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APR 12 1996

SERIAL: HNP-96-063
10 CFR 50.59(b)(2)

United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REPORT OF CHANGES PURSUANT TO 10 CFR 50.59

Gentlemen:

Enclosed is the report prepared in accordance with 10 CFR 50.59(b)(2), "Changes, Tests and Experiments," for the Harris Nuclear Plant (HNP). The report provides a brief description of changes to the facility and a summary of the safety evaluation for each item that was implemented between July 12, 1994 and December 12, 1995. This report is being submitted by April 12, 1995, as required.

Effective November 30, 1995, HNP implemented a 10 CFR 50.59 screening process. Prior to November 30, 1995, the HNP 10 CFR 50.59 Program conservatively required an unreviewed safety question determination for most activities including those not meeting the definition of 10 CFR 50.59(a)(1). Summaries of those evaluations performed which would not have been required by regulation have not been included in the enclosed report.

Prior to this Program revision, the completed unreviewed safety question determinations were not uniquely identified. Therefore, a review was performed of activities expected to result in an unreviewed safety question determination. The report contains the summaries from this review. Since unreviewed safety question determinations are now uniquely identified, assurance is provided that future reports will include the required summaries.

Questions regarding this matter may be referred to Mr. T. D. Walt at (919) 362-2711.

Sincerely,

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R PDR

DBA/dba

c: Mr. J. B. Brady
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HNP
50.59 SUMMARY REPORT
FOR THE PERIOD COINCIDENT
WITH FSAR AMENDMENT 46

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RAF 1455

Title: PCR-4959, Replacement of Level Transmitter

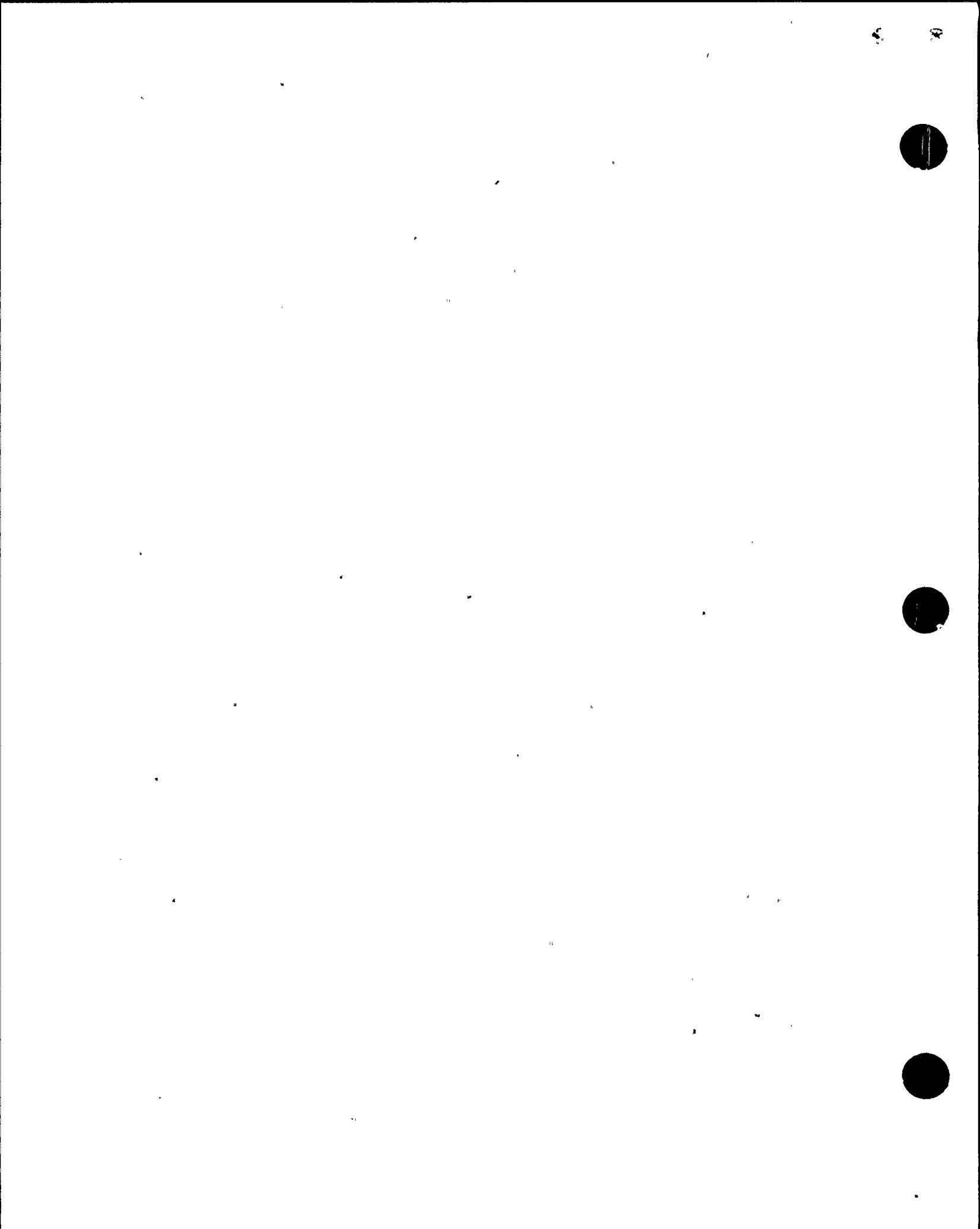
Description:

This modification replaced a Barton Model 752 instrument for monitoring pressurizer level at low temperature with a Rosemount model differential pressure transmitter. This change out was required since the Barton transmitter was damaged during a calibration and no spares were available to replace it.

Safety Summary:

The existing instrument is a non-safety, seismically installed instrument located in Containment. Since its use constitutes a potential RCS leakage source, it is qualified to IEEE-344 (Seismic) and is seismically mounted. Replacement of this transmitter with a Rosemount model transmitter is basically a like kind replacement since both transmitters function similarly electronically. Rosemount transmitters use in this application is acceptable since the seismic integrity is maintained and the instrument is compatible with the environment.

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RAF 1833

Title: PCR-6786, Transition Weld

Description:

This modification replaces the carbon steel portion of the branch line to pressure indicator PI-6470, in the Fuel Handling Building Drainage Systems, with stainless steel piping of the same size and in the same configuration.

Safety Summary:

Stainless steel is a superior choice of materials for this application since it will resist variations in pH. The equipment and floor drainage system has no safety function and is not safety-related. No seismic or other adverse phenomena apply to the equipment. Flooding is also not a concern since flooding in the Fuel Handling Building and Turbine Building is not analyzed since no safe shutdown equipment is located in these areas.

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RAF 1841

Title: ESR 95-00366, Reactor Auxiliary Building Filter Backwash

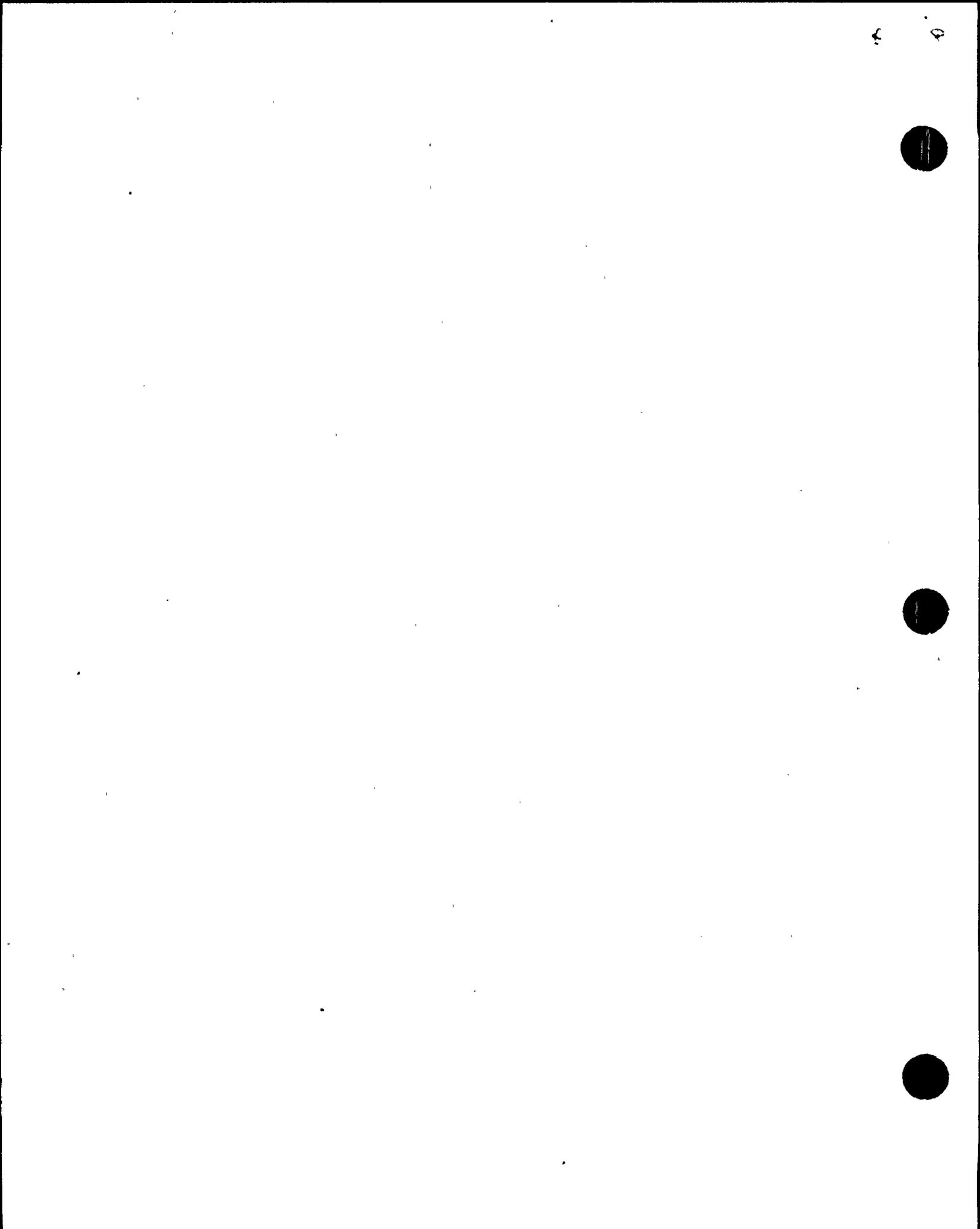
Description:

This modification installed a filter drain pot to separate air and water between the filter vent and the HVAC exhaust duct to avoid water drainage into ductwork. Vented air will be routed to same HVAC exhaust system and water will be routed to the same equipment drain system as the existing design.

Safety Summary:

The Filter Backwash System allows cleaning of the Chemical and Volume Control System (CVCS) and Boron Recycle System (BRS) filters. The filter drain pot was installed downstream of safety related filters. Non-safety piping will be modified or added. Since this is downstream of the safety-related components, there can be no adverse impact on the CVCS or BRS or the safety-related filters.

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RAF 1842

Title: ESR 95-00141 Condensate Polisher Demineralizer Non-Contaminated Resin Replacement

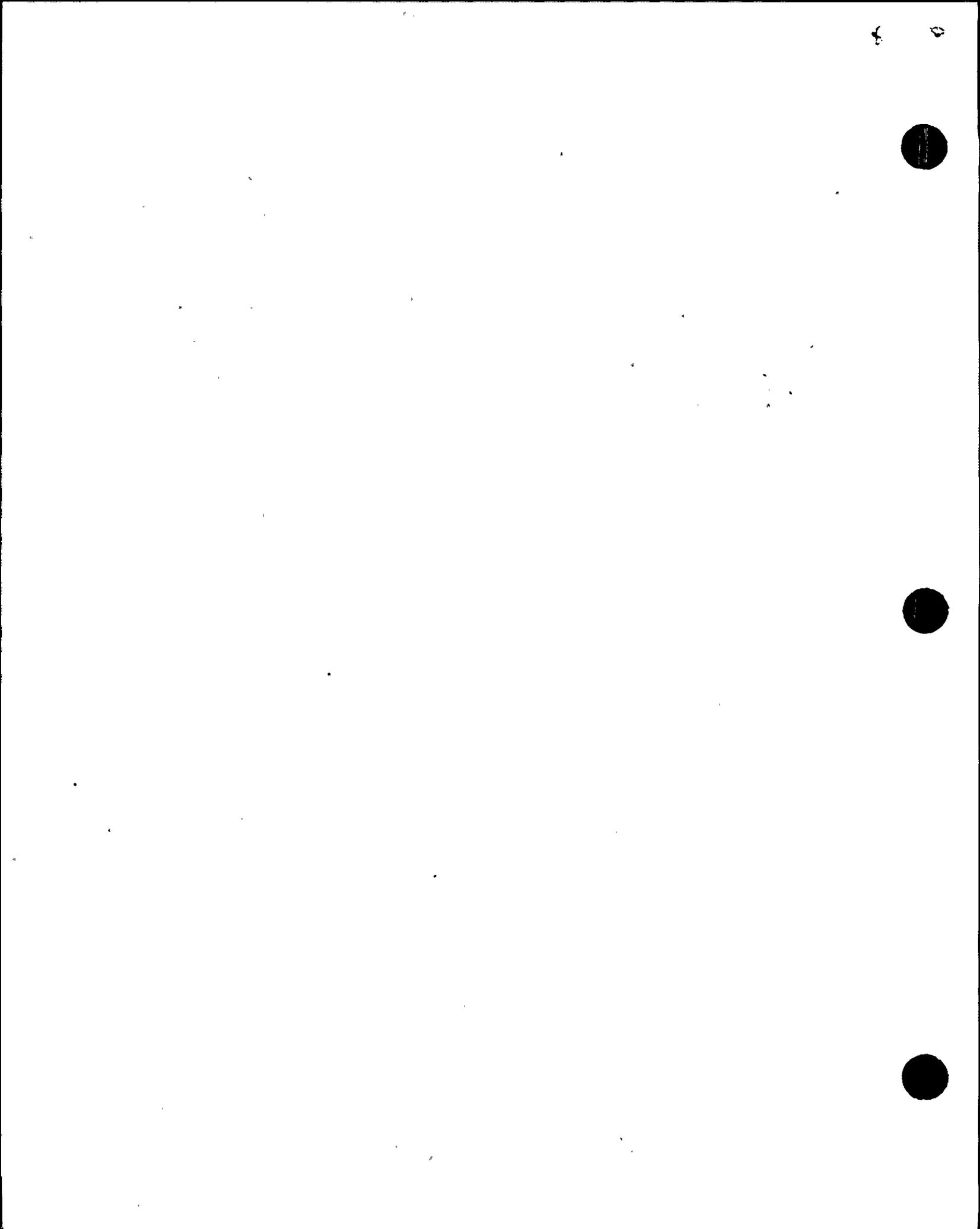
Description:

This modification adds a new piping connection on the condensate polisher demineralizer piping to enhance spent resin transfer.

Safety Summary:

The piping and valves involved are part of the Condensate Polishing Demineralizer System, which is not safety-related. The changes simply facilitate the resin transfer process and do not alter the system function. No other systems or components are impacted by this change.

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RAF 1848

Title: PCR-3605, Drawing Corrections

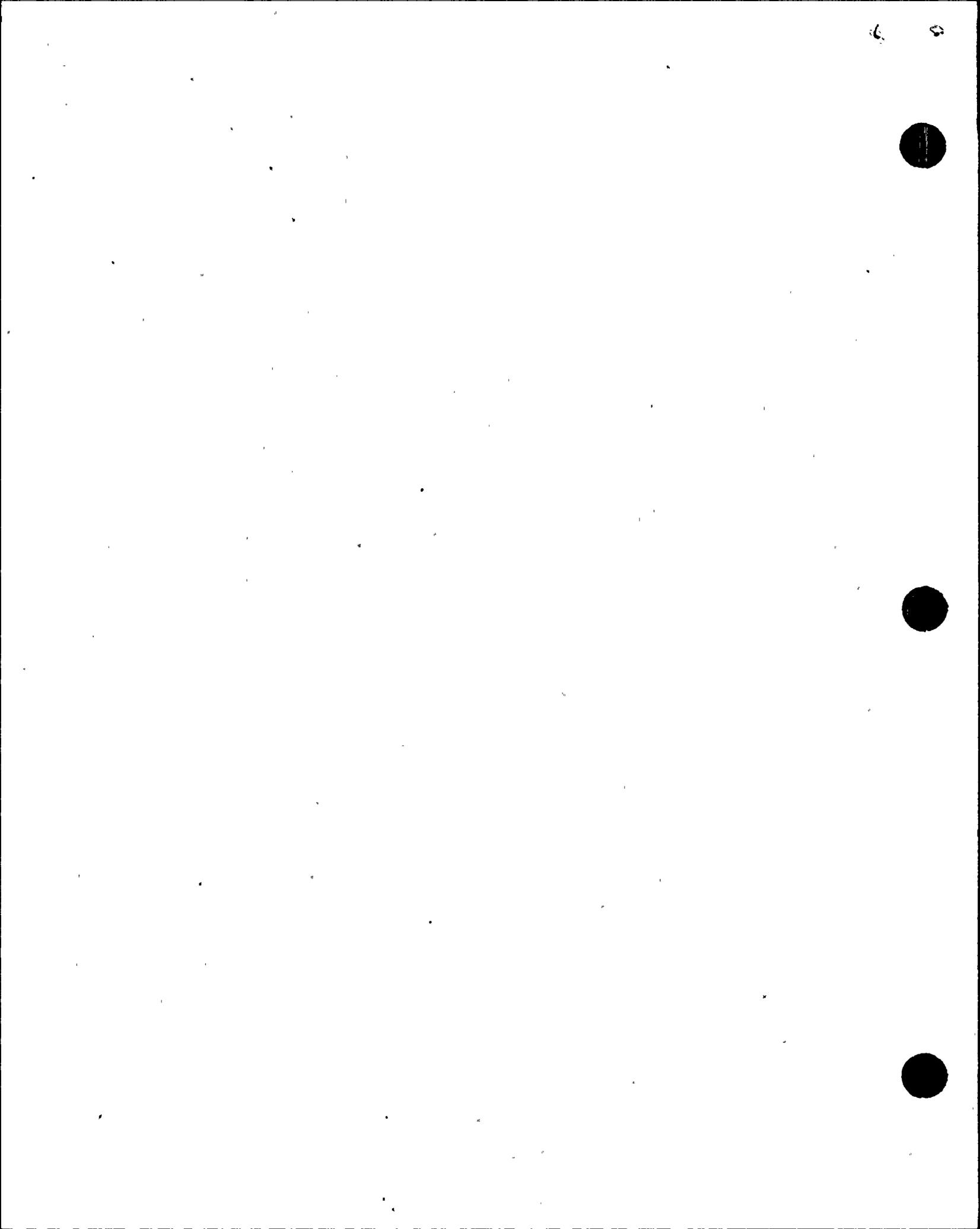
Description:

This change corrected a discrepancy on the Solid State Protection System (SSPS) Functional diagram to match field conditions and related drawings. The SSPS functional diagram showed that the Auxiliary Feedwater (AFW) Isolation Signal is reset by the manual Main Steam Isolation Reset switch instead of the AFW Isolation Reset switch. This was a document change only and did not involve plant equipment changes or additions.

