

Temporary Lifted Lead: 1-88-54 (Unit 1)

This temporary modification defeated a limit switch that prevents the movement of the refueling machine into the upender area, unless the upender is fully vertical.

Two switches must be actuated to achieve the upender vertical light, which also satisfies the refueling machine interlock. One switch, ILS-AVH is actuated as the upender moves away from the horizontal position, but before it reaches the vertical position. This switch is actuated by the carriage which rocks back to its "HOME" position as the upender is being raised.

During the spring 1988 refueling outage, the other switch, ILS-AV, was bypassed in accordance with Calvert Cliffs Instruction (CCI) 117. Temporary Mechanical Device, Electrical Jumper and Lifted Wire Control. This switch actuates when the upender is fully vertical. With this switch bypassed, the upender vertical light is energized when the carriage is "HOME," but before the upender is really vertical.

The switch was bypassed and not repaired because maintenance to the switch was delaying the Unit 1 refueling outage. The refueling pool had to be flooded to replace the switch since the fuel transfer carriage had to be on the refueling pool side of the fuel transfer tube. This condition was required to verify proper switch alignment. We had experienced numerous failures of actuator styles of this switch and were replacing these switches with magnetic proximity style switches. When the failed actuator-style switch was replaced, the brackets supporting the two assemblies of the proximity switch were discovered to be misaligned and the switch would not function properly. A diver attempted to adjust the switch position for eight hours over a seventeen-hour period. Plant management concluded the refueling pool would have to be drained in order to determine the required corrective maintenance. Since this additional maintenance would have substantially delayed the beginning of refueling operations, plant management concluded bypassing the switch was appropriate.

With ILS-AV bypassed, it is theoretically possible for the refueling machine to lower a fuel assembly onto the upender when the upender is not vertical. This may damage a fuel assembly. However, this accident scenario is bounded by the Final Safety Analysis Report (FSAR) Chapter 14.8 fuel handling accident analysis.

Since the interlock which prevents refueling machine entry into the upender area is bypassed, the probability of an accident is increased. The increased probability of an accident is not significant because of the administrative controls, training, and additional interlocks.

- o Operating Instruction 25C (Refueling Machine) and 25E (Fuel Transfer System) describe this interlock. These procedures instruct personnel to have the upender vertical before bringing the refueling machine in the upender area.

- o Interlocks are still effective which prevent raising the upender if the refueling machine is in the upender area. This prevents raising the upender into a fuel assembly suspended by the refueling machine.
- o Interlocks are still effective which stop hoist movement when a cable slack condition is reached. Thus, when a fuel assembly is being lowered, the hoist will stop when the cables are slack.
- o Procedural controls are in effect such that the operator will investigate hoist load deviations of 50-100 lbs. Thus, if a fuel assembly is being lowered and the upender is not exactly aligned with the assembly, a load deviation in excess of 50 lbs. would cause the operator to investigate the situation. This condition can exist whether or not the switch is bypassed. On occasion, the coordinates used for location of the upender may be slightly modified to correct for minor mechanical variances. This can be caused by switch wear and adjustment.

The upender was in use from 4/22/88 to 5/1/88 with the limit switch defeated.

The safety evaluation, performed in response to NRC inspection 89-200, concluded the modification constituted an USQ. The plant operations and safety review committee (POSRC) and the offsite safety review committee agreed with that determination on 3/23/89 and 4/20/89 respectively. The upender was tagged out-of-operation when the USQ was identified. The limit switch was restored to its failed condition and will be repaired prior to the next Unit 1 refueling outage. The safety evaluation included a review of FSAR Chapters 9.7 and 14.18, Technical Specification 3.9.6, Operating Instruction 25C and 25E and various schematics.

Temporary Mechanical Device: 1-87-24 (Unit 1)

This temporary modification installed a pipe cap on a 3/8 inch SS-tubing run to the oxygen analyzer O-AE-6511 to prevent Waste Gas Decay Tank air samples from entering the oxygen analyzer. The analyzer was not working properly. The tank air samples are taken in accordance with Chemistry Procedures and analyzed for oxygen content. The safety evaluation concluded this modification does not require a change to Technical Specifications or result in an USQ. The safety evaluation included a review of FSAR chapters 5A, 9.6, 11.1 and 14.2, Chemistry Procedure 402 and Technical Specification 3/4.11.2.5.

Temporary Mechanical Device: 1-87-49 (Unit 1)

This temporary modification installed jumpers around Waste Gas Decay Tanks and Waste Gas Surge Tank solenoid valves (O-SV-2182/2188/2189/2190). There is a plant and personnel safety concern resulting from these valves leaking by. The tank air samples are taken in accordance with Chemistry Procedures and analyzed for oxygen content. The safety evaluation concluded this modification does not require a change to Technical Specifications or result in an USQ. The safety evaluation included a review of FSAR chapters 5A, 9.6, 11.1 and 14.2, Chemistry Procedure 402 and Technical Specification 3.11.2.5.

Temporary Lifted Lead: 1-88-145 (Unit 1)

This temporary modification involved lifting pressure switch wires for the 11B Reactor Coolant Pump Oil Lift Pressure Alarm. The circuit is grounded. With the leads lifted, the ground detector is restored. The safety evaluation concluded this modification does not require a change to Technical Specifications or result in an USQ. The safety evaluation included a review of FSAR chapter 7.7, 14.16, FSAR Table 4.5 and Technical Specification 3/4.4.1.

Temporary Leak Repair: 2-89-6, 2-89-8 (Unit 2)

This temporary modification installed an encapsulation to a gasket leak for 2-F0-4018 and leak injection nuts to be installed on the body to bonnet joint on manual valve 2-MS-341 (Steam supply to the 2nd stage of #21 Moisture Separator Reheater). This leak was nonisolable during normal operations. The leak repair prevented further damage to the joint and maintained the pressure boundary. The safety evaluation concluded this modification does not require a change to Technical Specifications or result in an USQ. The safety evaluation included a review of FSAR chapter 10.1 and Main Steam Construction Code ANSI B31.1 and determined all code requirements were met.