

Section A

PLANT DESIGN CHANGES

This section has been prepared in accordance
with the requirements of 10CFR, Part 50.59(b).

8008070318

A. Plant Design Changes

This section contains brief descriptions of and bases for plant design changes accomplished during the calendar year 1979, and summaries of the safety evaluations for those changes, pursuant to the requirements of 10CFR, Part 50.59(b).

DCR No. 380 No. 5 Feedwater Heater Drains

Description of Change: Air operated valves were added in the cross tie line between #5A and #5B feedwater heaters.

Reason for Change: To prevent the relatively small and unavoidable pressure differences in the No. 5 heaters from driving the total drains to one heater string or the other.

Safety Evaluation: This change did not affect or interface with a safety system or function.

DCR No. 438 Well Water Chemical Injection System

Description of Change: A well water chemical injection system was installed.

Reason for Change: To prevent the formation of calcium carbonate buildup on heat exchanger surfaces and related piping and components.

Safety Evaluation: This change did not affect or interface with a safety system or function.

DCR No. 452B Service Air System

Description of Change: Electrical and control components for the third air compressor (1K-1C) were installed.

Reason for Change: The continuous operation of the plant depends on an uninterrupted supply of instrument air. The addition of the third air compressor (and controls) assures backup capability in the event of the unlikely failure of two compressors.

Safety Evaluation: This change did not affect or interface with a safety system or function.

DCR No. 513

Turbine Building Crane

Description of Change: Safety cables and spacers were added to existing bumpers to protect the wider platform.

Reason for Change: A crane inspection conducted on 4-5-74 identified that the existing bridge installation did not include safety cables on the bridge bumpers as set out in the inspection checklist section 2-1.7.2.b.

Safety Evaluation: This change did not affect or interface with a safety system or function.

DCR No. 552

Shielding for RE-1997

Description of Change: Lead shielding was installed around, under and over the detector and detector well for RE-1997.

Reason for Change: To reduce background radiation effects on detector RE-1997 thus providing for proper instrument operation.

Safety Evaluation: This change does not present significant hazards or considerations not described or implicit in the Safety Analysis Report. The lead brick structure and associated supporting steel have been designed to Seismic Class 1 requirements so as not to infringe upon the Seismic Class 1 integrity of the adjacent piping systems.

DCR No. 566

Computer

Description of Change: The space between the alarm levels and deadband constants for the significant alarm function were increased.

Reason for Change: Reduce nuisance alarms.

Safety Evaluation: This change did not affect any system other than the plant computer.

DCR No. 624A

161/345 KV Substation

Description of Change: The 161 KV oil circuit breaker, two switches, buswork, and control panels necessary for 161 KV line to Sixth Street Plant were installed.

Reason for Change: It was necessary to construct an additional source for the existing Cedar Rapids 161 KV loop to maintain adequate service.

Safety Evaluation: The addition of a 161 KV line to the DAEC does not alter the safety analysis but enhances it. Another line to the substation increases its flexibility for system disturbance and resolves potential system load problems for other areas of the Iowa Electric Transmission Network.

DCR No. 692

RHR Service Water Rupture Discs

Description of Change: The RHR/ESW discharge was changed from the cooling towers to thru rupture discs PSE-2079A and B and the dilution structure/river.

Reason for Change: Normal discharge operation caused the rupture discs to rupture. This change is to document the fact that rupture discs PSE-2079 A and B are burst and will be left that way.

Safety Evaluation: This change is to a safety related system; however, it does not effect its ability to perform its safety function in that it insures that a seismic class 1 discharge path is provided for the RHR and emergency service water systems.

DCR No. 722

Type CR120A GE Relays

Description of Change: The contact arm retainers on all CR 120A type relays were replaced with self-extinguishing and flame resistant retainers.

Reason for Change: Overheating problems have caused the contact arm retainers to burn on GE CR120A type relays.

Safety Evaluation: This change has no effect on the seismic qualifications of these relays. There is no effect on the electrical properties or function of the relays since the original design did not change.

DCR No. 746A

MSR Scavenging Steam Installation

Description of Change: Scavenging steam piping for the moisture separator reheaters were installed.

Reason for Change: To improve the reliability and performance of the moisture separator reheaters. This modification prevents the cycling of the subcooled water - 2 phase - steam interface in the region of the tube to tube sheet connection thereby minimizing the probability of tube - tube sheet cracking.

Safety Evaluation: There are no unreviewed safety questions raised by this modification.

DCR No. 746B

MSR Scavenging Steam Installation

Description of Change: Electrical power and control equipment to support the MSR scavenging steam flow modification was installed.

Reason for Change: To meet the requirements for the new MSR scavenging steam flow modification.

Safety Evaluation: There are no unreviewed safety questions raised by this modification.

DCR No. 768

HVAC

Description of Change: Cooling air to the valve positioners and actuators for CV-1060 and CV-1056 was installed.

Reason for Change: Prevent heat damage to rubber parts in the valve positioners and actuators of CV-1060 and CV-1056.

Safety Evaluation: This change did not affect or interface with a safety system or function.