Safety Summary:

This change involved engineering document changes and a change to the FSAR, it did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 1899

Title: PCR 2450, Instrument Air System Drawing Corrections

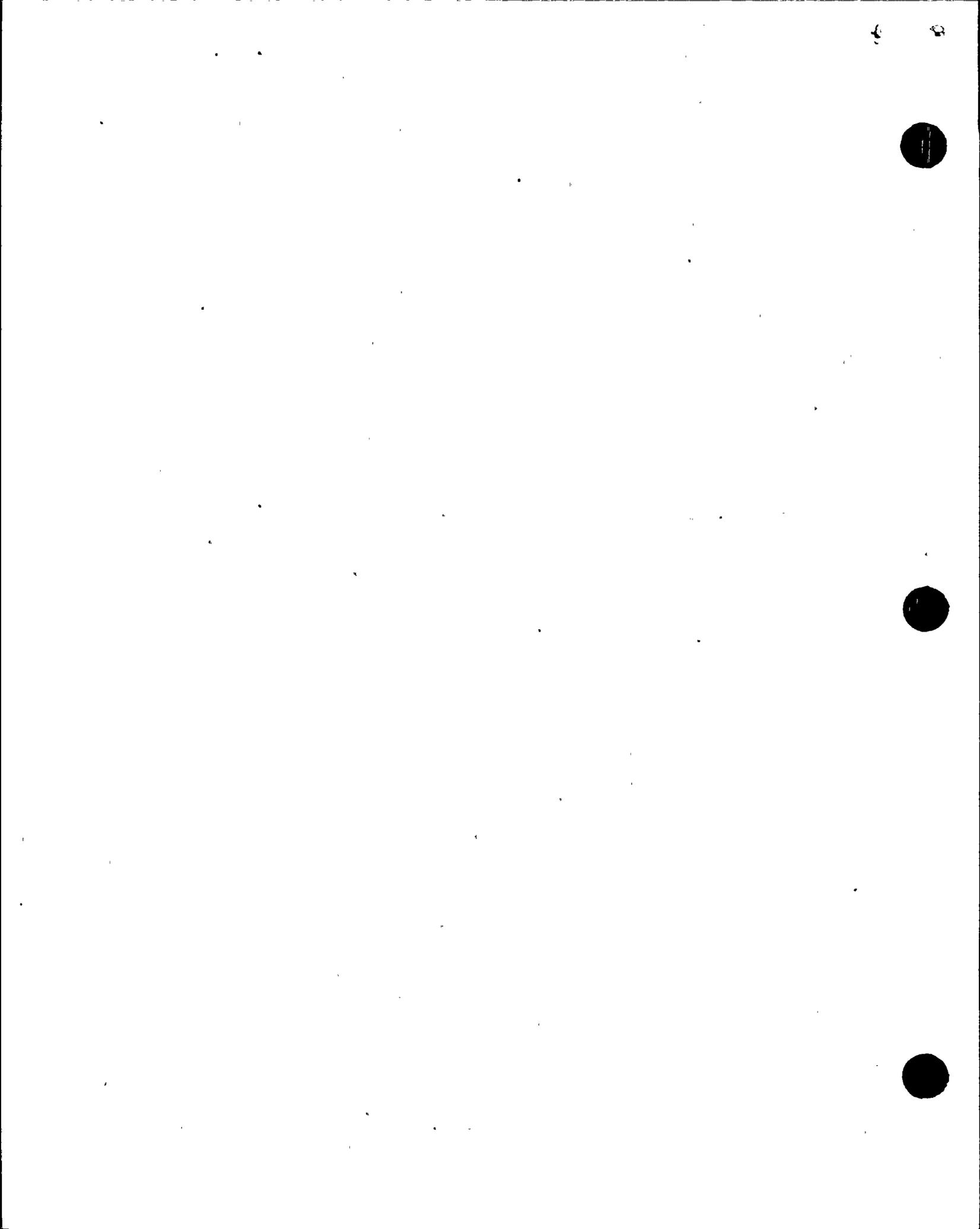
Description:

This change revised a design drawing to reflect as-installed conditions for miscellaneous vents and drains in the instrument air system. It also corrected instrument nomenclature to agree with as-designed and as-installed configurations.

Safety Summary:

This change was a minor drawing modification to the non-safety instrument air system. Because this was only a document change and did not result in any physical changes to the plant, it did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 1901

Title: ESR 95-00375, Condensation-In leakage to the Floor Drain System

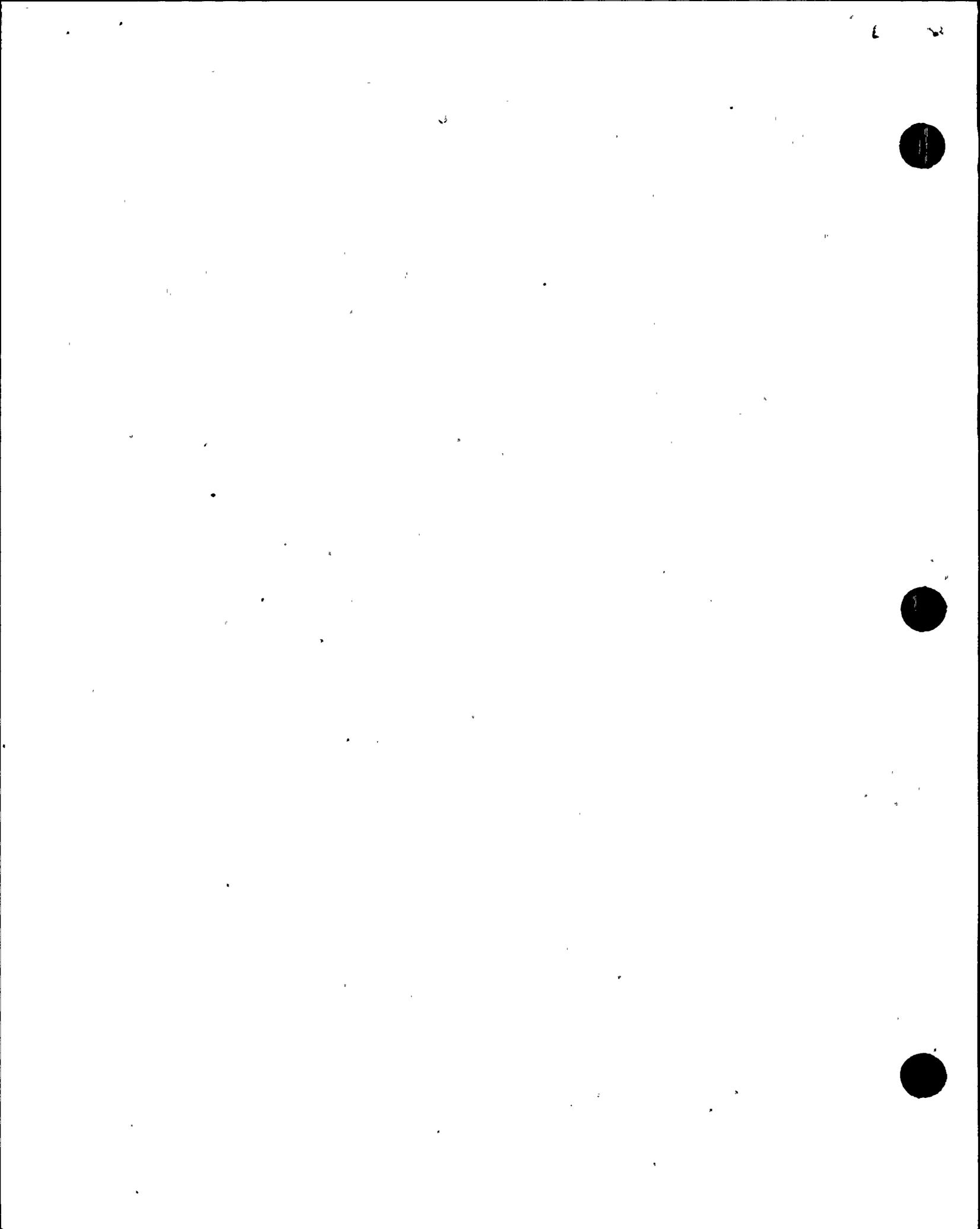
Description:

This modification establishes an HVAC pressure boundary around the equipment room for WPB Air Handlers 41, 42, 43, and 44 by installing penetration seals. A slight positive pressure will be maintained in the new pressure boundary to ensure no contamination infiltrates this clean space.

Safety Summary:

The addition of seals for existing penetrations will cause no adverse condition to existing equipment and components. This modification will eliminate potential in-leakage of contaminated air into air handling unit suction. The Waste Processing Building HVAC systems are non-safety related, as are the equipment and floor drain systems. While this change requires a revision to the FSAR, it in no way increases the probability or consequences of an accident previously evaluated in the Safety Analysis Report, increases the probability or occurrence of a malfunction of equipment important to safety, creates the possibility of a different type of accident or a different type of equipment malfunction, or reduces a margin of safety as defined in the Technical Specifications.

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RAF 1906

Title: PCR-6696, Liquid Nitrogen Supply Skid Addition

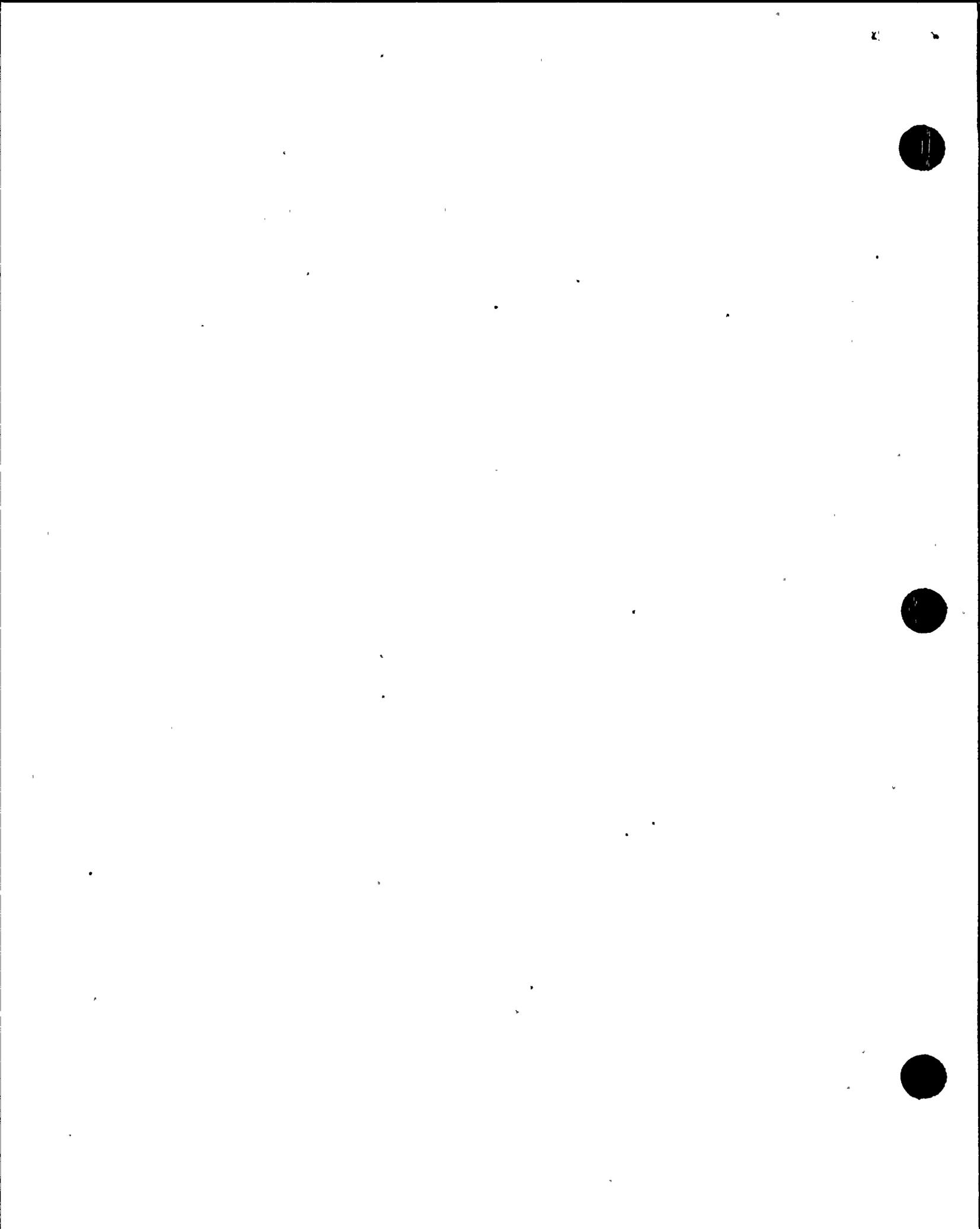
Description:

This change revises design drawings to include a liquid nitrogen supply skid, which was added as a permanent plant equipment to improve system reliability.

Safety Summary:

The nitrogen gas system is a non-safety related system which supports no safety-related function necessary for safe shutdown of the unit. While this change requires a revision to the FSAR, it in no way increases the probability or consequences of an accident previously evaluated in the Safety Analysis Report, increases the probability or occurrence of a malfunction of equipment important to safety, creates the possibility of a different type of accident or a different type of equipment malfunction, or reduces a margin of safety as defined in the Technical Specifications.

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RAF 1907
RAF 2028

Title: ESR 95-01003, Relocation of Security Fence

Description:

This modification relocated the security fence and associated security and fire protection equipment to place the Administration building outside of the HNP Protected Area.

Safety Summary:

None of the systems or components affected by this modification were accident initiating systems, nor do they interface with any accident initiating system. In addition to movement of the fence, one fire hydrant inside the protected area were relocated and two new hydrants were added outside the protected area. However, these changes are such that the occurrence of a fire or the effects of a fire will not adversely affect any safety-related systems or equipment.

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RAF 1910

Title: PCR-7330, Station Blackout

Description:

Engineering design controlled documents and the FSAR were reviewed and revised to redefine Quality Classification "B" to encompass the Station Blackout criteria from Regulatory Guide 1.155, "Station Blackout." This activity did not involve any physical plant changes; it revised the scope of Quality Class B as used in FSAR Section 3.2.1.1 to include Station Blackout components, as well as Seismic and Regulatory Guide 1.97 components.

Safety Summary:

HNP complies with Regulatory Guide 1.155. This reclassification of components cannot reduce any safety margins or increase the probabilities or consequences of FSAR Chapter 15 accident scenarios. This change does not involve revisions to operational procedures, control schemes, system line-ups, maintenance or test activities, or radiological conditions. It simply ensures that those components associated with Station Blackout are reclassified such that they will be subject to the Regulatory Guide 1.155 criteria.

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RAF 1917

Title: RAF 1917, Nasal Smears to Detect Internal Deposition

Description:

Plant Procedure HPP-251, "Personnel Decontamination and Documentation of Contamination Events," required the use of nasal swabs as a screening process to provide a qualitative indication of internal deposition and the possible need for bioassay. This requirement has been eliminated from the procedure since bioassays are now performed whenever an uptake has occurred or is suspected to have occurred.

Safety Summary:

Personnel contamination survey procedures are described in the FSAR, and this change requires a revision to the FSAR description. However, this change does not increase the probability or consequences of an accident previously evaluated in the Safety Analysis Report, does not increase the probability or occurrence of a malfunction of equipment important to safety, does not create the possibility of a different type of accident or a different type of equipment malfunction, nor reduce a margin of safety as defined in the Technical Specifications.

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RAF 1923

Title: RAF 1923, Replacement Met-Tower Barometric Pressure Sensor

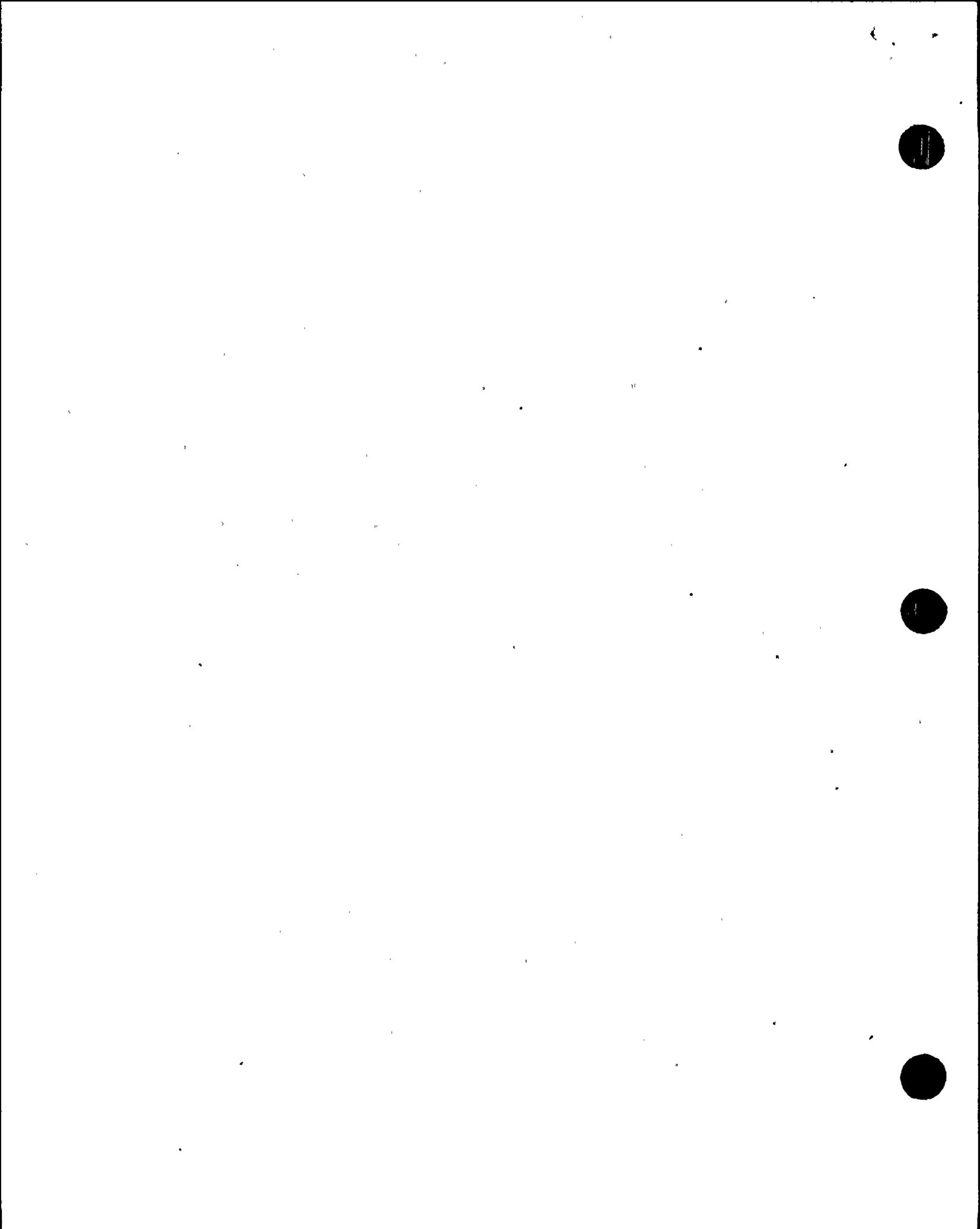
Description:

The barometric pressure sensor utilized at the HNP meteorological tower is no longer manufactured and was being replaced with a like instrument. The replacement pressure sensor meets the specifications of Regulatory Guide 1.23, and is compatible with current electronic interface equipment.

