain connection which was not previously installed.

Safety Evaluation No. 4 evaluated the use of A-182 Gr F304/304L or Gr F316/316L and A-479 Gr 304/304L or 316/316L for RCP shaft sleeves. The evaluation was initiated due to material availability and expanded the list of acceptable materials for the RCP shaft sleeves. The RCP vendor, Byron Jackson, specifically approves A-182 Gr F304/304L or Gr F316/316L for the shaft sleeves. The evaluation further documented as acceptable A-479 Type 304/304L or 316/316L. Byron Jackson concurred with the equivalency conclusion.

Safety Evaluation No. 5 evaluated 1) replacement of the tec ring (packing ring) of 1/2-CV-110P and Q, the CVCS letdown valves with a graphite seal ring versus teflon and 2) a material change of the valve spindle from 316SS to 304SS. The tec ring material change was necessitated by the unacceptability of teflon for use in the reactor coolant system and the subject spindle change was

mandated by a change of material initiated by the manufacturer. The safety evaluation documented the acceptability of these changes.

Safety Evaluations 6, 7, and 8 were not issued.

Safety Evaluation 9 evaluated a change in the coupling material on safety injection tank check valve leakoff line drain valves. The original material was 416SS cadmium plated. The replacement connector is safety related 316SS. There was also a change in the stem connector stud to safety related A193 Gr B7, the position indicator to non-safety related stainless steel sheetmetal, and the remaining parts were also made of stainless steel.

Safety Evaluation No. 10 evaluated the use of an alternate stem material for 1/2-MOV-651 and 652, the shutdown cooling return header isolation valves. The evaluation documented the acceptability of SA-564 Type 630 as an alternate to the originally specified stainless steel A-276 Type 316.

Safety Evaluation No. 11 evaluated a change to the line cross connect on the Emergency Diesel Generators from copper to a mild steel pipe, per vendor recommendation. The vendor (Fairbanks-Morse) changed the cross connect pipe. The copper line previously installed had failed on occasion due to pin hole leaks caused by erosion. The material change was evaluated and approved by BG&E's metal lab.

Safety Evaluation No. 12 evaluated a change to the spent fuel cooling pump casing material from ASTM A-296, Gr CA-15 to ASTM A-217, Gr CA-15. As the casing is a pressure boundary for the spent fuel pool water, the material change was analyzed by the Mechanical Engineering Unit and concluded to be equivalent in chemistry, heat treatment, and mechanical property requirements.

Safety Evaluation No. 13 evaluated a change in the service water pump shaft material from ASTM A276 Type 410 to allow ASTM A276 Type 316. The vendor, Gould Pumps, changed the component material and evaluated the change as equivalent.

The Safety Evaluations all concluded there was no unreviewed safety question or change in the Technical Specifications.

88-004 (Units 1 & 2)

This evaluation involved enlarging the inside diameter and chamfering the lower pads on the grappling tools of the Unit 1 Refueling Machine. It also allowed enlargement of the radius of the chamfer on the slot edges of the outer tool of the Spent Fuel Handling Machine grappling tool. These changes were necessary to adapt the grappling tools to the fuel assemblies supplied by Advanced Nuclear Fuels. The new fuel assemblies were being installed in order to evaluate them for possible use throughout the core in place of the Combustion Engineering fuel used

previously. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

88-021 (Units 1 and 2)

The valve positioner on the atmospheric steam dump valve is installed in a sealed enclosure to protect it from the harsh (steam and heat) environment. However, the lack of cooling ventilation in the enclosure allowed internal temperatures to approach 180°F. Since the neoprene gasket in the positioner degrades at elevated temperatures, a replacement gasket made of Nomex-reinforced Viton A and suitable for temperatures up to 300°F was evaluated. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

88-0047 (Units 1 & 2)

This change reterminated the field cables connected at the Vital 125V batteries (all four in each Unit) to match the Vendor's recommended termination detail. This was done to ensure that the Vendor seismic documentation was adequate for this installation. The cables were originally terminated to a cantilevered plate and are now terminated to a vertical plate. This FCR was written to resolve QA Audit finding 87-44-12 (SSFI effort). In addition, some steel shims were installed under various center row pedestals of the battery rack to make structural contact with the concrete floor. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

88-0057 (Unit 1)

This change replaced a pipe saddle, and at the same time, installed welded lugs to the support steel which were inadvertently omitted when a new section of pipe was placed. The work was completed without the necessity of having to take line No. 4"-EB-5-1032 out of service.