DCR No. 769

Snubber GBB-4-SS217

Description of Change: The pipe bracket on RHR pump discharge line 18" GBB-4 and dual snubber GBB-4-SS217 was modified to prevent pipe bracket rotation.

Reason for Change: To provide for the proper operation of the bracket and snubber assembly during RHR operation.

Safety Evaluation: This change does not present significant hazards or considerations not described or implicit in the Safety Analysis Report. The purpose of the change is to modify the pipe bracket and snubber to prevent pipe bracket rotation. This assures proper positioning of the dual snubbers and thus provides increased assurance in the safety related functions of this dual snubber configuration.

DCR No. 770

Snubber GBD-29-5512

Description of Change: The snubber bracket on snubber GBD-29-SS12 attached to Auxiliary Boiler supply line 8"-GBD-29 was modified to prevent clamp rotation.

Reason for Change: To provide for the proper operation of the pipe attachment and snubber assembly during HPCI operation.

Safety Evaluation: This change does not present significant hazards or considerations not described or implicit in the Safety Analysis Report. The purpose of the change is to modify the pipe attachment and snubber to prevent pipe attachment rotation.

DCR No. 777

Containment Inboard Cable Splicing

Description of Change: All safety related cables sizes #10 and larger which were spliced at the inboard side of the electrical penetration and insulated with tape that did not meet LOCA requirements were reconnected and reinsulated.

Reason for Change: Correct potential safety hazard posed by the use of nonqualified for LOCA insulating tape.

Safety Evaluation: The change of insulation on the inboard side cable splices using Raychem heat shrinkable tubing will enhance the integrity of the circuit thus reducing the chances of failure.

DCR No. 822

Recirculation System Safe-end Insulation Modification

Description of Change: Insulation panels for the eight recirculation system vessel inlet nozzles were modified.

Reason for Change: To allow the insulation to be installed after a RV hydrostatic test but with the nozzle biological shields having been installed prior to the hydro test. This insulation change shortens the length of time required between a RV hydrostatic test requiring inspection of recirculation system inlet nozzle welds and placing the plant on line.

Safety Evaluation: This change did not present significant hazards or considerations not described or implicit in the Safety Analysis Report. The purpose of the change was to reduce the time required to bring the plant on line after completion of DCR 800 A and B.

DCR No. 837

RWCU System Piping

Description of Change: Portions of spool pieces DCA-6-1-3, DCA-14-1-1, DCA-14-1-2 and DCB-2-1-2 were replaced with ASME SA-312, Grade TP-316L schedule 80 piping.

Reason for Change: To replace portions of the RWCU system piping which have shown indications of weld cracking, with a low carbon stainless steel. This change should reduce the effect of weld heat sensitization on the piping.

Safety Evaluation: This design change does not present significant hazards or considerations not described or implicit in the safety Analysis Report because the functional arrangement of the system was not altered. A re-evaluation of the seismic analysis was performed on the DCA portion of the piping.

DCR No. 844

Radwaste Resin Hopper Discharge Valves

Description of Change: An existing electrical interlock was disabled to permit independent operation of valves CV-4068A and CV-4069A. This capability was also provided for valves CV-4068B and CV-4069B.

Reason for Change: Operation of both valves in each pair at the same time caused resin to build up and plug the discharge standpipe.

Safety Evaluation: This change does not affect or interface with a safety related system or function.

DCR No. 850

Containment Vent and Purge Valves

Description of Change: The valve travels on containment purge valves CV-4300, CV-4301, CV-4302, CV-4303, CV-4306, CV-4307 and CV-4308 were limited to allow a 30 degree opening capability.

Reason for Change: The containment vent and purge valves were found to be not capable of closing against the containment design basis accident pressure.

Safety Evaluation: This change was required to provide assurance that the containment isolation function of the vent and purge valves will be attainable at the DBA containment pressure of 56 psig. To accomplish this, the valve modification was installed to prevent the valves from opening more than 30 degrees.

DCR No. 857

RWCU System Modification

Description of Change: Weld No. 17, which is the elbow to the 4"-ECB-1 pipe weld was repaired by cutting and removing a section of the existing schedule 40, 304 stainless steel pipe and replacing it with a new section of schedule 80, 316L pipe, including a new elbow.

Reason for Change: A small leak had been detected in the No. 17 weld.

Safety Evaluation: This change did not alter the basic design functions of the RWCU system nor did it effect any safety related equipment.

DCR No. 871

Reactor Pressure Narrow Range Computer Point

Description of Change: The reactor pressure narrow range computer point (4542) was brought into the process computer at point B049.

Reason for Change: Improved accuracy.

Safety Evaluation: This change does not affect or interface with a safety related system or function.

Section B
SPECIAL TESTS

This section has been prepared in accordance
with the requirements of 10CFR, Part 50.59(b).

B. Special Tests

This section contains summaries of those special tests conducted at the plant during the calendar year 1979. The Special Test Procedures, which governed the performance of these tests, were reviewed by the DAEC Operations Committee and were found not to present any unreviewed safety questions.