Safety Summary:

The replacement instrument was within the specifications of NRC Regulatory Guide 1.23 and was compatible with current electronic interface equipment. This instrument is not used in off-site dose calculations and has no impact on plant safety. It provides only informational data. While this involves a change to the FSAR, it does not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, does not increase the probability or consequences of a malfunction of equipment important to safety, does not create the possibility of a new or different type of accident or equipment malfunction, and does not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 1926

Title: PCR-6182, 230 & 500 KV Switchyard One-Line Diagram

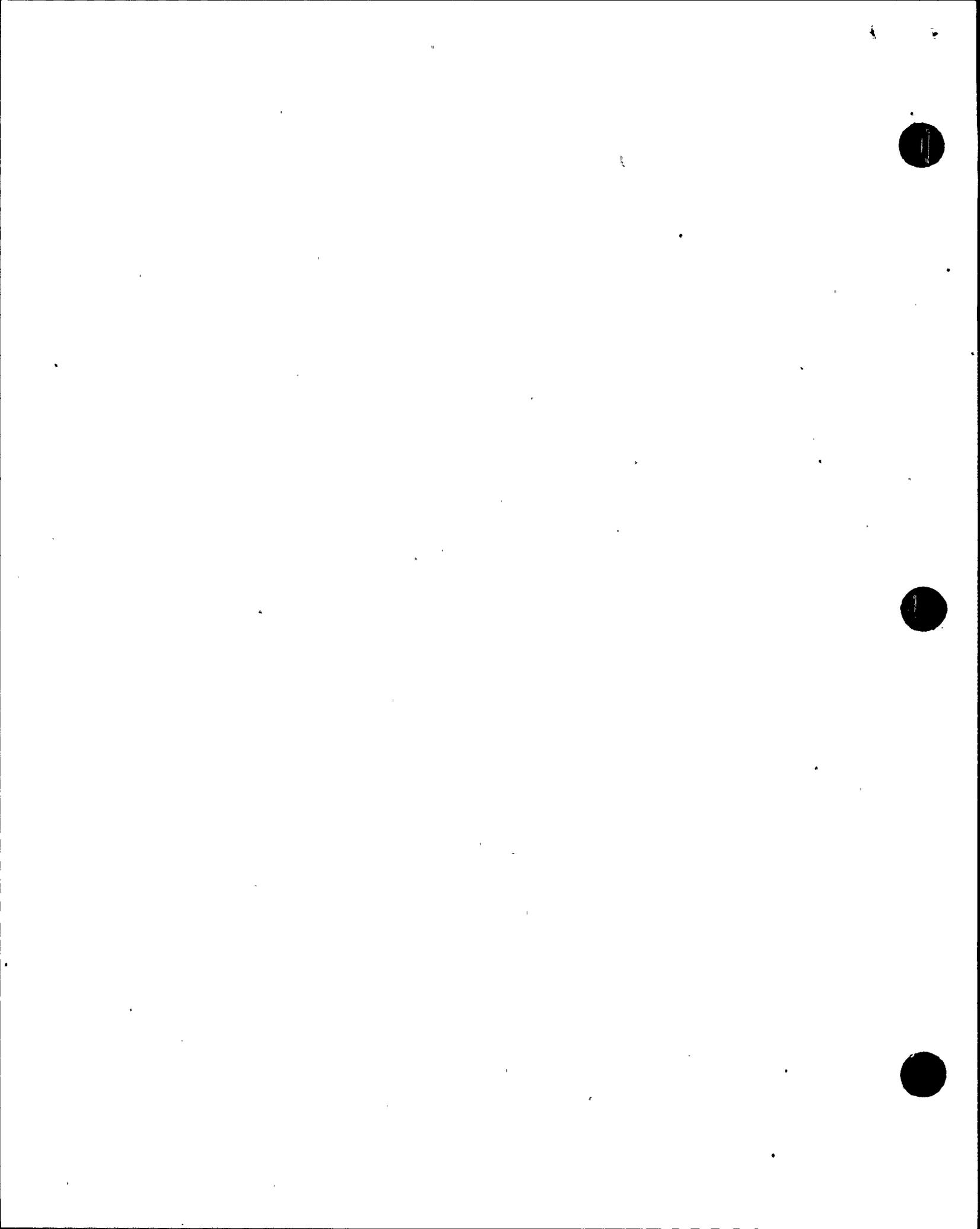
Description:

This modification updates plant drawings associated with a Administrative Building Motor Control Center and 230KV switchyard power panels. New electrical distribution drawing are created for the Administrative Building MCC and an addition non safety power panel in the plant. Current load calculations do not require revision.

Safety Summary:

This change does not effect any documents which describe plant operation. No design information associated with accident inhabiting circuits or equipment important to safety is changed. This change does not effect the probability of or consequences of any accident analysis.

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RAF 1927

Title: RAF 1927, Control Bank Rod Insertion Monitoring

Description:

A procedure change was made to enhance operator response to the Bank Low-Low Insertion Limit Alarm following a load rejection. Plant Procedure AOP-002, "Emergency Boration," stated that this alarm indicated a loss of Shutdown Margin under stable plant conditions. However, there was an inconsistency identified among the operating shifts as to what constituted stable plant conditions. This change, which is consistent with the Technical Specifications and the Bases, results in an overall enhancement in reactivity management since boration will be pre-planned versus initiated immediately.

Safety Summary:

This change clarifies when emergency boration may be required and introduces no new actions. It ensures that core reactivity is controlled in a prudent manner, consistent with Technical Specifications. No new equipment is introduced nor will existing equipment be operated in a different manner. The operation of emergency boration components is unaffected, except that the frequency of operating the components will be reduced. While this change requires a revision to the FSAR description, it in no way increases the probability or consequences of an accident previously evaluated in the Safety Analysis Report, increases the probability or occurrence of a malfunction of equipment important to safety, creates the possibility of a different type of accident or a different type of equipment malfunction, or reduces a margin of safety as defined in the Technical Specifications.

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RAF 1928

Title: ESR 95-00045, Turbine Building HVAC Equipment Labeling

Description:

This change was a revision of plant drawings and component tagging to reflect the as-built conditions of Turbine Building HVAC.

Safety Summary:

The drawings and tagging revised were not to safety-related, security, radwaste, or fire protection systems. No physical equipment of facilities was changed by this modification. While this change requires a revision to the FSAR, it in no way increases the probability or consequences of an accident previously evaluated in the Safety Analysis Report, increases the probability or occurrence of a malfunction of equipment important to safety, creates the possibility of a different type of accident or a different type of equipment malfunction, or reduces a margin of safety as defined in the Technical Specifications.

RAF 1929

Title: ESR 94-00433, Condensate Drain Line Capping

Description:

This modification capped condensate drain lines to reduce condenser in-leakage.

Safety Summary:

These lines are non-safety related and non-seismic and do not impact safety related systems or equipment. While this change requires a revision to the FSAR, it in no way increases the probability or consequences of an accident previously evaluated in the Safety Analysis Report, increases the probability or occurrence of a malfunction of equipment important to safety, creates the possibility of a different type of accident or a different type of equipment malfunction, or reduces a margin of safety as defined in the Technical Specifications.



RAF 1930 & 1935

Title: RAFs 1930 and 1935, Main Turbine Steam Valve ISI Testing

Description:

This revision clarifies the main turbine valve inspection program and the mechanical testing done on-line and off-line. The FSAR stated that at least one intercept turbine valve and reheat stop valve would be inspected each refueling outage; however, this is not required per Technical Specifications. Since the valves are identical in design except for the orientation of actuators and spring cans, there is no reason to expect that a reheat stop valve will wear faster than an intercept valve. Since there are times in the performance of major turbine component inspections where it is not practical to remove one of each type of valve, the program is being revised to allow two intercept valves to be inspected instead. Additionally, the frequency of turbine valve testing is being changed from monthly to quarterly based upon an evaluation performed by Westinghouse on turbine missile probabilities.

Safety Summary:

The turbine valves are equipment important to safety. They are used to mitigate turbine missiles. The reheat stop and intercept valves are subjected to the same operating conditions and are identical in design with respect to steam path. The valves are inspected over an interval that identifies and corrects problems before valve function is lost. Valve function is also verified quarterly by stroke testing. Therefore, the probability of a failure of these valves is not increased by this revision.

In addition to revising the inspection program, the frequency of turbine valve testing is being changed from monthly to quarterly. This change was supported by an evaluation of turbine missile probabilities performed by Westinghouse for the Harris Nuclear Plant. The significant input allowing less frequent tests is improved reliability data demonstrating an industry trend in less system separations and valve failures. The HNP performance data follows the industry trend. HNP test and maintenance programs ensure the overspeed protection systems will remain functional. While valve testing is being relaxed to quarterly, the function of the hydraulic solenoid valves and mechanical trip mechanism will continue to be verified on a monthly frequency. HNP maintains the overspeed protection system consistent with Westinghouse recommendations. Therefore, changing the frequency of the turbine valve testing presents no significant risk at HNP. No new accidents or consequences are foreseen and no increase in the probability of an accident can be demonstrated.

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RAF 1931

Title: PCR-4881, Radwaste Demineralizer System Permanent Plant Equipment

Description:

The Radwaste Demineralizer System was originally leased from a vendor and installed as a one year demonstration project. This equipment was purchased and made permanent plant equipment.

Safety Summary:

The modification involves physically moving demineralized water and service air hose stations to a more convenient location inside a block wall. There are no safety implications from this modification. The construction of the concrete block wall around the skid could cause a failure of the demineralizer skid during a seismic event, but this would have no impact on Chapter 15 accident analyses which assume complete failure of all liquid radwaste components and a loss of all liquid inventory. Even with a failure of the wall, the water would be contained in the Waste Processing Building.

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RAF 1933

Title: ESR 94-00507, Waste Gas System

Description:

Revisions were made to the operating practices of the Waste Gas systems. The FSAR text which describes the Waste Gas storage capacity of 40 years is being replaced with text stating that releases may be made in accordance with the ODCM, 10 CFR 20, and 10 CFR 50 limits. The FSAR was further revised to state that normal operation and shutdown gas decay tank gases are not segregated. Various other changes were made to the FSAR description of operating practices related to these systems.

Safety Summary:

No changes have been made to the Gaseous Waste Processing System which affect operating pressures or system materials. The total activity in a waste gas storage tank is not increased beyond analyzed conditions. There will a slight calculated increase in doses shown in the FSAR tables due to a new source term calculation. The Plant Nuclear Safety Committee has reviewed this increase and found that it does not result in an actual increase in dose to the public. The doses are still within 10 CFR 20 and 10 CFR 50 limits.

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RAF 1940

Title: RAF 1940, Emergency Diesel Generator Starting Air Tank Dewpoint Test

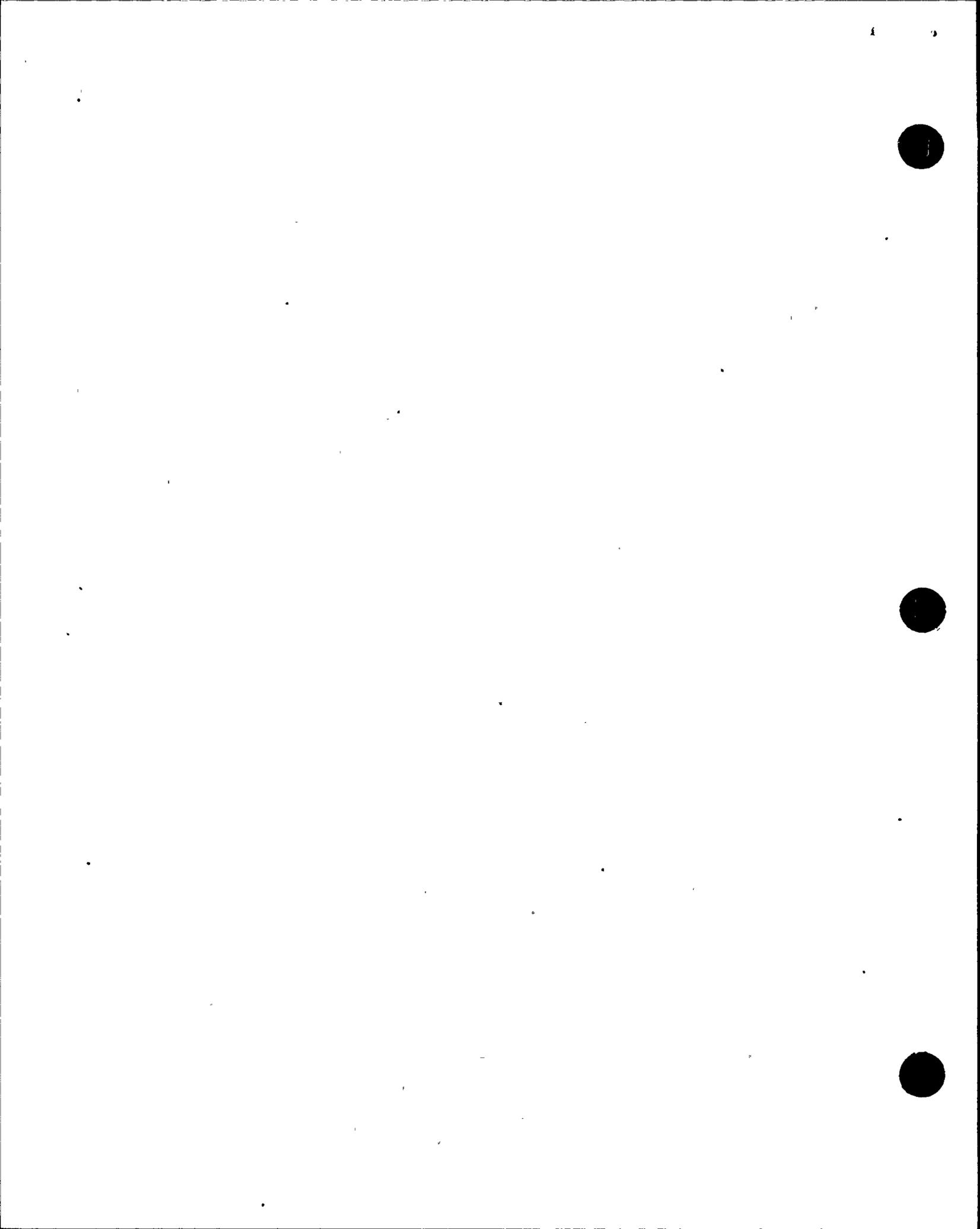
Description:

FSAR 9.5.6.4 states that dewpoints will be tested on a quarterly basis in conjunction with a periodic diesel generator test. The intent of the statement was apparently to take advantage of the compressors recharging the receivers following an EDG start. The requirement that these tests be done contemporaneously is being eliminated.

Safety Summary:

Considering the system operation, dewpoint data is unaffected by the diesel generator test. While the receiver pressure is typically maintained between 210 and 250 psig with the EDG in standby, a typical EDG start will result in only a 20 psig reduction in the receivers, which may or may not result in the compressors recharging the system, depending on initial receiver pressure. Therefore, eliminating the need to test the dewpoints in conjunction with an EDG test will not affect the quality of the dewpoint data and will allow greater flexibility in test scheduling.

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RAF 1941

Title: RAF 1941, Organization Changes

Description:

The CP&L organization description was updated to reflect the current organization as it applies to support of the Harris Plant. Both the Corporate and Plant organization description have been revised. The changes include re-alignment and streamlining of departmental responsibilities, predominately at the corporate level. Also included are numerous title changes, and shifting of responsibilities and a minor restructuring within the onsite operating organization.

Safety Summary:

As these changes are organizational and administrative, none of the changes alter the way safety-related systems, structures, or components are designed, constructed, operated, or maintained. While this change requires a revision to the FSAR description, it does not increase the probability or consequences of an accident previously evaluated in the Safety Analysis Report, increase the probability or occurrence of a malfunction of equipment important to safety, create the possibility of a different type of accident or a different type of equipment malfunction, or reduce a margin of safety as defined in the Technical Specification.

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RAF 1942

Title: RAF 1942, Performance-Based Nuclear Assessment Program

Description:

During 1995, changes were made to the functional, organizational, and administrative aspects of the nuclear assessment function at Carolina Power & Light Company. These changes were approved by the NRC in Amendment No. 57 to Facility Operating License NPF-63.

Safety Summary:

As these changes are functional, organizational, and administrative, none of the changes alter the way safety-related systems, structures, or components are designed, constructed, operated, or maintained. While this change requires a revision to the FSAR, it in no way increases the probability or consequences of an accident previously evaluated in the Safety Analysis Report, increases the probability or occurrence of a malfunction of equipment important to safety, creates the possibility of a different type of accident or a different type of equipment malfunction, or reduces a margin of safety as defined in the Technical Specifications.

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RAF 1943

Title: ESR 95-00336, Drawing Change - Duplicate Valve Tag Numbers

Description:

Valves 1-CF-2 and 1-DW-709 were assigned Ebasco Tag numbers 7CF-R-5-1 and 7WL-D113-1, which were duplications. New tag numbers were assigned for these valves and affected documents were revised.

Safety Summary:

This modification required no physical plant changes other than re-tagging. However, the Simplified Flow Diagram (SFD) tag numbers used by Operations were not affected. Although this modification resulted in a change to the FSAR, it did not increase the probability of occurrence or consequences of an accident previously evaluated in the SAR, did not increase the probability of occurrence of consequences of a malfunction of equipment important to safety, did not create the possibility of an accident or a malfunction of equipment of a different type from any previously analyzed, and did not reduce the margin of safety as defined in the basis of any Technical Specification.

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RAF 1944

Title: RAF 1944, Fire Protection Hose and Sprinkler Demand

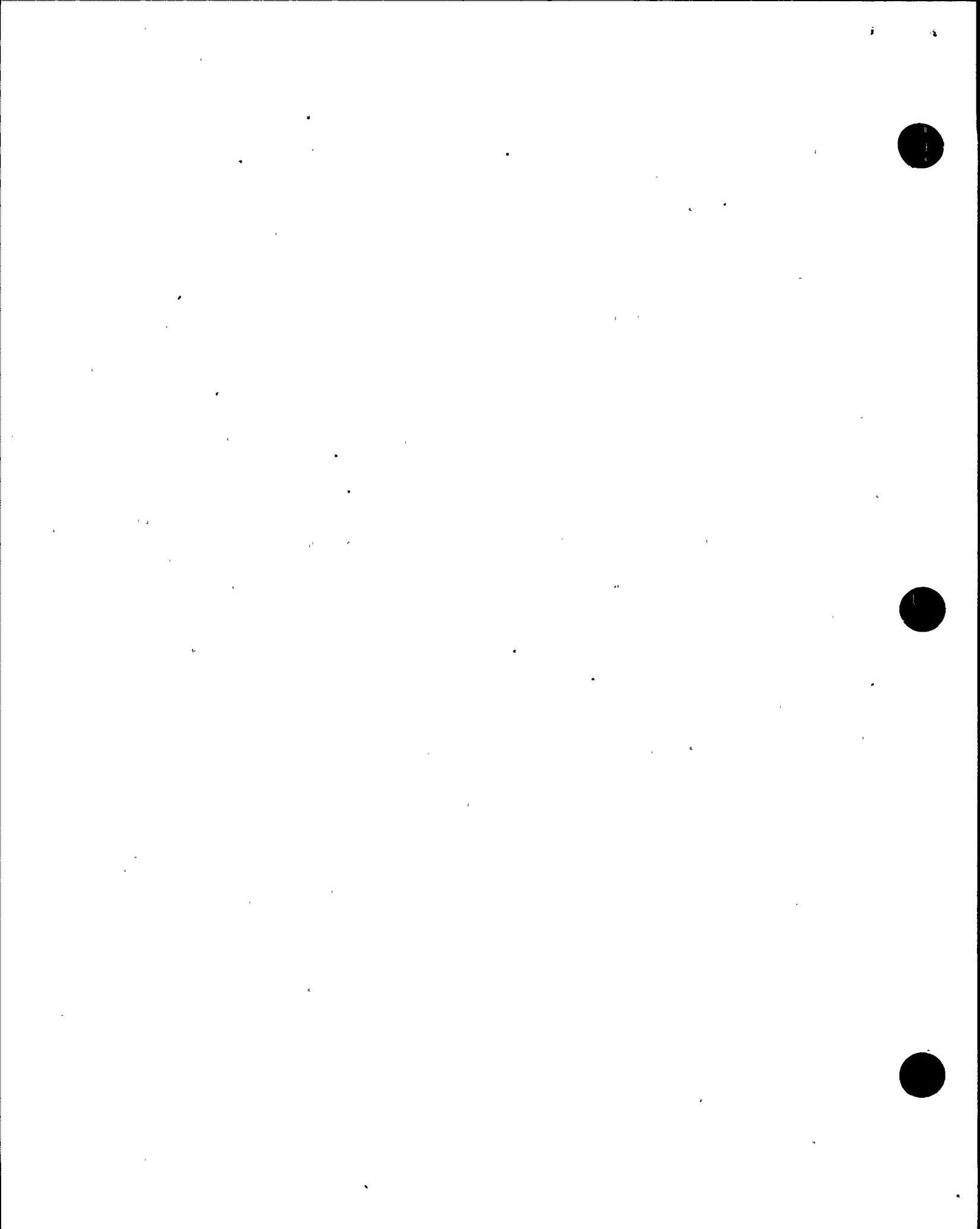
Description:

FSAR Section 9.5.1 is being revised to remove wording which incorrectly combines available sprinkler flow of 2,000 gpm with available design hose flow of 750 gpm. A total available flow of 2,750 gpm is still available, however the mix is approximately 2,445 gpm for the sprinkler system and 305 gpm for manual hose stations.

Safety Summary:

The Standard Review Plan, NUREG-0800, requires only that the Turbine Building be separated from adjacent structures containing safety-related equipment by a fire barrier with a minimum rating of 3 hours. The SRP does not require fire suppression. Further, the fire protection system is neither an accident initiating system nor an accident mitigating system. While this change requires a revision to the FSAR description, it in no way increases the probability or consequences of an accident previously evaluated in the Safety Analysis Report, increases the probability or occurrence of a malfunction of equipment important to safety, creates the possibility of a different type of accident or a different type of equipment malfunction, or reduces a margin of safety as defined in the Technical Specifications.