This safety evaluation addressed the possibility that the support design was not available to perform its intended function. Bechtel Power Corporation performed a pipe stress evaluation on this line assuming the support was missing. Results showed that the pipe stresses for dead, thermal and seismic loading were below ASME code allowables. The evaluation also concluded that the integrity of the adjacent supports was not compromised. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

88-87 (Unit 1)

This change was written to replace a cast iron frame boric acid pump motor with an aluminum frame motor. These small horsepower

motors are no longer manufactured with cast iron frames. The performance characteristics of the new motor are the same as the old motor and the new motor was furnished with an enamel finish which will compensate for the possibility of increased corrosion. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

88-127 (Common)

This change addresses installing new bumpers on the new fuel elevator and fuel inspection platform to increase the standoff distance from 5" to 8". This modification was required to allow movement of higher enriched fuel assemblies from the new fuel storage racks to the spent fuel pool. The bumpers added a redundant means, in addition to existing spent fuel handling machine interlocks and administrative controls, to prevent the spent fuel handling machine from bringing a fuel assembly within 8" of a fuel assembly in the elevator or inspection platform. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

88-0161 (Units 1 and 2)

This change was to allow minor changes throughout the plant that did not fall within the material and dimensional changes of 88-0003. This change authorized the use of 1/8" cotter pins in place of disc wire for securing the disk nut to the disk. This change was applicable to Velan swing check valves shown on drawings 12124-1, 3 and 4 (Safety Injection). The change permitted quicker reassembly and eliminated the need for tack welding. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

Temporary Modification 1-89-33 (Unit 1 & 2)

This temporary modification involved removal of the upper limit switch on the Spent Fuel Cask Handling Crane. This switch normally prevents the hook from being raised past its upper limit. This feature provides protection against dropping that hook with its load due to a two-blocking accident. A two-blocking accident occurs when the hook load block contacts the upper load block and cable breakage occurs. Removal of the limit switch was required to facilitate removal of the hook and its load block and winding the cable onto its drum for storage. The safety evaluation requires that the switch be replaced prior to or in conjunction with the reinstallation of the hook and block. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

Temporary Modification 1-89-36 (Unit 1)

This change evaluated the crediting of the manual isolation valve upstream of 1-CV-515 (CVCS Letdown Valve) even though it had a one gpm leak (measured). It was anticipated that 1-CV-515 may

have had to have its internals removed (during shutdown cooling operation) due to potential failure of its Local Leak Rate Test. A freeze seal was going to be installed upstream of the manual isolation valve, but it was not credited. The leak rate from the valve was accepted based on a comparison to the existing acceptable values in the FSAR for power operation. An evaluation was conducted to show that even with loss of off site power and maximum pressure the leak rate would remain within acceptable limits. One charging pump would remain available at all times. Thus no new accident was created and no malfunctions were anticipated. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

Temporary Modification 1-89-39 (Unit 1)

Due to leakage through the instrument air safety related boundary check valve, the normal air supply to the containment was supplied from an alternate path. Engineering Test Procedure 89-15 was performed to demonstrate that all containment loads could be supplied from this source and not interfere with normal operation. Isolation between the SR and NSR instrument air was not affected. The SR Salt Water Air Compressor loading calculations were not affected by this change. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

Temporary Modification 2-89-7 (Unit 2)

A portion of one of the salt water headers was physically removed in order to replace it with rubber lined piping. A blind flange was installed to allow the return of the header to operation with this portion out of service. Stress evaluations were checked to ensure that the pipe lines would remain within Code. This portion of the line was not required for operation. Thus there was no possibility for a malfunction. The change was not an accident initiator. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

Temporary Modification 2-89-13 (Unit 2)

Due to equipment damage, the remote manual trip of the steam driven AFW pumps was not available from the control room. This function was not discussed in the description of the FSAR, it was only shown on a P&ID. It was determined that the trip was not necessary to meet any accident mitigation requirements. The accident evaluations encompass the range of maximum to no flow from the AFW pumps according to what is conservative for the particular accident. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

Temporary Modification 2-89-19 (Unit 2)