SpTP No. 48 Nuclear Heatup Hydrostatic Test

The purpose of this procedure was to hydrostatically pressure test the reactor vessel and associated recirculation riser piping to verify boundary integrity after repair.

This Special Test was performed on March 7, to satisfy ASME XI Code inspection requirements.

SpTP No. 49 Hydrostatic Test For Reactor Water Cleanup Line

The purpose of this procedure was to describe and define requirements for hydrostatic testing of the repaired sections of 4 inch pipe in the Reactor Water Cleanup System.

This Special Test was performed on January 28, to ASME Code, Section III, Division 1 requirements.

SpTP No. 50 Inspection of the Recirculation Inlet Pipe Repair Welds Following Hydrostatic Test Per Special Test Procedure #48

The purpose of this procedure was to define the procedure to be followed during the inspection of the recirculation inlet pipe welds with the reactor hot and pressurized. Special precautions were being taken during this inspection due its special nature. It was intended that this procedure preclude personnel injury due to heat stress and physical contact with hot (>545°F) pipes and structural materials.

This Special Test was initiated on March 7, and completed on March 12.

SpTP No. 51 Recirculation Riser N2B Blockage Determination

The purpose of this procedure was to verify the integrity of the #3 and #4 jet pumps and instrumentation and to verify that foreign material was lodged in the N2B recirculation riser line thereby blocking flow through the #3 and #4 jet pumps.

This Special Test was performed on January 30.

SpTP No. 52

Recirculation Loop B Draining Procedure

The purpose of this procedure was to define the prerequisites and methods for draining the B recirculation loop jet pump riser section for the retrieval of objects blocking flow to the riser.

This Special Test was initiated on January 31, and was completed on February 27.

SpTP No. 53

Precaution Control for Fuel Movement and Storage With Lowered Water Level

The purpose of this procedure was to define the methods to be used for vessel level control, adjusting fuel grapple up stops, and for ensuring adequate ECCS capability during fuel movement and storage operations with reduced water level.

This Special Test was initiated on February 16, and was completed on February 28.

SpTP No. 54

Flushing of Reactor Bottom Head Drain Line (2"-DBA-10 and 2" HBD) to the Drywell Equipment Sump Following Lead Brick Removal

The purpose of this procedure was to flush the 2" reactor bottom head line from the connection to the 4" clean-up system line to the drywell equipment drain sump. The objective of this flush was to verify that the line had not become plugged with missing debris from the lead brick container, and to retrieve any possible debris remaining in the line for accountability purposes.

This Special Test was performed on February 22.

SpTP No. 55

Obtaining Sample For Metallurgical Examination From Rams Head or Diffuser Pipe Located in Spent Fuel Pool

The purpose of this procedure was to define a method of obtaining a sample from smudge marks on the inside of the Rams Head or Diffuser.

This Special Test was performed on February 22.

SpTP No. 56

Load Testing Hilti Kwik Bolts

The purpose of this procedure was to load test Hilti Kwik Bolts in order to qualify their installation in pipe supports.

This Special Test was performed on August 6.

SpTP No. 57

Evaluation of Concrete Expansion Bolts for Pipe Supports

The purpose of this procedure is to describe the steps to be followed to verify the capability of existing concrete expansion anchor bolts used in the supports of Seismic Category I piping systems to meet design requirements.

This Special Test was initiated on October 9.

SpTP No. 58

Standby Diesel Generator 24 Hour Continuous Operational Testing

The purpose of this procedure was to verify the ability of the Standby Diesel Generators to sustain house loads for an extended time period to satisfy regulatory concerns pertaining to post LOCA power requirements.

This Special Test was initiated on October 30, and was completed on November 3.

SpTP No. 59

Thermal Neutron Noise Data Recording

The purpose of this procedure was to collect thermal neutron noise data from the reactor core using the Traversing Incore Probe thermal tips.

This Special Test was initiated on November 20, and was completed on December 4.

SpTP No. 60

Fuel Pool Clean-up Preparatory to Installation of High Density Fuel Racks

The purpose of this procedure was to provide guidance for the clean-up and decontamination of a portion (west end) of the spent fuel pool in preparation for the installation of high density fuel racks.

This Special Test was initiated on November 18, and was completed on December 27.

SpTP No. 61

Procedure for Verification of Presence of
Boral Plate and Proper Fuel Element Cell
Cross-Sectional Dimensions of PAR High
Density Spent Fuel Racks

The purpose of this procedure was to verify that the construction of the received PAR High Density Fuel Racks was consistent with design specifications regarding Boral Plates and cell cross-sectional areas.

This Special Test was initiated on December 5, and was completed on December 31.

SpTP No. 62

Installation of Signal Monitoring Equipment
in the Turbine Generator EHC Circuitry

The purpose of this procedure was to define where turbine control valve EHC feedback voltages are read.

This Special Test was initiated on November 27 and is still in progress.

Section C
EXPERIMENTS

This section has been prepared in accordance
with the requirements of 10CFR, Part 50.59(b).

C. Experiments

There were no experiments conducted during the calendar year 1979.