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RAF 1945

Title: ESR 95-00153, Secondary Sampling System

Description:

This modification corrected the line sizes for two pressure indicators which had been improperly identified and also corrected the drawing symbols for two valves which were incorrect. The field installation was determined to be correct and appropriate for the application.

Safety Summary:

No field work was required as a result of this modification. While this modification involves a change to the FSAR, it does not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, does not increase the probability of consequences of a malfunction of equipment important to safety, does not create the possibility of a new or different type of accident or equipment malfunction, and does not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 1946

Title: ESR 95-00602, Service Water System Flow Diagram Corrections

Description:

This change corrected discrepancies noted in FSAR Figure 9.2.1-02 regarding Condenser Vacuum Pump Service Water outlet connections to match as-installed conditions. These were document changes only and did not involve plant equipment changes or additions.

The line sizes for two pressure indicators and the drawing symbols for two valves were incorrect. The field installation was determined to be correct and appropriate for the application.

Safety Summary:

No field work was required as a result of this change. While this change involves a change to the FSAR, it does not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, does not increase the probability of consequences of a malfunction of equipment important to safety, does not create the possibility of a new or different type of accident or equipment malfunction, and does not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 1947

Title: RAF 1947, Primary Coolant Outside Containment

Description:

This is a change to one element of the Leak Reduction Program described in FSAR TMI Appendix III.D.1.1. The change involves deleting the words "in accordance with the applicable provisions of ASME Section XI," and inserting "per approved procedures by qualified personnel."

Safety Summary:

The use of VT-2 qualifications for inspectors per ASME Section XI was used in development of the program because Section XI provided a convenient method. Experience has shown that the additional qualifications of the VT-2 examiners do not add value to the inspection effort. There is no special training required to perform III.D.1.1 type inspections, and Engineering or Operations personnel are sufficiently qualified to perform these inspections without additional training. The NRC's review of this FSAR section, as documented in the SER, did not provide credit for any specific portion of the ASME Code. The program still employs all elements as relied upon in the SER.

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RAF 1948
RAF 1954
RAF 2027

Title: ESR 95-00084, Reactor Auxiliary Building Emergency Exhaust Dampers

Description:

This modification eliminates fourteen Reactor Auxiliary Building Emergency Exhaust System (RABEES) dampers. These dampers are normally closed and are designed to fail open. Even though the dampers are categorized as being "shut-off" dampers, they are actually provided for back draft prevention when the RABEES or the RAB Normal Ventilation System operates. This back draft prevention technique is a conservative approach to controlling backflow and is not required. The dampers in question are being locked open and spared in place.

Safety Summary:

The RABEES is not an accident initiating system; it is an accident mitigating system and is required to maintain Emergency Core Cooling System areas under a negative pressure to prevent unfiltered releases of radioactive materials. Deletion of the fourteen dampers will not impair the ability of the system to properly perform its design basis function. The single failure analysis for the RABEES identified eighteen shut-off dampers that could fail to open. Locking open these fourteen dampers will make this failure mode practically obsolete, thus creating a more reliable system.

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RAF 1949 & 1950

Title: ESR-94-00033, Steam Generator Blowdown Heat Recovery

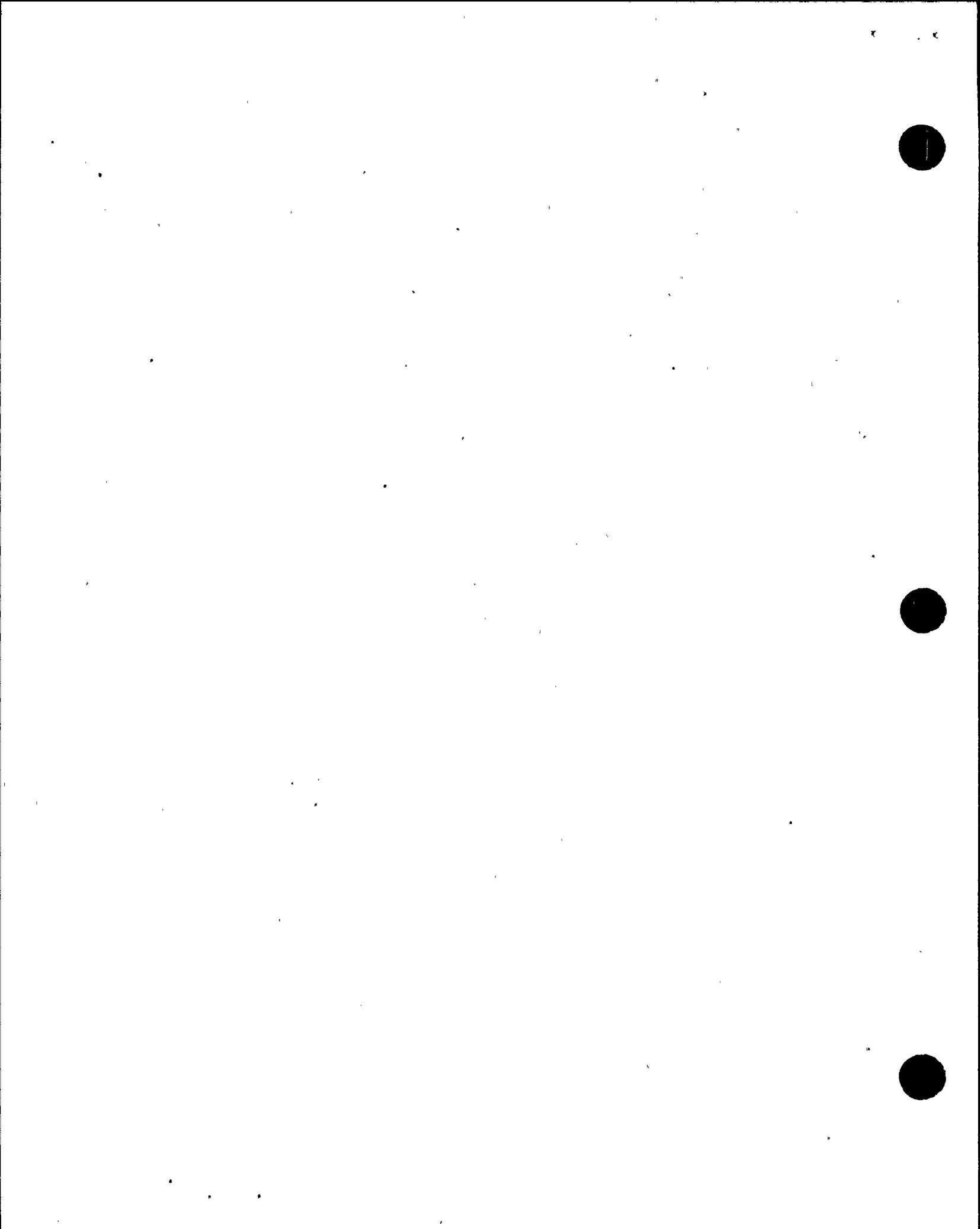
Description:

This modification installs a heat exchanger, two mechanical filters, three demineralizers, and associated instrumentation and controls to the steam generator blowdown to reclaim a portion of the heat normally lost in steam generator blowdown. This will enhance overall plant performance. Secondary sample points are added to monitor steam generator blowdown. Specific conductivity, cation conductivity, and sodium will be continuously monitored to ensure the blowdown demineralizers are effective. Demineralized blowdown is routed to the condensate/feed system.

Safety Summary:

The resultant slight pre-heating of the condensate will not adversely affect feedwater reliability. There is no increase in accident probability. The capability to deal with contamination of blowdown and condensate during a steam generator tube leak is enhanced. There is no increase in the consequences of any previously analyzed accident. This modification affects no safety related equipment and the probability of safety related malfunctions is not affected. There is no introduction of new accidents of different types from those previously evaluated. There is no reduction of margin of safety related to this modification.

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RAF 1951

Title: ESR 95-00082, Drain Collecting Tank for Nitrogen PCV to Volume Control Tank

Description:

Two problems were identified relating to the Gaseous Waste Processing System during degassing operations. First, it was determined that there was insufficient nitrogen gas pressure to the Volume Control Tank (VCT) during drain downs to purge hydrogen from the VCT. This modification raises the setpoint for the nitrogen supply so that it is higher than the hydrogen supply pressure to the VCT. Second, it was also suspected that water was accumulating in the nitrogen gas line between a pressure controller and the VCT. To alleviate that situation, an equipment drain line has been added in the nitrogen gas purge line.

Safety Summary:

The additional piping installed in accordance with the design requirements of the system and is no more likely to fail than the existing system piping. The additional piping also provides a system that avoids temporary connections to contain potential radioactive gases. The setpoint increase in the nitrogen pressure to 25 psig is well within the alarm setpoint of 65 psig on the VCT. If the nitrogen were to displace the hydrogen in the VCT, the problem would show up during monitoring of the hydrogen concentration in the reactor coolant. This should not occur, however, since the nitrogen from the shutdown waste gas decay tank is valved out of the CVCS during normal operation. The plumbing and drainage system is not an accident initiating system. Likewise, the waste gas system, VCT, and the plumbing and drainage system are not accident mitigating systems. Further, no malfunction of equipment could occur as a result of raising the nitrogen pressure to the VCT, and neither the new line or the setpoint increase affects the margin of safety as defined in the Bases to the Technical Specifications.

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RAF 1952

Title: ESR 9500193, ECCS Piping Vent Modification

Description:

This modification replaced existing non-pressure boundary pipe caps on vent lines in the Emergency Core Cooling System (ECCS) piping with quick disconnect couplings. This change enhances the ability to test the system for filling as required by Technical Specifications.

Safety Summary:

The pipe caps do not function as a pressure boundary. The vent lines are wetted with reactor coolant. Therefore the quick disconnect couplings are fabricated of austenitic stainless steel. The couplings are designed with double shut-off and provide minimum leakage during disconnect/connect. The couplings utilize Viton seals which are resistant to the affects of a radioactive environment and are rated to 400 degrees Fahrenheit. The couplings have a maximum operating pressure of 5,000 psig and a maximum operating temperature of 400 degrees Fahrenheit. The design parameters for the vents are 2735 psig at 300 degrees Fahrenheit and 600 psig at 400 degrees Fahrenheit. These couplings will adequately function as intended although they are non nuclear safety related. The seismic review revealed that the addition of these couplings did not impact the existing seismic analysis.

This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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RAF 1953

Title: PCR-6944, Fuel Transfer Tube Valve IPP-427 Position Indication

Description:

This modification to the Refueling System abandoned in place position limit switches for valve IPP-427. In doing so, the fuel transfer system control panel (pit side) has been modified. The valve open indicator light and the valve interlock selector switch was removed. Panel controls have been rewired to bypass the removed/abandoned components.

Safety Summary:

Although the Refueling System is safety-related in part, this modification only affects the non-protection, non-safety fuel transfer control panel (pit side). The modification has no affect on any mitigating systems nor does it adversely affect any initiating system. The modification improves the ergonomics of the control console in that inoperable or unnecessary controls are removed to support the abandoning in place of the fuel transfer valve limit switches. Abandoning the limit switches will save costs and dose, compared to replacing them. Valve position can be determined by alternate means. Administrative controls are a sufficient to verify this valves position. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. No safety margins are affected. Thus, no unreviewed safety question exists.

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RAF 1955

Title: RAF-1955, Service Air System

Description:

ESR 95-00549 changed valve and line lists to correct minor discrepancies that have been identified. It does not result in physical plant changes. Additionally, it corrected an incorrect instrument number on a piping layout drawing, and corrects a valve symbol on flow diagrams and the corresponding FSAR figure 9.3.1.02.

Safety Summary:

This change does not alter the physical plant or the manner in which the plant is operated. While this involves a change to the FSAR, it does not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, does not increase the probability or consequences of a malfunction of equipment important to safety, does not create the possibility of a new or different type of accident or equipment malfunction, and does not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 1956

Title: RAF 1956, 230 KV Transmission Line Rerouting/Renaming

Description:

The Harris-Fayetteville 230 KV line is being re-routed through the new Fort Bragg Woodruff Street substation and is being renamed the Harris-Ft. Bragg Woodruff St. 230 KV line. The names of this line are being updated and the applicable FSAR figures revised to show the new arrangement. The length of this line is changed and will be reflected in the FSAR.

Safety Summary:

This line is one of seven 230 KV lines connecting the Harris Switchyard to the transmission system. As the means of transmitting generated power and as the preferred source of electrical power to mitigate an accident, the reliability of the switchyard is important to nuclear safety. The change in routing of this line has no impact on the total reliability or availability of off-site power due to both the nature of the change and the large degree of redundancy provided by the other six transmission lines. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR.

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RAF 1957

Title: RC-PD-13, Revision 16, Operation of Whole Body Counting Systems

Description:

Procedure RC-PD-13 was revised to require bioassays only for personnel who enter bioassay areas and to allow the use of whole body friskers to meet the requirement for annual whole body counts. The reduction in the number of personnel who require baseline and termination whole body counts, means that the Harris bioassay program no longer meets the intent of ANSI Standard N343-1978 as specified in the FSAR (12.1.1.5) which requires whole body counts for all personnel assigned to the plant site.

Safety Summary:

The revised program meets the intent of Regulatory Guide (R.G.) 8.9, "Acceptable Concepts, Models, Equations, and Assumptions for a Bioassay Program" and the requirements of 10 CFR 20.1204. The whole body friskers have been shown to be sensitive enough to detect internal contamination at the level which requires further evaluation per R.G. 8.9. Taking credit for the use of these monitors to meet the requirements for an annual whole body count will not adversely impact the bioassay program and will result in a significant reduction in work for dosimetry personnel. The bioassay program is concerned only with plant personnel dose. It has no effect on fission product barrier integrity or public safety. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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RAF 1958

Title: ESR 95-00857, Sampling System - Normal Position of Valves

Description:

This modification was implemented to have the position of four (4) primary sampling system containment isolation valves (1SP-40, 1SP-41, 1SP-59, and 1SP-60) changed to normally closed instead of open per original design intent for the purpose of reducing required maintenance.

Safety Summary:

The surveillance requirements and performance requirements (containment integrity and closure time) for the subject containment isolation valves are not changed as a result of this modification. The design intent of the containment isolation valves is to mitigate the consequences of a design basis accident by providing containment isolation. The change in normal valve position (open to close) does not affect this mitigating function since closure on Phase A isolation, closure time, and leak-tight integrity requirements remain unchanged. Inservice Test Program requirement for these valves also remain unchanged. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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RAF 1959

Title: AP-535, Revision 0/7, Performing Work in Radiation Controlled Areas

Description:

This change allows personal items leaving the radiation controlled area (RCA) or a contaminated area to be monitored for contamination with instrumentation other than a GM frisker. the procedure was revised to allow the use of small article monitors (SAM) for checking personal items.

Safety Summary:

A SAM is sensitive enough to detect contamination levels at or below those referred to in the Harris Radiation Control & Protection Manual (RC&PM) for release by pancake GM probe: 100 ncpm on a pancake GM probe when surveying for total contamination, and 100 ncpm on smear from 100 cm² using a pancake probe when surveying for removable contamination. This change, coincident with installation of monitor at key RCA exit points, do not increase the risk of contaminated items leaving the RCA. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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RAF 1960

Title: OMM-001, Revision 8, Operations - Conduct of Operations

Description:

Due to the arrangement of the control panels, parts of the main control board are not visible to an operator located at panel AEP-1. Administrative procedures define the area adjacent to AEP-1 as a "limited time area" to allow necessary manipulation of controls and alarm verification. The "at the controls area" in the Main Control Room (MCR) was expanded. As described in Regulatory Guide 1.114 C. 1.3, a "limited time area" was added which allows manipulation of the controls on panel AEP-1 and the Cooling Tower Make-up (CTMU) panel for timely response to annunciator alarms and the ability to promptly answer an unforeseen condition.

Safety Summary:

The "at the controls area" in the MCR has been expanded to include panel AEP-1 and CTMU panel. This area is within the guidelines established by NUREG 1.114 for interpretation of 10 CFR 50.54. The required licensed personnel requirements are still being met and operators will be allowed to access the AEP-001 and CTMU panel areas to respond to alarms and perform surveillance as required. As delineated in this revision to OMM-001 the expanded area will be controlled as a "limited time area", to allow use of these controls but limit the time spent in this area for non-control functions. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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RAF 1961

Title: RAF 1961, Qualifications for Independent Review Personnel

Description:

The FSAR has been changed to agree with the current Technical Specification Section 6.5.3, with respect to the use of "equivalence" for educational/experience qualifications for independent review personnel.

Safety Summary:

This is an administrative change to make the FSAR consistent with the NRC approved Technical Specification that allows substitution of experience for education for qualifications of Nuclear Assessment Section independent review personnel. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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RAF 1963

Title: RAF 1963, Laundry and Respirator Decontamination Facilities

Description:

This change revises the FSAR to more accurately describe the equipment currently in the Respirator Decontamination Facility. The exhausted unloading hood is removed and the respirator washer is added.

Safety Summary:

It was determined that the exhausted unloading hood was conducted. Respirators returned for cleaning have been surveyed prior to leaving the contaminated area where they were used and the contamination levels are recorded on each bag. Since highly contaminated respirators must be handled under the supervision of Health Physics personnel if a hood is required it will be on an individual basis and a hood in another lab will be used. The subject hood and washer do not effect safety related equipment. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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RAF 1965

Title: HPP-500 Rev 3/5, Radiation Monitoring System Data Base Manual

Description:

Continuous release radiation monitor alert and high alarm setpoints have been increased due to new Environmental Concentration (EC) liquid release limits in 10 CFR20. FSAR Table 11.5.2-2 has been revised accordingly for the following:

REM-1MD-3528
REM-1MD-3530

REM-1SW-3500A
REM-21WS-3542

REM-1SW-3500B

Safety Summary:

The new setpoints are in accordance with the Harris Off-Site Dose Calculation Manual (ODCM). The setpoints were calculated based on the EC values given in the revised 10 CFR20, and are higher than the previous setpoints. This increases the amount of radioactivity released prior to alarm/release termination. However, there is no accident analysis in the FSAR which relies on this termination being performed at a specific activity level. There are also no accident consequences given in the FSAR which would be increased by these setpoint changes. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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RAF 1967

Title: RAF 1967, Site Paging System .

Description:

FSAR Section 9.5.2.3.2 describes the Site Paging System as designed so that speakers in any zone are split between two circuits fed by two amplifiers so that the loss of any single amplifier will not cause loss of the paging function in that zone. This change to the FSAR removes this design criteria.

Safety Summary:

The Public Address system is neither an initiating system nor a system required to mitigate the consequences of any design basis accident or malfunction of equipment. Other methods of on-site communication can be used in the event that paging in a zone is lost due to an audio amplifier failure. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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RAF 1968

Title: PCR-5342, Evaluation of Ultimate Heat Sink

Description:

This evaluation upgrades the Emergency Service Water and Cooling Tower Make-up Intake Channel and Structure to Seismic Category I as an alternate source of Emergency Service Water supply or Ultimate Heat Sink (UHS). Evaluation has determined that the Emergency Service Water and Cooling Tower Make-up Intake Channel and Structure was designed to Seismic Category I criteria which meeting the pertinent requirements of 10 CFR 50 Appendix B and Regulatory Guide 1.27 and can therefore be relied upon as an alternate source of Emergency Service Water supply or UHS. A multi-disciplined verification walkdown was performed to ensure compliance with R.G. 1.29 requirements for design controlled components and a verification of field run components. Non-seismic components located in the safety-related areas of the Emergency Service Water Intake and Cooling Tower Make-up Structure were reviewed for compliance with R.G. 1.29 and were found to be acceptable. Administrative controls are in place for temperature monitoring of the Emergency Service Water Intake Structure Pump and Pump Strainer Rooms and the Auxiliary Reservoir water during cold weather conditions.

Safety Summary:

This upgrade does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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RAF 1970

Title: PCR-6776, Cooper Emergency Diesel Generator Parts Classification

Description:

The Emergency Diesel Generator purchase specification was changed to allow procurement of spare parts to the requirements of IEEE standard 323-1983 vice 323-1074. FSAR changes were made to reflect the specification change.

Safety Summary:

IEEE standard 323-1974 and Regulatory Guide 1.89 were invoked for the original Emergency Diesel Generator installation. These standards required all equipment to be designed for operation in the post LOCA containment environment. The fact that equipment important to safety exists and operates under much less severe conditions was not recognized by the Standards and Regulatory Guides.