This temporary modification involved removal of mechanical stops from the Unit 2 Fuel Elevator. This was necessary to allow the elevator to be used as a new fuel elevator. The stops had been installed under FCR 83-78 to provide additional protection against raising irradiated fuel above the minimum required spent fuel pool water level when the elevator was being used for spent fuel inspection. The stops were designed to be removable to maintain the new fuel elevator capability. Use of the elevator without stops and reinstallation of the stops was controlled by electrical interlocks and administrative controls, respectively. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

Temporary Modification 2-89-20 & 21 (Unit 2)

These temporary modifications documented the removal of the actuators from #21 and #22 MSIVs during Modes 5 & 6 for off-site overhaul. The MSIVs are "Y" type bidirectional, balanced disk globe valves with disk seating surface, disk guides, and back seats integrally hard faced with satellite 21. With containment at atmospheric pressure during Modes 5 & 6, the weight of the MSIV internals would keep the valves closed. Any pressure from the containment (pressure from the containment is possible in these modes only if the secondary side steam generator manway is open) would assist valve closure because of the "Y" type configuration. With the actuators removed, the MSIVs still provided the adequate containment boundary as required by Technical Specification 3.9.4.C The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specification.

Temporary Modification 2-89-22 (Unit 2)

This temporary modification documented the temporary air supply to Unit 2 via portable air compressors. The service water system was out of service for maintenance and was unable to supply the necessary cooling to the instrument air and plant air compressors. This evaluation reviewed the requirements for supplying compressed air and concluded the temporary supply met the standards for quantity and quality. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

Temporary Modification 2-89-52 (Unit 2)

This temporary modification documented the removal of the actuator and gagging of 2-AFW-4550 CV in the shut position to facilitate the replacement of tubes from the #22 SRW Heat Exchanger. 2-AFW-4550 CV is the normally shut Unit 2 to Unit 1 AFW Systems cross-connect. When manually opened, 2-AFW-4550 CV allows AFW Pump No. 23 to supply water to the Unit 1 AFW System. Check

valve 1-AFW-190 provides the pressure boundary to the Unit 2 AFW System from the Unit 1 System. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

Temporary Modification 2-89-53 (Unit 2)

This temporary modification involved the installation of blind flanges on the saltwater inlet and outlet of the #22 SRW Heat Exchanger. The blind flange installation isolated the #22 SRW Heat Exchanger and maintained the 22 Saltwater Header operable. Isolation of the heat exchanger was required to accomplish degraded tube replacement (applicable during Modes 5 & 6). The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

Miscellaneous 50.59

STP 0-73-E:

This STP was revised lower acceptance criteria for the shutoff head of the Containment Spray pumps. It was determined that the actual value in the test procedure was higher than necessary. This could have resulted in the pump being declared inoperable when it was not necessary. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

Defueling With Pressurizer Heater Leakage Indications from Power Operations:

While shutdown prior to defueling, indications of pressure boundary leakage was detected on the bottom of the pressurizer. The indication was damp boric acid, with no evidence of leakage at the current static low pressure conditions. The 50.59 evaluated the probability of failure to be negligible based on conclusions drawn from structural integrity at full pressure. Consequences were bounded by the existing analyzed loss of a refueling pool seal evaluation completed for IE Bulletin 84-03. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

OI-29

This procedure change allowed the throttling of the saltwater pumps' discharge valves (manual) in modes 5 or 6 while the instrument air lines to the service water and component cooling water heat exchanger control valves were not operable. The discharge valves were throttled to ensure sufficient salt water flow for mitigation and prevent pump run-out should the service water and component cooling water heat exchanger control valves

fail to open. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

LTOP COMMITMENT

This evaluation was initiated to determine if the fill of the pressurizer and the drawing of a bubble could proceed without full compliance to the LTOP commitment. The evaluation was only for the existing mode 5 condition with cooled down steam generators. The evaluation dealt with the fact that there was no computer generated alarm and typewritten print out, from the PT103-1 low range pressurizer pressure instrument loop, provided before going solid. The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.

Justification for Continuing Operation JCO-SE-201

A safety evaluation was performed to document investigations into safety concerns about the interaction of pipe insulation weight and piping seismic stress evaluation.

The investigation was divided into two distinct tasks. First, a walkdown of sampling of pipe to determine if insulation was in agreement with the original design documents and second, a review of pipe stress evaluations to verify that proper insulation weight was used in the evaluation.

A number of anomalies were found during this investigation. They were all evaluated and found to be acceptable.

The Safety Evaluation concluded there was no unreviewed safety question or change in the Technical Specifications.