The Harris Emergency Diesel Generators meet the installation and operation conditions that are consistent with the conditions defined by IEEE Standard 323-1983. These restrictions are not necessary and would not be invoked had the concept of a milder operating environment existed at the time of original design and construction. Invoking purchase specifications for replacement parts to reflect the requirements of IEEE 323-1983 will not change or affect the operating conditions prescribed by the original purchase specification. The change would remove the requirement to test for operating conditions that do not exist in the anticipated operating environment. Seismic analysis specifications or the assumptions supporting the accident analysis of the FSAR are not changed. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

The original purchase specification included requirements for environmental conditions per IEEE standard 323-1974.

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RAF 1971

Title: PCR-7225, 7.5 KVA Voltage Ratings

Description:

This evaluation establishes the maximum allowable AC output voltage from the safety-related 7.5 KVA inverters (channels I, II, II, & IV) based on the maximum allowable operating voltage for all inverter loads.

Safety Summary:

Each load fed by the safety-related 7.5 KVA inverters has been examined to determine its maximum allowable input voltage for proper operation. The most restrictive (i.e. the lowest maximum allowable) load input voltage is 123.9V (118V + 5%). Therefore, a maximum output voltage of 123.9V can be fed from the inverters and still ensure proper operation of inverter loads. Due to cable voltage drop between inverter outputs and load inputs, safety margins will exist between actual load operating voltages and maximum allowable load input voltages.

Per Westinghouse, inverter output voltages up to 123.9V will have no adverse impact on inverter equipment provided the inverter remains loaded between 2/3 full load and full load. Based on electrical calculations, the expected continuous loads on the inverters range from 46.4A to 52.23A, which is less than full load. Subtracting an assumed 10% from each value to account for intermittent loads, the lowest expected load is 41.8A, which is greater than 2/3 load. Therefore, an increase in inverter output voltage up to 118V + 5% is acceptable.

Increasing the inverter output tolerance has no impact on present alarms for the safety-related inverters. Alarms on the main control board are activated due to inverter loss of DC input, high DC input, loss of AC input, or loss of AC output. The ERFIS setpoints for inverter output voltages labeled as "Warning High" and "Alarm High," with values of 122V and 124V respectively, remain acceptable. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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RAF 1973

Title: ESR 94-00252, Containment Purge System Valve Upgrade

Description:

This modification replaced existing eight (8) inch butterfly valves in the Containment Purge System with more reliable valves. Normal purge valves 1CP-3, 1CP-5, 1CP-6, and 1CP-9 were replaced with new torque seated butterfly valves with laminated metal and graphite seats. The existing Bettis actuators were reused but required reconfiguring to change the direction of rotation.

Safety Summary:

The safety function of the affected valves is to shut on a containment isolation signal and remain closed and leak tight during the LOCA and post LOCA environment. This function is tested by LLRTs and ILRTs. The replacement valves are designed to meet the required function. Closing time and leak tightness were tested at the factory prior to shipment and following installation. The installation of these valves enhances reliability and nuclear safety. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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RAF 1974

Title: ESR 94-00382, ESW Strainer-Backwash Valve Replacement

Description:

This modification involved (1) the replacement of ESW strainer backwash valves and a timer, (2) the additional of throttle valves, (3) a change in piping material from carbon steel to stainless steel, and (4) a resetting of backwash duration.

Safety Summary:

The strainer backwash valve material was improved by changing from carbon steel to stainless steel, as well as other enhancements in the new valve ball and seat features. These changes were made to enhance the reliability of the ESW strainer backwash system. While this involves a change to the FSAR, it does not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, does not increase the probability or consequences of a malfunction of equipment important to safety, does not create the possibility of a new or different type of accident or equipment malfunction, and does not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 1975

Title: ESR 94-00274, Emergency Diesel Generator Soft Start Modification

Description:

This modification installed a soft start control system on the 1A-SA and 1B-SB Emergency Diesel Generators. This soft start system actually provides a "slow start" versus the "fast start" starting capability that is presently available on the diesel generators. This modification was recommended by the EDG manufacturer Enterprise Engine Services to reduce stresses and wear of the very fast starts. The modification installs a slow start solenoid valve and fuel limit cylinder. The solenoid valve is identical to the air admission solenoid valves utilized on the starting air system. The fuel limit cylinder is identical to the existing shutdown cylinder. Both components have a high reliability factor based on testing and operating history.

Safety Summary:

The soft start control circuit does not cause an increase in the probability of occurrence of any FSAR Chapter 15 event. No single failure mode exists that would disable both EDGs as a result of this control system change. There is a relatively small increase in probability of occurrence of a malfunction of equipment, and the modification does introduce a new equipment malfunction that did not previously exist. The Plant Nuclear Safety Committee determined that no Unreviewed Safety Question existed and that no unacceptable adverse impact on plant safety would result from this modification based on a review of the new components to be installed, the probability of their failure, and the measures in place that will continue to ensure EDG operability. The failure consequences of a diesel due to this modification is not increased, nor would the loss of a diesel due to this modification create a different type of accident. No margin of safety as defined in the Bases to the Technical Specifications is reduced.

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RAF 1977

Title: ESR 94-00561, Revision of DC System Electrical Calculations

Description:

ESR 94-00561 documented changes to electrical calculations as a result of DC system load additions made by previous plant modifications. Also, the recharge/equalization voltage for the Class 1E battery chargers was revised to agree with a calculation.

Safety Summary:

No plant hardware changes were made as a result of this revision. The loads added by the previous plant modifications had no adverse impact on the DC system. Since no hardware changes were made, the probability of occurrence of an accident was no changed, there was no effect on accident mitigation. Equipment reliability will be unaffected. Also, new test values have been evaluated to be within the capability of the batteries; therefore, no test failures or battery degradation should occur. No additional accident scenarios were created by this revision. Further, the Bases for the Technical Specifications do not include safety margin for the loading values for the Class 1E batteries.

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RAF 1978

Title: ESR 95-00125, Removal of Containment Bridge Crane Structural Steel

Description:

During original plant construction a 50 ton bridge crane at the Containment Equipment Hatch was installed for equipment rigging to and from Containment. At the end of Harris Plant construction, the 50 ton crane was removed and salvaged. This ESR removed the remaining structural steel supports for the crane.

Safety Summary:

The following aspects of removing the structural steel were evaluated:

- Seismic stability of the structure during disassembly.
- Possible effects on Refueling Water Storage Tank.
- Possible effects on Gas Decay Tanks.
- Loading on Waste Process Bldg. 236' elevation.
- Safe load paths.
- Installation of man-lifts to facilitate steel removal.

Evaluation of each of these considerations concluded that with appropriate precautions and compensatory measures, the structural steel could be safely removed with no adverse impact on plant operation and did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 1979

Title: ESR 95-0248, Resin Storage Area

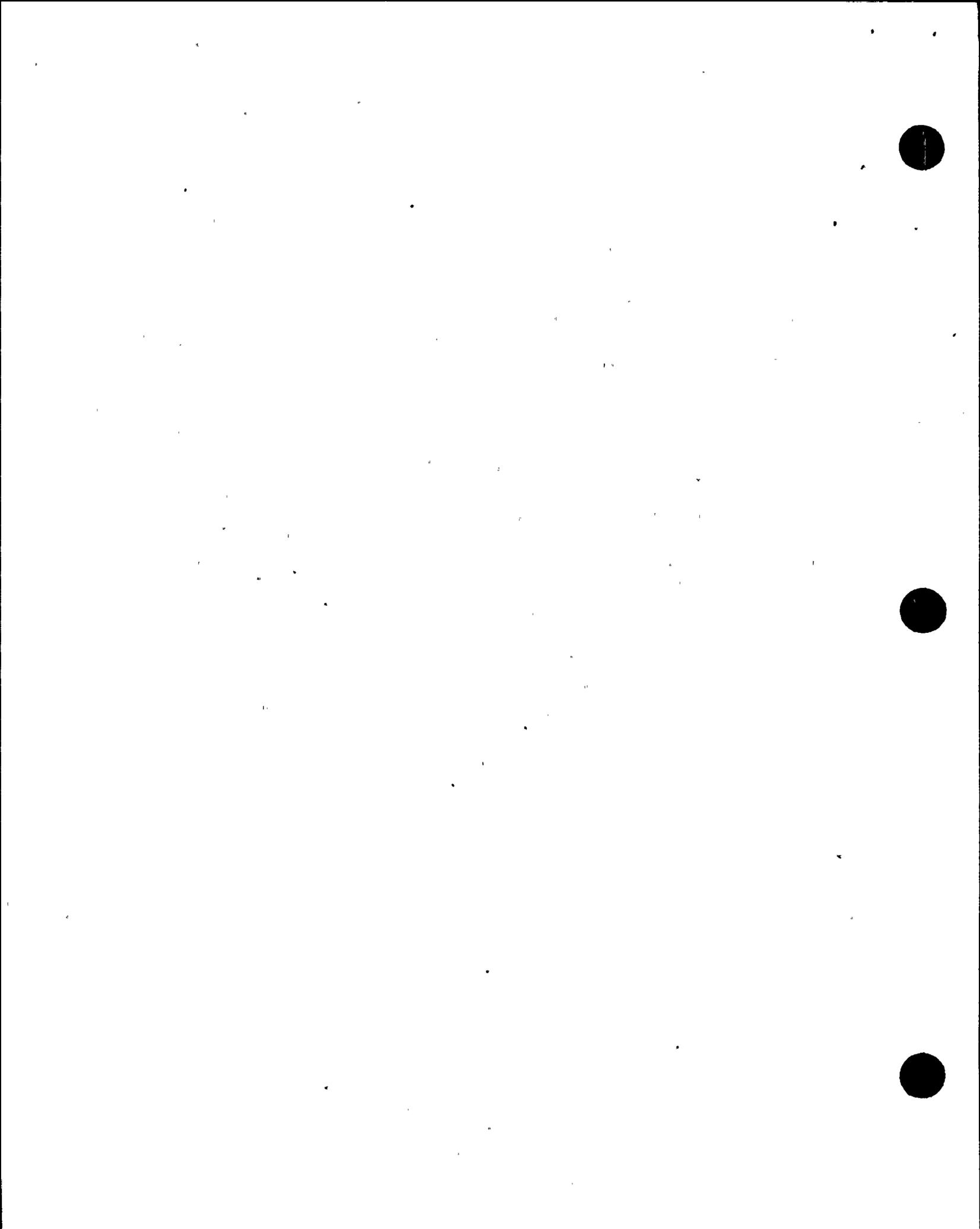
Description:

This modification removed the abandoned Waste Gas Decay Tanks from the ten (10) Unit 3 & 4 Waste Gas Decay Tank Pits to allow for temporary storage of radwaste containers. New radwaste containers were installed in these pits and will be used to store spent resin. In addition to the removal and installation discussed above, the modification required preparation to the surface of the pit floors, construction of a concrete curb around each hatch opening, and new metal hatch covers.

Safety Summary:

The weight of a waste gas decay tank is 49,600 pounds when flooded. The maximum weight of the spent resin liners is 20,000 pounds. Therefore, there is no reduction in the structural integrity of the floor slab. There is no safety related equipment located within the waste gas decay tank pits. The waste gas decay tanks had been abandoned in place with no interconnecting pipe or components. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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RAF 1980

Title: ESR 95-00206, Drawing Change for Essential Chilled Water System Valve Actuators

Description:

ESR 95-00206 was performed to incorporate drawing changes for Essential Chilled Water System valve actuators for valves 1CH-323 and 1CH -703. During the single failure analysis review of the ESCWS, these valves were identified as having motor operated actuators instead of electro-hydraulic actuators. The drawing changes corrected this condition.

Safety Summary:

This change is administrative in nature only and did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 1982

Title: PCR 6715, Train "B" Load Centers LK Breaker Replacement

Description:

This modification replaced nineteen (19) ABB LK breakers and cradles in Safety Train "B" 480 volt Power Centers 1B1-NNS (Seismic), 1B2-SB & 1B3-SB with Siemens RLN type breakers and cradles. The breaker's trip unit and other miscellaneous replacement hardware and electrical components, such as fuse blocks, fuses, fuse mounting plates, doors, etc., were also replaced. This modification also removed five (5) spare ABB type LK cradles from Safety Train "B" 480 volt Power Centers 1B1-NNS (Seismic), 1B2-SB & 1B3-SB and replaced them with a Siemens RLN type cradles.

Safety Summary:

The replacement breakers, cradles and Static Trip III units, in addition to other miscellaneous components, were purchased as safety related, and meet or exceed the ratings necessary to perform in a manner to protect the equipment serviced and the cable routed to the equipment. The time-current characteristic curves for the replacement breakers/fuses have been evaluated against the associated loads and downstream/upstream over current devices to assure proper coordination, and were found acceptable. The overall changes have been reviewed and no Appendix "R" impact is associated with the modification. The LK breakers were supplied with an optional mechanical lockout device incorporated into the automatic trip indicator assembly to mechanically prevent reclosing the circuit breaker after an automatic trip operation. This mechanical lockout device is NOT provided with the Siemens RLN breakers. The circuits associated with the RHR pumps, Containment Spray pumps, Service Water Booster pumps and Chilled Water P-4 pumps required a replacement of the "62" time delay relay to accommodate the spring charging time of the new Siemens RLN series breakers. These design differences have been analyzed and found to be acceptable. The replacement breakers were tested and qualified by WYLE Laboratories.

This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists

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RAF 1983

Title: ERC-003, Rev 2 Environmental & Radiation Control - Conduct of Operations

Description:

This change updates the Environmental & Radiation Control (E&RC) Unit position titles and responsibilities incorporating generic functional titles where possible, clarifies minimum staffing requirements for Health Physics and Chemistry Technicians, overtime policy for "travel time", and add requirements for record retention of decommissioning records per 10 CFR 50.75.

Safety Summary:

The subject changes are administrative in nature and were implemented to improve work processes and efficiency and will not reduce the quality or safety of affected programs in any way. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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RAF 1984
RAF 2023
RAF 2024

Title: ESR 9400254, Replacement of the DEH Pumps

Description:

The Digital Electro-Hydraulic (DEH) pumps which supply the turbine valve control system, were changed out with newer style pumps. In addition, a portion of the pump's discharge line was replaced with hydraulic hoses. The older pump and regulator system underwent approximately 500,000 pressure cycles a year. These cycles resulted in small shock waves being sent through the system, which causes cyclic stress. The new design maintains a more constant pressure, thus minimizing cyclic stress. The newer style pumps have been installed and operated in the following generation stations with no adverse consequence: Byron, Salem, Sutton (CP&L coal unit).

Safety Summary:

Neither the drawing change nor the DEH pump change-out constitute an unreviewed safety question. The modification increases the reliability of the DEH pressure source; the modification does not affect the pressure reduction capabilities of the DEH system (which we rely upon to cause a turbine trip in our accident analysis). This modification decreases the probability of an unwanted turbine trip due to an increase in the system's reliability. Loss of the DEH is bounded by analysis.

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RAF 1985

Title: ESR 95-00363, Target Rock Valve Replacement

Description:

PCR-5296 originally intended to replace ten Target Rock solenoid-operated valves with air-operated valves, six inside containment and four outside containment. During implementation of the modification, it was determined that replacement of the four valves outside containment was not cost effective. RAF-1768 had been approved for the replacement of all ten valves and the FSAR was incorrectly revised to show all ten valves as air-operated valves. RAF-1985 revises the FSAR to show the four valves that were not changed as solenoid-operated valves.

Safety Summary:

The stroke times for the valves remains unchanged regardless of the operator type, and no logic changes were made. Revising the FSAR to reflect the original solenoid-operated valves still being installed does not change an analyzed accident, change the consequences of an analyzed accident, create a new accident, or change the margins of safety as previously analyzed

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RAF 1986

Title: ESR 95-00073, Deletion of Radiation Monitoring Channels/Equipment

Description:

This modification disconnected and abandoned in place selected Radiation Monitoring equipment which is no longer required.

Safety Summary:

The Radiation Monitoring System is not an accident initiating system. The equipment did not increase the probability or consequences of any analyzed accident. The equipment was not required for accident mitigation.

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RAF 1987

Title: OST-1036, Concurrent RCS Cooldown and Boration

Description:

This change deletes the requirement to borate to cold shutdown boron concentration prior to initiating a cooldown of the RCS by taking credit for xenon negative reactivity.

Safety Summary:

Deleting the requirement to borated to cold shutdown boron concentration prior to initiating a cooldown of the RCS takes credit for xenon in the shutdown margin calculation. The changes to Plant Procedures OST-1036 and GP-007 maintain the required Technical Specifications shutdown margin assumed in the Safety Analysis Report and establish administrative controls that provide additional margin.

The total shutdown margin during RCS cooldown is reduced but still well within the Technical Specification limit and greater than the margin assumed in the FSAR analyses. Administrative controls established by the procedure also provide additional margin.

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RAF 1988

Title: ESR 94-00334, Removal of Line 7CA1-9-1

Description:

This modification removes a section of line from the cooling tower acid metering pumps where it enters a local concrete slab. This requires a change to FSAR Figure 9.2.1-2.

Safety Summary:

The Cooling Tower Acid and Caustic System is not a functional system and is not considered in the Technical Specifications.

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RAF 1989

Title: ESR 940022 Rev. 0, Installation of the Containment Equipment Hatch Monorail

Description:

This modification removed support beams for a previously used 50 ton crane (i.e., used during the construction phase). This crane was associated with activities involving the equipment hatch of the Containment Building. In addition to the removal of the old supports, this modification also installed a new monorail support system. The 25 ton monorail hoist and beam will only be attached to the supports during outage conditions.

Safety Summary:

Neither the removal of the older supports nor the installation of the monorail supports constituted an unreviewed safety question. The new monorail support is seismically sound. The electrical portion of the modification involved reactivation of a previously deleted power circuit. Modifications to existing conduit were required. All penetrations and cabling were reviewed for air seals and the three hour fire seals. The modification involved a negligible impact on the combustible loading of the appropriate fire zone.

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RAF 1994

Title: PCR-6892 Rev. 0, Drawing Change for the Service Water System Cooling Supply to the Main Generator Lead Cooling Unit.

Description:

A Normal Service Water system (non-safety system) flow switch was incorrectly labeled on a drawing in the FSAR. Figure 9.2.1- 02 listed the flow switch as FS 0902; the correct designator is FIS-01GA-0901V. The Plant Change Request (PCR) corrected the drawing.

Safety Summary:

The drawing change was not considered to be an unreviewed safety question. The drawing involved all non-safety related equipment. The PCR involves no change to field-installed equipment. Neither the probability nor the consequences of accidents are affected.

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RAF 1999

Title: PCR 7142,

NSW Strainer Vent Plug Identification

Description:

Added the words "plugged vent" on the FSAR drawing. The strainer has always had this vent plug; however, the plug was never shown on the drawing. A small representation of a plug was added to the drawing, as well as the words.

Safety Summary:

This drawing change does not involve a physical change to the system. The addition was made to enhance the drawing to more closely reflect those component on this non-safety system. This change has no effect on the probability or consequences of any analyzed accidents.

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RAF 2000

Title: ESR 9400460, Pressurizer Spray Bypass Valves Remote Operator Removal

Description:

The FSAR figure was changed to reflect removal of the reach-rods for the pressurizer spray bypass valves. These reach-rods were removed since the valves are only being operated while not at power (i.e., lower dose rate in the pressurizer cubicle). These reach-rods are operated on a very infrequent basis. Manual handwheels for the valves are still maintained, per the valve's original design. The resultant shield wall holes from removal of the rods were plugged with material to ensure no streaming effects will result from the modification.

Safety Summary:

Removal of the remote operators compromises neither the systems reliability nor operability. As long as the valves remain in their constant throttled position, they have no bearing on the probability of occurrence or the severity of any accident. The piping stress analysis was reviewed for the impact of the reach-rod removal; there were no deleterious effects on the piping stress analysis. Neither the reach-rod removal nor the accompanying FSAR figure change constituted an unreviewed safety question.

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RAF 2001

Title: RAF-2001, Check Valve IRC-993 Replacement

Description:

IRC-993 is currently part of the HNP ISI program which requires it to be disassembled and inspected each outage since it cannot be forward flow tested to meet ASME XI requirements during normal operation. Such disassembly requires considerable effort under high radiation conditions. This modification removes the internals of check valve IRC-993 and replaces IRC-993 with a manual stop valve. Removing the internals allows removing IRC-993 from the ASME XI IST program.

Safety Summary:

IRC-993 is located in the RCS Vent System and serves to prevent backflow for the Pressurizer Relief Tank (PRT) to containment during stroke testing of valve IRC-904. It also aids in preventing backflow from the PRT into the Reactor Coolant System (RCS) during times when the RCS is depressurized, such as during plant cooldown and heatup. The function of IRC-993 is maintained through a set of changes to the following procedures: GP-001, GP-007, GP-008, and OST-1043. These changes prevent backleakage from the PRT by maintaining a negative (or zero) pressure differential between the PRT and the RCS or containment.

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RAF 2002

Title: RAF-2002, Refueling Operations

Description:

The FSAR specifies that as part of normal plant operations, the fuel-handling equipment is inspected prior to the refueling operations. During the operational testing, procedures are followed to affirm the correct performance of the fuel handling system interlocks. Fuel Handling Procedure FHP-020 and FHP-005 specify steps that must be followed to ensure the equipment is operated correctly. Revision 7 to FHP-020 deletes visual checks on equipment and tools and deletes reference to an operator in the Fuel Handling Building during fuel movement.

Safety Summary:

The deleted FSAR sections governing fuel handling operations are covered by Operations procedures to ensure safe and proper fuel movement. The revision to FHP-020 will aid the operator in performing his duties more efficiently. The implementation of this procedure will not cause any unanalyzed accidents to occur, nor cause the probability of accidents to increase. Each item listed in the FSAR will be checked out by applicable procedures such that malfunction of equipment should not occur. During refueling, the core is borated to cold shutdown requirements which will keep the reactor subcritical during core reload.

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RAF 2003

Title: RAF-2003, Triaxial Peak Accelerograph Location Correction

Description:

One of three Triaxial Peak Accelerographs is mounted on Reactor Coolant System (RCS) piping. The FSAR incorrectly identified its location as being mounted on RCS Loop 1 as opposed to Loop 2.

Safety Summary:

This change properly documents existing plant configuration and corrects a minor discrepancy in the FSAR. Changing the designated location of the Peak Triaxial Accelerograph will not change the probability of occurrence or the consequences of an accident previously analyzed. Changing the designated location of the accelerograph will have no impact on the probability or consequences of equipment malfunction, or create the possibility of a new accident or equipment malfunction. Nor will it have any impact on the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2004

Title: RAF-2004, MCB to ACP Auto Transfer Deletion

Description:

This design change will disable the existing bulk transfer scheme and institute a transfer scheme where the operators manually transfer each individual relay associated with the transfer of control from the Main Control Board (MCB) to the Auxiliary Control Panel (ACP). The modified transfer scheme eliminates the use of the 43T-xx relay's electrical-to-mechanical transfer mechanism which has a history of causing electrical relay transfer failures. However, the indication and alarm functions associated with the existing manual transfer scheme are maintained.

Safety Summary:

This change will not require any changes to Technical Specification 3.3.3.5.b. Operability of the transfer switches required by the SHNPP Safe Shutdown Analysis to (1) remove decay heat via auxiliary feedwater flow and steam generator power-operated relief valve flow from steam generators A and B, (2) control RCS inventory through normal charging flow path, (3) control RCS pressure, (4) control reactivity, and (5) remove decay heat via the RHR system will be maintained and validated per the performance of OST-1813. The surveillance requirements of Technical Specification 4.3.3.5.2 will be met via OST-1813.

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RAF 2005

Title: RAF-2005, Partial Turnover of Secondary Sampling Abandonment

Description:

This modification removes or abandons in place some of the original secondary sampling system equipment while maintaining the ability to obtain secondary grab samples at the primary sample sink. This maintains existing sampling capabilities and does not introduce new sources of leakage.

Safety Summary:

The original secondary sampling system was designed and installed as a non-safety and non-seismic system. The system was not considered or used in any FSAR event analysis. The capability to obtain steam generator samples under post accident loss of off site power conditions is retained. This capability is not required for any accident analysis and the sample lines involved are non-safety and non-seismic. This modification has no adverse plant safety impact.

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RAF 2007

Title: PCR-7236, CVCS Flow Diagram Tag Number Correction

Description:

This correction to 2165-G-804 will properly identify the flow diagram tag number on the valve and correct EDBS so that the tag, EDBS screen, and drawing are consistent.

Safety Summary:

This is an editorial change to the FSAR and plant drawings. No safety concern is associated with this drawing change.

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RAF 2008

Title: ESR 9400003, Revise Title Blocks on Drawings for Condensate System

Description:

This document change revises the title blocks of CWD 2166-B-401 Sheets 2642 AND 2612; 2166-B-430, Sheets 31.84B and 31.84C; 2166-S-4093. These were not changed when PCR 960 was approved and implemented.

Safety Summary:

The change updates design documents that were not updated correctly during the modification.
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RAF 2009

Title: PCR 6380 Condensate and Air Evacuation Flow Diagram Correction

Description:

Flow diagrams were corrected to show proper orientation pressure controller PC-8930 and an associated relief valve.

Safety Summary:

This drawing change corrected the relative location of instrumentation in a non-safety system. This drawing change has no safety significance.

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RAF 2010

Title: PCR 5862 Fire Protection System Flow Diagram Correction

Description:

Drawing 2165-G-055, 2165-S-555, and 2165-S-985 are revised to correct valve symbols.

Safety Summary:

These drafting and editorial corrections have no safety significance.

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RAF 2011

Title: PCR-6641, Relocation of Rinse Water Introduction to Liquid Release Flow Paths

Functional Summary:

This modification installs throttling valves for controlling demineralized water flow on the 3/4" and 1" lines downstream of the Radwaste Q boundary valves. This modification also re-routes the line 7WL3/4-394-1-4 which is inside the Radwaste Q boundary.

Safety Summary:

Jumpers are permitted in the procedures for the releases involving the Laundry and Hot Shower Tank, Waste Monitor Tank, or the Secondary Waste Sample Tank. This is necessary to permit the forward flushing of fluid to the floor drain to remove trapped fluid from the previous release. After a release from the tanks to the Cooling Tower Blowdown, demineralized water is used to flush the release line. The manual valves give better control than the on/off air operated valves used presently. The flush flow cannot exceed the permit release rates. These changes enhance system operation. The additional valves permit finer flow control. The jumpers reduce system setup time. No changes affect any safety related equipment. No new accident scenarios are introduced. Three FSAR figures require revision due to updated flow diagrams. These figures are 11.2.2-08 sh.01, 11.2.2-04 sh.02, and 11.2.2-05.

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RAF 2013

Title: ESR 94-00290, Revise ESWS Flow Diagram to reflect the current alignment

Functional Summary:

The valve alignment was changed to prevent the cross-connection of the "A", and "B" trains of ESWS due to the failure of 1SW-270 to open on an ESW actuation. The opposite train inlet and outlet isolation valves to the CSIP coolers being closed eliminates the possibility to cross-connect trains.

Safety Summary:

The Emergency Service Water system is an accident mitigating system. The changes evaluated by this ESR ensure no cross-connection of trains and prevents violation of the single failure criterion. Closing the cross-connecting valves reduces the consequences of failure of 1SW-270. This change ensures the Technical Specification 3.7.4 (which requires two independent ESW loops be operable) is not violated due to cross connection of the trains. Margin of safety is not reduced.

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RAF 2015

Title: ESR 95-00115, Potable Water System Flow Diagram Correction

Description:

This correction involved the addition of a manual isolation valve to the flow diagram of a potable water supply line to an emergency shower and eyewash station. No field work was required as a result of this modification.

Safety Summary:

While this change involves a change to the FSAR, it does not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, does not increase the probability of consequences of a malfunction of equipment important to safety, does not create the possibility of a new or different type of accident or equipment malfunction, and does not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2016

Title: ESR 94-00129, Deletion of Test Instrument Tag Numbers

Description:

This correction involved the updating of system flow diagrams to match the actual plant configuration. Specifically, this correction deletes from the flow diagrams seven test instrument tag numbers for test instruments which are not installed in the Component Cooling Water System and Heater Drain and Vent Systems flow in these plant systems. In addition, the flow diagram for the Main Steam System was corrected to reflect the existence of three additional test connections.

Safety Summary:

While this change involves a revision to the FSAR, it does not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, does not increase the probability of consequences of a malfunction of equipment important to safety, does not create the possibility of a new or different type of accident or equipment malfunction, and does not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2017

Title: PCR-6414, Unit 2 Fuel Pool Piping

Description:

This modification involved capping the Unit 2 fuel pool piping so that the Unit 2 fuel pools could be filled with water. The piping used is non nuclear safety Seismic design and this modification maintains this design. This modification involved no new supports but did require modification of two existing supports.

Safety Summary:

This modification completes the Unit 2 piping only to the extent of completing a seismically designed pressure boundary. The piping does not provide cooling to the Unit 2 fuel pools, therefore, spent fuel is not allowed in either of the Unit 2 fuel pools. Since not spent fuel is stored in the Unit 2 fuel pools, the spectrum of spent fuel accidents currently evaluated in the FSAR is not affected.

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RAF 2018

Title: ESR 95-00095, CSAT Nitrogen Cover Gas Pressure Drift

Description:

This modification involved replacing the nitrogen pressure regulator on the Containment Spray Additive Tank with a regulator capable of controlling pressure at 1.5 psig.

Safety Summary:

This modification replaces the previous pressure regulator with a regulator with increased controllability at the established setpoint of 1.5 psig. The function provided by this regulator has not changed. The nitrogen prevents long term degradation of the CSAT solution. The replacement regulator valve operates the same as the previous regulator and serves no safety related function.

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RAF 2019

Title: ESR 94-00540, PASS Chiller Service Water Isolation Valves

Description:

This ESR evaluates allowable valve configuration for Emergency Service Water supply to the non-safety related Post Accident Sample System Chiller. The evaluation determined that the supply and return valves from one train may be maintained open provided the opposite train supply and return valves are closed.

Safety Summary:

This evaluation determined that leaving one train of supply and return valves open was acceptable based on potential effects of a pipe break, both loss of flow and flooding, as well as potential physical impact of the pipe break. The potential lost flow is not sufficient to cause inadequate cooling to downstream ESW components or to cause flooding that will impact safety related equipment. ESW is a moderate energy system and the potential impact of pipe whip is not postulated.

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RAF 2021

Title: ESR 95-00837, RAB Equipment Drains Ventilation to RABEES

Description:

This modification installs two connections between the Radioactive Equipment Drains System (REDS) and the Reactor Auxiliary Building Emergency Exhaust System (RABEES). These connections allow the REDS to be vented to the RABEES during accident conditions to mitigate the consequences of postulated leakage from valve stem leakoffs and equipment drains during ECCS recirculation following an accident.

Safety Summary:

Neither the RABEES nor the REDS are accident initiating systems and neither support the operation of equipment important to safety. The RABEES is designed to mitigate the consequences of a LOCA by providing an encapsulating environment to selected areas outside of containment which would effectively filter and contain 95% of the radioiodine that would be released through postulated leakage from ECCS recirculation systems. The leakage from ECCS valve stem leakoff into REDS is considered part of the leakage requiring encapsulation. This leakage has not previously been vented to RABEES. The addition of REDS to the RABEES envelope is merely an extension of the definition of the area encompassed in the RABEES boundary area.

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RAF 2022

Title: ESR 94-00502, RCP Hatch Cover Replacement

Description:

This modification replaces the concrete reactor coolant pump hatch covers with steel grating and a support system for the grating. The hatch covers are installed in the elevation 286.00' operating deck during refueling activities and are stored at a designated location on the operating deck during power operations to ensure proper ventilation flow and compartment venting. A 13 foot section of the manipulator crane rail is attached to a steel support beam to span the 1C RCP hatch cover opening. This replacement reduces dose and demand on the polar crane during outages.

Safety Summary:

The steel grating and manipulator crane rail/support beam have been evaluated for all postulated loads and load combinations, including seismic, and found acceptable. Movement of the existing concrete hatch covers used the existing safe load paths. This modification enhances the structure by reducing the number of heavy lifts during a refueling outage.

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RAF 2025

Title: ESR 95-0086, RAB Emergency Exhaust System Temperature Element Relocation

Description:

This modification relocates the temperature element providing indication and control of the RABEES electric heating coils inlet temperature. The temperature element is relocated upstream of the demister and opposite train bleed air inlet. The new location reflects a more true inlet temperature during RABEES filtration unit operation. NOTE: Only Train B has been relocated at this time.

Safety Summary:

The RABEES is an accident mitigation system. Its design basis function is to limit post-accident radiological releases from potentially contaminated RAB areas. The electric heating coil operates when its respective filtration unit fan is operating, and the temperature of the opposite train bleed air is not relevant to its operation. The EHC is sized conservatively for 100% relative humidity at the filtration unit inlet; a demister is provided as an additional conservative measure. The RABEES and EHC design basis is maintained upon relocation of the temperature element upstream of the demister and bleed air inlet. Separation criteria is not violated, seismic qualification is unaffected, and RABEES single failure analysis is not affected by this modification.

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RAF 2026

Title: RAF 2026, Area Temperature Monitoring

Description:

Area Temperature Monitoring requirements have been removed from the Technical Specifications and are now described in the FSAR. An area temperature monitoring program is in place to ensure that normal operating temperature limits are not exceeded and safety-related equipment is not subjected to temperatures in excess of their environmental qualification temperatures. This program is implemented in accordance with site procedure PLP-114, "Relocated Technical Specifications and Design Basis Requirements."

Safety Summary:

The NRC's Final Policy Statement on Technical Specification (TS) Improvements (58 FR 39132) dated July 22, 1993 allows TS which do not meet any of the screening criteria for retention to be removed from TS and relocated to licensee-controlled documents. Area temperature monitoring was reviewed by the Westinghouse Owners Group, NRC and CP&L as meeting the criteria for relocation. This change does not involve any modifications to plant equipment or operation of the plant. The actual requirements are not being changed, only relocated. Future changes to the program will be made under the 10CFR50.59 process.

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RAF 2029

Title: PCR 5534, ESCWS Makeup Source

Description:

This modification replaces the Essential Services Chilled Water System (ESCWS) fire protection water makeup source with demineralized water. The demineralized water prevents the introduction of sediment into ESCWS which improves system operation.

Safety Summary:

Replacement of fire protection water with demineralized water for the makeup source to ESCWS improves the normal operation of this safety-related system by minimizing ESCWS corrosion and deposition. This modification does not affect the ESCWS operation during an accident condition because the demineralized water system is assumed to fail as was the fire protection water system, at which time makeup water to the ESCWS is provided by the emergency service water system. This modification requires no physical work to be performed to the valves except to replace the control switch nameplates. The emergency service water makeup to ESCWS function during an emergency is not affected by this modification.

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RAF 2030

Title: ESR 95-00161, ERFIS Terminal Upgrade

Description:

This modification replaces the existing ERFIS display terminals and hardcopy units with Satellite Display Station (SDS) terminals with color printers. In addition, a new terminal is installed inside the reactivity computer cabinet, and a dial-in modem is added to ERFIS to be used as a remote terminal. Associated cables and equipment are replaced to facilitate design. As a result, the combustible loading in Cable Spreading Room A has increased slightly.

Safety Summary:

This modification has no effect on any accident initiating or mitigating systems. This modification involves replacing components in the ERFIS computer system. The ERFIS computer system is a highly reliable non-safety computer system. The ERFIS system does interface with safety related systems ; but it is isolated from those systems by safety related mux cabinets. No new system interaction is introduced. The new configuration has been evaluated to ensure proper seismic qualification. The electrical loading of the new equipment configuration is equal to or less than the designed load of the cabinets in which the equipment is contained. Although the replacement cables are not qualified to IEEE 323 or IEEE 383, they are plenum cables meeting the UL 910 flame test.

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RAF 2031

Title: RAF 2031, Fire Brigade Staging Area

Description:

The location of the Fire Brigade Staging Area is no longer 261' Turbine Building. This location may move based on Fire Brigade composition. Fire fighting apparatus including self-contained breathing apparatus are still maintained at a central location; however, the designated location is no longer specified in the FSAR.

Safety Summary:

FSAR analyses do not rely on the mitigation of any accident through the efforts of manual suppression activities of the Fire Brigade. Therefore, this change has no impact on the consequences of accidents or equipment malfunctions as evaluated in the FSAR. This change allows moving the staging area to facilitate effective Fire Brigade response, while maintaining the same response capability and the requirement to have equipment at a central location.

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RAF 2032

Title: RAF 2032, Fire Protection Hazards Analysis

Description:

Various editorial corrections, such as inconsistencies and typographical errors, as well as administrative clarifications are being made to the Fire Protection hazards analysis in the FSAR.

Safety Summary:

These changes are editorial in nature and better clarify intent.

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RAF 2033

Title: ESR 94-00004, Containment Penetration Conductor Overcurrent Protection Devices
ESR 94-00072

Description:

This change supports an electrical calculation which documents that the primary and back-up (secondary) protection for the containment penetration conductors conforms to the requirements of IEEE 3317-1976/Reg. Guide 1.63 as described in the SAR. These changes correct design discrepancies/drawing changes and do not involve physically changing any of the components, with the exception of motor control center compartment relabeling. Test margins/values are refined to ensure that the protective device will operate/function within analyzed margins.

Safety Summary:

This change does not introduce any factors that degrade the performance of the containment penetration conductors protection devices. The primary and backup overcurrent protection meets the testing and independence requirements as described in the FSAR and provides the protection as required by the Technical Specifications and FSAR. Including the test margins/values in the plant procedures as determined by the analysis ensures that the proper surveillance testing is being performed and thereby reduces equipment malfunction.

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RAF 2034

Title: RAF 2034, Performance Evaluation Organizational Change

Description:

An organizational change has combined the former Performance Evaluation Section into the Performance Evaluation and Regulatory Affairs Section. The Performance Evaluation assessment function is now contained in the Performance Evaluation Support Unit (PES).

Safety Summary:

This change combined two corporate organizations under a common manager. This change will not create new accidents, increase the consequences or probability of existing accidents, or decrease the margin in the bases of the Technical Specifications. The Performance Evaluation Unit functions or responsibilities are unaffected by this change.

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Title: RAFs 2035 & 2049, Cycle 7 Operations

Description:

The Cycle 7 Reload Analysis was reviewed against the acceptance criteria for the FSAR Chapter 15 analyzed accidents. The predominate change was the Small Break Loss of Coolant Accident (SBLOCA) described in FSAR Section 15.6.5. Other changes included updates to various other FSAR sections to ensure consistency with the information presented in Chapter 15.

The SBLOCA, which was previously performed using Westinghouse methodology, has been reanalyzed using Siemens' methodology in support of Cycle 7 operation. The SBLOCA break spectrum calculations were performed for break diameters of 2.0, 3.0, and 4.0 inches in one of the cold legs of the reactor coolant system. The results show the 3-inch break to be the limiting break because it resulted in a slow rate of depressurization to the accumulator pressure, exposing the core for a long period of time, and causing the most severe fuel heatup. The analysis supports full power operation of the Harris Nuclear Plant at 2830.5 MWt (2775 MWt plus 2% uncertainty) with a steam generator tube plugging level of up to 15.0%.

Safety Summary:

A new SBLOCA analysis has been performed based on Siemens' methodology. The limiting break size remains at 3 inches. The change in methodology increased the available peak clad temperature margin from 1 degree F to 246.7 degrees F. The remaining Emergency Core Cooling System (ECCS) acceptance criteria fall within the acceptance criteria established in the HNP licensing basis as described below:

<u>Acceptance Criteria</u>	<u>Analysis of Record</u>	<u>Cycle 7 Results</u>
• Peak Clad Temperature < 2200 degrees F	2199	1953.3
• Zirc water reaction consumes < 1% of core zirc	<1%	<1%
• Localized clad oxidation < 17% of clad thickness	9.9%	6.7%
• Coolable geometry is maintained	Maintained	Maintained
• Long term cooling can be maintained	Maintained	Maintained



RAF 2041

Title: ESR 95-00534, DC Power

Description:

This modification provides revised battery calculations, including a Loss of Coolant Accident/Loss of Offsite Power (LOCA/LOOP) and Station Blackout (SBO) load profile for each safety battery. The load information was used to determine the battery cell sizing requirements, battery terminal voltage, and DC panel voltages for the Class 1E batteries and the Class non-1E 125V DC battery. Furthermore, since Regulatory Guide 1.70 only requires the FSAR to include information on the non-safety DC power systems pertaining to the safety related DC power systems, information not meeting the RG 1.70 requirements is removed from the FSAR.

Safety Summary:

This is a document change modification. No physical changes are occurring to the plant. The revised calculations verify that the 125V DC safety and non-safety batteries have sufficient capacity and voltage margin to perform their design function. There is no impact on accidents or malfunction of equipment important to safety.

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RAF 2042

Title: ESR 95-00492, Containment Temperature Evaluation

Description:

In response to NRC Information notice 87-65, an analysis was performed to evaluate the temperature distribution inside containment when the indicated temperature is at the Technical Specification limit of 120 degrees F. That calculation concluded that the containment temperature is normally horizontally stratified, and under worst case conditions, would result in an average temperature of 135 degrees F if thoroughly mixed. As such, 135 degrees F was used as the initial temperature in the analysis of the Loss of Coolant Accident (LOCA) and Main Steamline Break (MSLB) events.

Safety Summary:

The limiting MSLB and LOCA scenarios were reanalyzed to determine the impact of the change in initial conditions on the containment temperature and pressure responses. These analyses have shown that the resulting peak values remain within the accident acceptance criteria. The only accident that credits the containment for mitigating offsite dose is a LOCA. LOCA peak pressure calculated using an initial temperature of 135 degrees F is 37.6 psig, which is less than the 41 psig associated with the Technical Specification leak rate limit; therefore, there is no resulting increase in accident consequences. In addition, the maximum pressure following a MSLB remained below the containment design pressure of 45 psig, ensuring that containment integrity will be maintained. Also, the horizontally stratified temperatures during normal operation have been evaluated for the impact on long term equipment qualification, instrument uncertainty, motor torque, cable ampacity, and structural integrity of concrete. These reviews have concluded that there would be no adverse impact on equipment operation. The margin to safety as defined in the Technical Specifications is not reduced.

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RAF 2043

Title: OST-1830/1831 Rev.4, Turbine Driven AFW Pump Discharge Isolation Methodology

Description:

This change allows use of the turbine driven AFW pump motor isolation valves to isolate flow to A, B, and C steam generators for TDAFW pump testing.

Safety Summary:

The AFW system is not a part of the initiation of any analyzed accidents. The automatic signal to these valves is an automatic isolation signal. This change will not impact the ability of that isolation feature since using these valves for isolation purposes would result in the valves being already shut if an AFW isolation signal were to occur. Also, the use of these valves will only isolate one AFW (turbine) pump from the steam generators. Isolation of feedwater flow to a SG and failure to restore isolation valves to the proper position following testing have been analyzed in the FSAR. The consequences of this situation are not changed by which valves are used to isolate the SGs from the TDAFW pump.

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RAF 2044

Title: RAF 2044, Tank Area Drain Transfer Pump Radiation Monitor

Description:

This change is to reclassify the tank area drain transfer pump radiation monitor as "providing alarm and stop signal to the discharge pump" rather than "providing automatic termination of release." The FSAR previously stated that the flow is halted by automatic shutoff of the pump. This change results in a stop signal being sent to the discharge pump upon high alarm. However, it is possible to have some flow through the system even after the discharge pump is turned off due to gravity drain effects.

Safety Summary:

The change affects only the tank area drain system. In the event of an RWST rupture, this change could potentially cause a small amount of RWST water to be released to the storm drain system (and subsequently to nearby surface waters) before the release is fully terminated. This is due to the fact that part of the release termination is manual instead of automatic. However, the consequences of this occurrence are entirely bounded by the existing analysis which assumes the entire contents of the RWST is discharged to the Harris reservoir.

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RAF 2045

Title: RAF 2045, License Amendment #58, RETS Relocation to ODCM

Description:

This change implemented the relocation of the effluent specifications from the SHNPP Technical Specifications to the Offsite Dose Calculation Manual (ODCM) and changed the reporting periodicity for the Effluent Release report from semi-annual to annual. Both of these changes were in accordance with Amendment 58 to the SHNPP Operating License. Also, an additional off-site sampling point was added in the Radiological Environmental Monitoring Program.

Safety Summary:

The ODCM is a program to control the release of radioactive effluents to the environment to ensure compliance with regulatory limits. The changes to the ODCM do not change the effluent mix, quantity of effluents released, or the methodology used to monitor and control radiological effluent releases. Nor do these changes impact the calculation, assumptions, or setpoints used to determine dose. These changes do not affect the probability of occurrence or the consequences of any analyzed accident. No equipment important to safety is affected, nor is any possibility of different type of accident or equipment malfunction created. These changes do not reduce the margin of safety defined in the Bases of the Technical Specifications..

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RAF 2046

Title: RAF 2046, Combustibility of Building Materials

Description:

This change is to clarify the licensing basis as provided by Safety Evaluation Report NUREG-1038 for the combustibility of building materials.

Safety Summary:

The licensing basis for building materials is as evaluated by the SER, NUREG-1038, and as utilized in plant material specifications. Therefore, the accident consequences and malfunction of equipment important to safety is not increased.

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RAF 2048

Title: ESR 95-01070, HVAC Calculation Revisions

Description:

A revision is required to FSAR Figure 9.2.8-2, Essential Services Chilled Water Chillers, Flow Rates and Miscellaneous Details, to reflect various HVAC calculational revisions.

Safety Summary:

Neither safety-related HVAC or Essential Services Chilled Water are accident initiating systems. As a result of these revisions, no new system interactions or failure modes have been created and no new system interactions or failure mechanisms have been introduced. The safety-related HVAC and Essential Services Chilled Water systems will continue to remain capable of removing the post-LOCA design heat loads. While this change requires a revision to the FSAR description, it in no way increases the probability or consequences of an accident previously evaluated in the Safety Analysis Report, increases the probability or occurrence of a malfunction of equipment important to safety, creates the possibility of a different type of accident or a different type of equipment malfunction, or reduces a margin of safety as defined in the Technical Specifications.

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RAF 2050

Title: RAF 2050, Reactor Vessel Integrity, NRC Generic Letter 92-01, Revision 1; Supplement 1

Description:

As a result of CP&L's response to NRC Generic Letter 92-01, Revision 1, Supplement 1, changes to the FSAR are required. The "best estimate" chemistry contents (copper and nickel) are being revised for each of the reactor vessel beltline materials. There were also slight changes in the dropweight temperature and Upper Shelf Energy of the reactor vessel beltline circumferential weld material.

Safety Summary:

The reactor vessel pressure boundary is a mitigating component, and not an initiating mechanism. The chemistry and material property changes do not impact the ability of the reactor vessel to maintain its pressure boundary integrity as previously evaluated. The chemical and material property changes are mostly beneficial. The decrease in EOL Upper Shelf Energy for weld heat 5P6771 is relatively minor and remains above the required value that has been prescribed by the NRC to provide the necessary level of ductility assumes for reactor vessel integrity calculations. Since these changes do not adversely affect any reactor vessel evaluations, such as P-T limits, PTS, etc., implementation of the changes does not represent a reduction in the margin of safety as described in the Bases of the Technical Specifications.

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RAF 2051

Title: PCR 0031, Cooling Air for Digital Rod Position Indication Cabinet Inside Containment

Description:

This change provided a source of cooling air for the Digital Rod Position Indication Cabinet from the Containment Cooling System.

Safety Summary:

This change involved routing of cooling air ductwork to the cabinet and required a change to FSAR Figure 6.2.2-3. It did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2051

Title: PCR 1161, Containment Pre-Entry Purge Air Cleaning Unit Integrated Leak Rate Test Modification

Description:

This change provided a flow path for depressurizing Containment Pre-Entry Purge Air Cleaning Unit following an ILRT.

Safety Summary:

This change involved the addition of a removable pipe spool in the Containment Pre-Entry Purge system at containment penetration M-58, with a vent tap and isolation valve to allow for depressurizing the Containment Pre-Entry Purge Air Cleaning Unit. The addition of this depressurization flow path did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2051

Title: PCR 3429, Flow Measurement Capability for Spent Fuel Pool Cooling System

Description:

This change provided flow indicators on the discharge of Spent Fuel Pool Cooling Pumps 1A-SA and 1B-SB to allow for testing required by ASME Code Section 11.

Safety Summary:

This change involved the addition of flow indicators in the discharge of Spent Fuel Pool Cooling Pumps 1A-SA and 1B-SB to allow for testing required by ASME Code Section 11. It did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2051

Title: PCR 3642, Setpoint for the Condensate Make-up to the Condenser Vacuum Pump Pressure Control Valve, 1CE-148

Description:

This change revised a setpoint for the Condensate Make-up to the Condenser Vacuum Pump Pressure Control Valve, 1CE-148. This valve was arbitrarily set at 50 psig during initial system setup.

Safety Summary:

This change involved the development and implementation of a setpoint for the Condensate Make-up to the Condenser Vacuum Pump Pressure Control Valve, 1CE-148. A properly justified setpoint had not been previously developed. The development and incorporation of this setpoint will allow for proper system operation per system design. This change did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and does not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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Title: PCR 4688, Circulating Water System Flow Instrumentation

Description:

This change provided flow measurement instrumentation on the condenser outlet to allow determination of the Circulation Water System flow rate.

Safety Summary:

This change involved the installation of instrumentation at the condenser outlet to allow for Circulation Water System flow rate determination. These instruments will provide the ability to monitor system performance. Installation of these instruments did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2051

Title: PCR 4745, Spent Fuel Shipping Cask Handling Improvements

Description:

This change improved activities associated with handling the Spent Fuel Shipping Cask. This included construction and permanent installation of storage racks and tool boxes, which will reduce contamination and improve housekeeping.

Safety Summary:

This change involved the permanent installation of storage racks and tool boxes to reduce contamination and improve housekeeping while handling the Spent Fuel Shipping Cask. It did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2051

Title: PCR 5164, Component Cooling Water System Drawing Changes to Indicate Various Valves to be Locked Shut

Description:

This change revised Component Cooling Water System Drawings. The drawings did not accurately reflect the locked shut position of various CCW valves as required by the FSAR.

Safety Summary:

This change involved drawing changes and was administrative in nature only. It did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2051

Title: PCR 5503, Installation of a New Wet Secondary System Sample Panel on 240' Elevation of Turbine Building

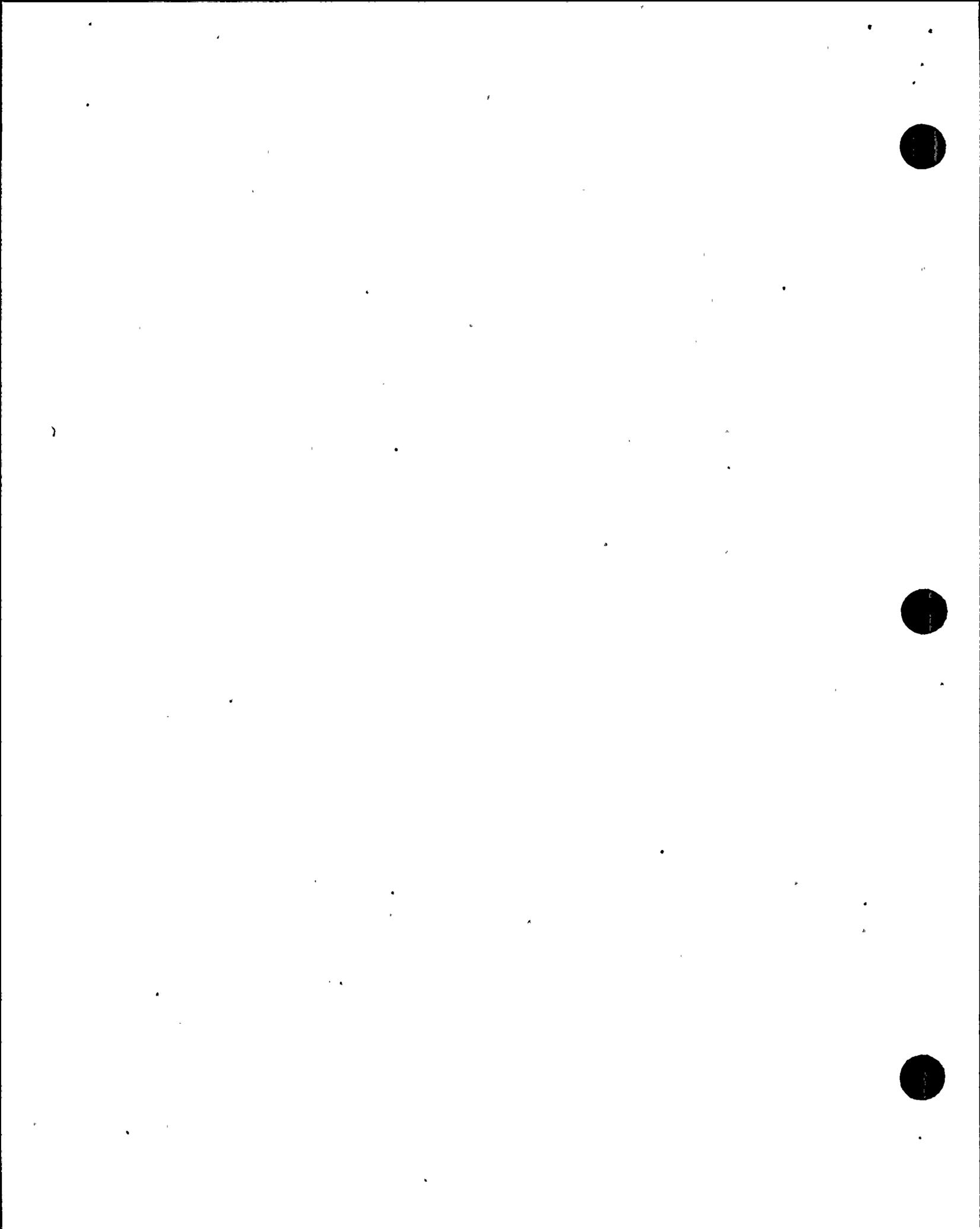
Description:

A new wet secondary system sample panel was installed on 240' elevation of Turbine Building. This replaced the existing, obsolete sample instrumentation and installed new equipment for monitoring secondary chemistry. Equipment for sample conditioning, various chemical analyses and sample reclamation was installed.

Safety Summary:

This change involved installing a new secondary sample panel and replacing the old, obsolete secondary system monitoring instrumentation. It did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2051

Title: PCR 6183, Drawing Changes for Radwaste System Valve Position Requirements

Description:

Numerous Radwaste System drawings were revised to remove the "locked" open or shut requirement.

Safety Summary:

This change involved drawing revisions. It did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2051

Title: PCR 7062, Fire Protection Program Drawing Changes

Description:

Numerous Fire Protection System drawing discrepancies were corrected.

Safety Summary:

This change involved drawing revisions only. It did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2051

Title: ESR 94-00139, High Head Safety Injection System Drawing Changes

Description:

ESR 94-00139 was generated to revise High Head Safety Injection drawings 2165-G-808 and S-1308 to accurately reflect plant system configuration. The location of the tie-in point between the high head injection line, after it has entered the containment structure, and the three hot leg injection lines has been revised.

Safety Summary:

This change involved drawing revisions and was administrative in nature only. It did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2051

Title: ESR 94-00182, Q-Class Determinations

Description:

Various plant drawings and documents were revised to accurately designate the correct Q-class category.

Safety Summary:

This change involved document revisions and was administrative in nature only. It did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

RAF 2051

Title: ESR 95-00162, Elimination of Faulty Seepage Monitor for the Harris Lake Main Dam

Description:

Faulty SM-3 Seepage Monitor were eliminated from the HNP Water Control Structure Inspection Program.

Safety Summary:

The elimination of this seepage monitor will not adversely affect the main dam's performance as a water control structure. This is based on the conservative design of the dam and other redundant water control monitoring capabilities. This change did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2051

Title: ESR 95-00367, Steam Generator Blowdown Valve and Piping Replacement

Description:

Steam Generator Blowdown Flow Control Valves 1BD-18, 1BD-37, and 1BD-56 and Bypass Valves 1BD-14, 1BD-33 & 1BD-52 were replaced with valves of a different seat and disk material to better withstand the effects of erosion and corrosion associated with the Steam Generator Blowdown System. In addition to replacing these valves, the piping adjacent to these valves will be replaced with a low alloy steel material that is more erosion resistant.

Safety Summary:

This ESR provided justification for replacing Steam Generator Blowdown valves and piping to reduce the effects of erosion and coronion.. This change did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2052

Title: ESR 95-0707, FSAR Changes Resulting from the 1994 Service Water Operational Performance Investigation (SWOPI)

Description:

This engineering evaluation incorporates into the FSAR updated design calculations relative to the Emergency Service Water System (ESW), the Essential Services Chilled Water System (ESCW), and the Component Cooling Water System (CCW) as a result of the SWOPI. These changes include:

- An expanded single failure analysis for the Service Water System and reference to the design calculation,
- Revised meteorological conditions used as inputs to the analysis supporting the availability of a 30-day cooling water supply,
- Re-analyzed required minimum cooling flow to ESW components such as the Charging/Safety Injection Pumps, CCW heat exchangers, and the Emergency Diesel Generators, and
- Reanalysis of the maximum service water inlet temperature (Ultimate Heat Sink).

The reanalysis of the Ultimate Heat Sink resulted in an increase in the maximum predicted service water inlet temperature from 91.5°F to 94.2°F based upon conservative assumptions regarding reservoir evaporation and heat input. The UHS reanalysis has also demonstrated availability of a 30-day cooling water supply as required by Technical Specification and Regulatory Guide 1.27.

Safety Summary:

None of the changes have an adverse impact on the operation of accident initiating or mitigating systems, therefore there is no impact on either the probability or consequences of analyzed accidents. No new or unanalyzed accidents are possible since no new component or system interactions have been created by this evaluation so. The analyzed design limits (minimum service water flows) for various ESW components have been reduced; however, these components will continue to operate within their respective design limits such that the probability or consequences of equipment failure previously evaluated will not be increased. In addition, no new or unanalyzed equipment failures would result because no new component or system interactions have been created. Changes were made in the required minimum ESW flows to several components such as the CCW heat exchanger, the Emergency Diesel Generator Jacket Water Cooler, the CSIP Coolers, and the Containment Fan Coolers. The reductions in required flow are based on calculations showing that these components will continue to remove their design-basis accident heat loads, which have not changed as a result of this evaluation. Since the heat removal capability defines the safety function and operation of these systems, there is therefore no change in the margin of safety of these systems and components as a result of the change in minimum flow requirements.

The Ultimate Heat Sink maximum service water inlet temperature was reanalyzed based on worst-case meteorological conditions. This reanalysis resulted in an increase in maximum predicted preaccident reservoir temperature from 91.5° F to 94.2°F. Although the maximum predicted temperature was increased to 94°F, the ultimate heat sink can still provide adequate heat removal

during any design basis accident. The heat rejection from a LOCA will cause the auxiliary reservoir temperature to increase to a maximum of 95.12°F after 30 days. Although this is slightly above the ESW design basis temperature of 95°F, it is considered acceptable because the reservoir analysis did not account for thermal stratification.

Administrative controls have been placed in operation procedures should the reservoir's temperature/level combination place the system in a condition where it could not perform its safety function. A license amendment request will be processed to lower the maximum UHS temperature in accordance with these new calculations.

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RAF 2053

Title: RAF 2053, Current Equipment Identifications

Description:

This is an editorial change to FSAR Table 7.3.1-7 to correct various valve numbers, actuation channels, drawing references, and to delete a manual valve from the Table. The Table is revised to match actual plant configuration.

Safety Summary:

These changes do not involve any physical plant changes to equipment important to safety. While this change requires a revision to the FSAR description, it does not increase the probability or consequences of an accident previously evaluated in the Safety Analysis Report, increase the probability or occurrence of a malfunction of equipment important to safety, or create the possibility of a different type of accident or a different type of equipment malfunction, or reduce the margin of safety as defined in the Technical Specifications.

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RAF 2055

Title: RAF 2055, Hydrogen Analyzer Containment Isolation Valves Position

Description:

This change involves having the containment isolation valves for the B Train hydrogen analyzer shut during normal operation. This eliminates the affected penetration as a potential containment leakage path. The containment isolation valves for the A Train hydrogen analyzer remain normally open. Both trains will fail shut on a loss of electrical power.

Safety Summary:

The hydrogen analyzer is maintained in the standby mode. In an accident situation, the containment isolation valves are automatically shut and then manually opened for containment hydrogen monitoring. These valves still have the capability to be opened during an accident; therefore, the analyzer can still perform its intended function. In addition, the valves being normally shut eliminates a failure mechanism for containment isolation. This change does not impact accidents or equipment malfunctions analyzed in the SAR.

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RAF 2058

Title: RAF 2058, Inservice Inspection Code Case Acceptability

Description:

This change incorporates a reference to Regulatory Guide 1.147, Inservice Inspection Code Case Acceptability -- ASME Section XI Division 1, in the FSAR to acknowledge use of Code Cases generically approved for use by the NRC. This change also includes the approval of Code Case N-416-1 specifically for use at Harris. Code Case N-416-1, Alternate Pressure Test Requirement for Welded Class 1, 2, and 3, Section XI, Division 1, was approved for use at Harris by the NRC by letter dated November 29, 1995.

Safety Summary:

10CFR50.55(a)(g) states that ASME Code cases that have been determined suitable for use by the Commission staff are listed in Regulatory Guide 1.147, Inservice Inspection Code Case Acceptability -- ASME Section XI Division 1. It further states that the use of other Code cases may be authorized by the Director of the Office of Nuclear Reactor Regulation upon request. By letter and Safety Evaluation dated November 29, 1995, the NRC approved Code Case N416-1 as an alternate to the required hydrostatic pressure test for use at Harris.

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RAF 2059
RAF 2069

Title: ESR 95-00941, Feedwater Isolation Time Acceptance Criteria

Description:

This change is to allow the main feedwater isolation valve to exceed its eight second isolation time as long as the corresponding Engineered Safety Features Response Time (ESFRT) meets the ten second requirement. The ESFRT is the time interval from when the monitored parameter exceeds its ESF Actuation Setpoint at the channel sensor until the ESF equipment is capable of performing its safety function. The ESFRT for the feedwater isolation valves is ten seconds as identified in PLP-106, "Technical Specification Equipment List Program and Core Operating Limits Report." The eight second isolation time is the equipment portion of the ESFRT, which combined with the two second signal processing time yields the ten second ESFRT.

Safety Summary:

Neither the ESFRT nor the component response time is associated with accident initiation or causing an equipment malfunction. The total response time (or ESFRT) of 10 seconds is the parameter used in the safety analyses. The ESFRT has not changed, and it is the basis for determining accident mitigation effectiveness. Therefore, as long as the equipment meets its ESFRT, it will perform its safety function as analyzed and will not increase the consequences of accidents or equipment malfunctions. This activity is consistent with the Technical Specification bases.

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RAF 2060

Title: License Amendment #53, TDI Standby Diesel Generator

Description:

This is a change to the FSAR to describe the implementation and deletion of the previous TDI diesel generator license condition which required the performance of emergency diesel generator (EDG) component inspections at periodic intervals. After reviewing operational data and component inspection results, the TDI Owners Group submitted to the NRC comprehensive reports to justify relief from the license conditions imposed on licensees with TDI diesel generators. Subsequently, HNP submitted a license amendment request and supporting documentation for removal of the license condition. This request was granted by NRC on January 12, 1995 in License Amendment #53.

Safety Summary:

Failure of an EDG does not initiate an accident. The Emergency AC Power System is a mitigating system. Deletion of the TDI requirements as a license condition results in no changes in the configuration of the EDGs. The probability of occurrence of a malfunction does not increase, and the consequence of EDG failure remains unchanged. Harris will continue to perform EDG maintenance as recommended by the TDI Owners Group. The NRC approved deletion of this license condition by License Amendment #53 and associated safety evaluation dated January 12, 1995.

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RAF 2061

Title: RAF 2061, Independent Safety Engineering Group Description

Description:

This change to the TMI Appendix to the FSAR is to reflect an organizational change previously approved by the NRC. The Nuclear Assessment Section is now responsible for performance of the independent safety engineering group (ISEG) function.

Safety Summary:

This change defines the responsibility for the ISEG function as part of the Nuclear Assessment Section. The description of organizational staffing and function is contained in the Technical Specifications and the FSAR. This change does not impact the initiating factors or mitigating capability for any accident or equipment malfunction.

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RAF 2062

Title: RAF 2062, Generic Letter 89-10, Motor Operated Valve Program

Description:

In Generic Letter 89-10, the NRC required a program that ensures that Motor Operated Valve (MOV) switch settings are set and maintained such that they will operate under design basis conditions for the life of the plant. A program was developed at HNP to implement the requirements of the commitments to this Generic Letter. This change adds a section to the FSAR describing the NRC Generic Letter 89-10 commitments.

Safety Summary:

The implementation of the Generic Letter 89-10 program requires only design review and testing of MOVs. The function of the MOVs has not been changed. This program provides a higher confidence level of proper valve operation in response to a design basis event. This information does not change accidents or equipment malfunctions nor change the margins of safety previously analyzed. This program verifies that design margins for this equipment are maintained.

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RAF 2063

Title: ESR 94-00056, Single Failure Analysis of Essential Services Chilled Water System

Description:

This change documents a review of active single failure scenarios of the Essential Services Chilled Water System (ESCWS). This evaluation was performed in accordance with Generic Letter 89-13 requirements. A review of the consequences of all solenoid operated valves, air operated valves, electrohydraulic valves, pumps, electrical breakers, control instruments, and station air supply in the ESCWS failing was performed. The current configuration of the ESCWS was determined to be acceptable and the single failure criterion is met. This review was required by NRC Generic Letter 89-13.

Safety Summary:

This evaluation is a review of the single failure analysis of the ESCWS and does not change the operation of equipment. The ESCWS is not an initiating system, therefore the probability of an accident occurring is not increased. The ESWCS is a mitigating system and this review determined that the ESCWS is capable of withstanding any single failure. This evaluation ensures that the margin of safety described in the Technical Specifications are not violated.

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RAF 2064

Title: ESR 94-00057, Single Failure Analysis of Component Cooling Water System

Description:

This change is to document a review of active single failure scenarios of the Component Cooling Water System (CCWS). The CCWS was determined to be capable of withstanding any single failures. This review was required by NRC Generic Letter 89-13.

Safety Summary:

This evaluation is a review of the single failure analysis of the CCWS, and does not describe or approve any changes to the plant. The CCWS is not an initiating system, therefore the probability of an accident occurring is not increased. The CCWS is a mitigating system and this review determined that the CCWS is capable of withstanding any single failure. This evaluation ensures that the margin of safety described in the Technical Specifications are not violated.

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RAF 2066

Title: General Update to FSAR Chapter 12, Radiation Protection

Description:

These changes are necessary to bring Chapter 12 of the FSAR up to date with procedure revisions, changes in health physics equipment, and in some cases, with differences between the plant design and the "as-built" condition. Changes in the use of some facilities/equipment and several editorial corrections/clarifications are also included. None of these changes has a negative impact on compliance with the Operating License/Technical Specifications or on the integrity of fission product barriers. There is also no negative impact on the safety of plant personnel or the general public.

Safety Summary:

The facilities and procedures affected by this change are used for waste processing, dosimetry, respiratory protection, and other health physics activities. These facilities and procedures are not initiators of any accident or safety equipment malfunction, and these changes do not impede mitigation. The facility changes do not involve the relocation of any equipment to an area where safety equipment would be impacted. The procedure changes do not adversely impact the operation, inspection or maintenance of safety equipment. The removal of shielding will not increase the irradiation of safety equipment. Fission product barrier integrity is not impacted by this change.

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RAF 2067

Title: ESRs 94-00007 & 96-00104, 10CFR73 Land Vehicle Barrier

Description:

This modification is to meet the requirements of 10CFR73 which has been revised to require that the design basis threat for radiological sabotage include the use of a land vehicle. This modification is to install a vehicle barrier around the protected areas of the plant. The barrier is outside and generally in parallel with the protected area nuisance fence. Along the nuisance fence line, the barrier consists of a combination of restraining cable and cable posts or concrete filled steel bollards embedded in a concrete foundation. At gate locations providing access to the protected area, vehicle barrier gates are installed.

Safety Summary:

The vehicle barrier system is a non-safety related system. It is outside the protected area and does not interact or interface with any equipment important to safety or that could effect the consequences of an accident. The failure of the barrier in a seismic event will not result in the failure of any other safety related or seismically qualified equipment. The barrier structures are designed to withstand substantial loadings and it is not likely that any of the components of the barrier would represent a missile threat in the event of high winds or tornado. The vehicle barrier will not impede access to or from the plant in normal or emergency conditions.

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RAF 2068

Title: RAF 2068, Security Access Control

Description:

This is a change to the process used for identity verification of personnel prior to using a security badge and a change in the location of security badges. On December 20, 1994, the NRC issued CP&L an exemption from the requirements of 10CFR73.55(d) permitting the use of an alternate identity verification system and the removal of security badges/access control devices from the site by non-licensee personnel. A biometric system (hand geometry) is employed at the access entry point to verify identity of personnel who possess security badges affording unescorted access to the protected area.

Safety Summary:

Hand geometry is a biometric device which ensures that the holder of a photo ID badge/card reader card is an authorized individual. Based on the fact that the hand geometry system requires a match on the employee card reader card number and the template file of the authorized badge holder's hand, the degree of protection afforded is equivalent or better than the former methodology. This change does not impact, either directly or indirectly, any safety related systems, components, or equipment.

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RAF 2071

Title: PCR 6765, Ground Water Infiltration into Plant Buildings

Description:

Grounding cables in the Reactor Auxiliary building, elevation 190', have been affected by corrosion materials formed as a result of water seeping through the walls and floors. This modification provides new prevention and repair methods which utilize an injected material that is designed to reduce water in leakage through concrete and masonry materials. The new prevention and repair methods for concrete has been evaluated and determined to be acceptable. In addition, this modification provides for the use of jacketed (insulated) equipment grounding cables. The use of insulated cables will provide an effective barrier between the corrosive material and the actual grounding conductor; thereby preventing possible ground system failure without compromising the original design intent of the system.

Safety Summary:

The use of insulated cables as grounding conductors facilitates the prevention of possible ground system failure due to corrosion. Use of insulated grounding cables have no impact on accident initiation or mitigation. The increase in combustible material loadings due to the cable jacket material has been determined to be insignificant and does not impact post-fire safe shutdown capability or degrade the fire protection program. The use of concrete prevention and repair methods have been determined to not adversely impact the structural capabilities of seismic Category I buildings. Therefore, this modification did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 2072

Title: ESR 94-00020, Evaluation of Waste Processing Building Slab Loading

Description:

This Engineering Service Request evaluated the placement of lead shielding blanket storage boxes on the 236 foot elevation slab of the Waste Processing Building. The evaluation took into consideration the Structural impact of the weight as well as the impact of the additional combustible materials.

Safety Summary:

The evaluation concluded that the additional weight and combustible loadings were acceptable compared to the design values. Therefore, this evaluation did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF2073

Title: ESR- 95-00548, Operability Evaluation of Selected Service Water Cooled Components

Description:

This evaluation documents the operability of the "A" Emergency Diesel Generator jacket water cooler, Emergency Services Chilled Water chiller WC-2a, and ESW Intake Structure air handler unit AH-86 with reduced service water flow. This evaluation does impose an administrative limit on the low water level of the main reservoir. This limit ensures that the Service Water System can provide sufficient cooling capacity given a single failure. The administrative limit will remain in force until the Service water System is rebalanced or other measures taken that increases the flow to the components discussed above.

Safety Summary:

The ESW, Emergency Diesel Generator and ESCW are not accident initiating systems or components, and the evaluation determined that the components are capable of performing their design functions with the reduced cooling water flows. Therefore, the evaluation did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, nor did it increase the probability or consequences of a malfunction of equipment important to safety. No new system configurations or operation are introduced by this evaluation, no automatic functions changed or new equipment installed. Therefore, this evaluation did not create the possibility of a new or different type of accident or equipment malfunction. The components has been demonstrated, by analysis, to perform design function, therefore the margin of safety as defined in the Bases of the Technical Specifications was not reduced.

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Title: PCR 6465, ESWCS Chiller 1B-SB Differential Pressure Switch Troubleshooting

Description:

This temporary modification installed tie-in points with isolation valves on the high pressure and low pressure sides of the Compressor Oil Pressure Indicator Switch on the ESWCS Chiller 1B-SB. These valves provided test instrument tie-in points to troubleshoot low oil differential pressure trips occurring on the chiller.

Safety Summary:

The installation of the test connections and valves met the design, material and construction standards for the system. The test connections were to be used only while the Chiller was inoperable. The valves were located and designed to CP&L guidelines thereby ensuring that the tubing and support structural members adhere to acceptable standards for stresses and deflection. This modification did not increase the probability or consequences of an accident or malfunction of equipment important to safety, create the possibility of an accident or malfunction of a different type or reduce the margin of safety as defined in any Technical Specification Bases.

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Title: ESR 94-00010, Incore Nuclear Detector System - Temporary Modification
ESR 95-00034

Description:

The Incore Nuclear Detection System provides the ability to perform flux maps of the reactor core. The system provides five detector drive units, and 5-path and 10-path transfer devices to facilitate performing core flux maps. The E detector stuck at 24.6 inches inserted and prevents rotation of the 5-path and 10-path transfer devices. The temporary modification allows flux maps to be performed with the stuck E detector by defeating the interlock from the withdraw/insert limit switch, thereby allowing the use of the D detector in the E 10-path. This temporary modification was performed by each of the referenced ESRs.

Safety Summary:

The movable Flux Mapping System is non-safety related and operation of the drive units does not affect the accident mitigation capabilities of the plant. The withdraw/insert interlock prevents rotation of the 10-path transfer device to prevent damage to the detector cable or transfer motor when the transfer device is penetrated by the detector and cable. Since the detector is stuck at 24.6 inches, which is above the 10-path transfer device, the 10-path can rotate freely. Electrical movement of the E detector is prevented by the removal of control relay 6K15A. Therefore, this modification will allow rotation of the E 10-path transfer device without damage to the transfer motor or detector cable. This change does not result in an unreviewed safety question or a change to the Technical Specifications.

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Title: ESR 94-00012, Temporary Connection between Carbon-Dioxide Tanks

Description:

The "A" Carbon Dioxide Tank supplies the source of manual fire suppression to the Hydrogen Storage Vent Stack. During maintenance of the "A" tank, the fire suppression supply will be cross connected to the inservice "B" Carbon Dioxide Tank via a high pressure hose.

Safety Summary:

The Carbon Dioxide System is a non-safety, non-seismic, Q-class E system. It provides no safety related functions or accident mitigation functions. The Carbon Dioxide System is not addressed by the Technical Specifications and cannot affect any safety systems which could reduce the margin of safety as defined by the Bases of any Technical Specification. The function of the system is not being altered by this temporary modification, it only changes the source of fire suppression for the hydrogen vent stack.

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Title: ESR 94-00319, Temporary Power to the Sewage Lift Station Pumps

Description:

Temporary electric power was provided to Sewage Lift Stations #1 and #3 while normal power was unavailable due to a modification. Temporary power was from non-class 1E motor control centers. Shifting the load to the temporary source had no impact on the Auxiliary System Load Study.

Safety Summary:

Inadvertent adverse impact of an electrical fault was prevented by proper overcurrent protection and observation of separation criteria. The design of the AC electrical distribution system provides isolation of the non-1E AC electrical distribution system from the class 1E AC electrical distribution system. Therefore, this temporary modification did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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Title: ESR 94-00350, Reactor Coolant Pump Vibration Alarm Setpoint

Description:

The setpoints for the "B" Reactor Coolant Pump (RCP) frame vibration Alert-level alarm were changed from 3.0 mils to 3.5 ±0.1 mils. The alert alarm is used for monitoring and trending. The alert alarm is not used for any control or protection systems. Nuisance alarms were being received during plant mode changes or when high containment temperatures exist (during the summer months) when the "B" RCP cross-over leg is in contact with the vertical restraints due to thermal growth/movement of the RCS. Adjusting the Alert level effectively blocks the generation of spurious alarms during operating modes 1 and 2.

An analysis of the RCP vibration by Westinghouse Electro-Motor Division has concluded that the spurious vertical frame vibration that produces the alarm does not impact the operability or reliability of the RCP. The restraints were evaluated and determined to be acceptable with respect to the RCS piping.

Safety Summary:

The RCP Vibration Monitoring System is not safety related and serves no accident mitigation function. Increasing the alert vibration alarm setpoint is bounded by 1) additional alarm settings at higher vibration levels which would require an operator response, and 2) the FSAR Chapter 15 locked rotor and RCS partial flow analyses which bound any potential adverse consequences of the alert alarm setpoint change. The increased alert vibration setpoint does not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, does not increase the probability or consequences of a malfunction of equipment important to safety, does not create the possibility of a new or different type of accident or equipment malfunction, and does not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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Title: ESR 94-00501, Temporary Communication Connection at REM-3548

Description:

A temporary connection was installed in Loop 4 around REM-3548 to maintain the Radiation Monitoring System communication line operability while the monitor was being modified.

Safety Summary:

The Radiation Monitoring System is not an accident initiating system. No monitors on this loop are relied upon to mitigate Chapter 15 accidents. Installation of the temporary connection to maintain communication between monitors in Loop 4 of the RMS did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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Title: ESR 94-00530, Temporary Connection of Lube Oil Purifier A CBP VSFC

Description:

Following the plugging of a leaking tube in the "A" Condensate Booster Pump Variable Speed Fluid Coupling (VSFC) oil cooler the moisture content of the oil was slightly high. An oil purifier was temporarily connected to a lube oil drain line to filter/purify the VSFC lube oil and return it to the reservoir.

Safety Summary:

The purifier will not decrease the lube oil by a significant amount, approximately two and one-half gallons of the approximately one hundred gallons of lube oil. Use of the purifier will not alter the function of the non-safety related Condensate Booster Pump. The pump is not required for safe shutdown of the plant. Temporary connection of the oil purifier cannot increase the probability of occurrence of an accident or malfunction of equipment previously evaluated in the FSAR. The Condensate Booster Pump is not addressed in the Technical Specifications.

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Title: ESR 94-00537, RAB Floor Drain Transfer Tank Flush

Description:

This temporary modification installed a drain/flush connection at the existing pump suction strainer for the RAB Floor Drain Transfer Tank. This connection is needed to drain/flush the Floor drain Transfer Tank due to the accumulation of sludge. The Floor drain transfer pump suction strainer will be removed and the tank-side flange will be used to install an elbow and appropriate valves to allow draining of the tank to the A/B RAB Equipment Drain sump.

Safety Summary:

The Floor Drain System is a part of the liquid Radwaste System which is analyzed in Chapter 15 of the FSAR. The FSAR event is a seismic event which results in loss of the radwaste inventory. The Temporary modification is bounded by the Chapter 15 analysis. This modification does not affect the operation of equipment described in the FSAR, nor does it increase the likelihood of safety equipment failure. This temporary modification does not impact either the Offsite Dose Calculation Manual or the Bases for the Technical Specifications.

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Title: ESR 94-00571, EDG Starting Air Purge Flow Exhaust Valves

Description:

This modification removes two purge flow exhaust valves on each of the four Emergency Diesel Generator starting air compressor dryers. The valves removed were previously installed to allow testing of the regeneration flow rate. The installation of the specific type of valve used resulted in a reduction in the volumetric flow rate through the regenerating tower. Removal of these valves returned the dryer exhaust piping to the original configuration.

Safety Summary:

The affected portions of the starting air system are non-safety and non-seismic. The dryers do not perform any functions necessary for emergency operation. The modification did not affect the boundary between the air dryers and the seismic category 1, safety class 3 portion of the Air Starting System. Therefore, the modification did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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RAF 1932

Title: ESR 95-00039, AFW Valve Thermal Overload Bypass Circuits
ESR 95-00058

Description:

This modification installs wires in Motor Control Center (MCC) 1B31 to bypass Thermal Overload circuitry for the Auxiliary Feedwater (AFW) isolation valves 1AF-55, 1AF-74, and 1AF-93. This ensures the valves will operate as designed during an accident. This jumper or wire is a "means" of bypassing the Thermal Overload circuit per Technical Specification 3.8.4.2. Fourteen AWG wire is used which is the same size used in the MCC for control wiring.

Safety Summary:

The AFW isolation valves and their thermal overload features are not FSAR Chapter 15 initiators. These valves will continue to function as designed; the modification will not result increase the consequences of an accident or of a malfunction of equipment important to safety. Installing the wires creates no new failure mechanisms and will not create the possibility of a new type of accident. Further, this modification does not reduce the margin of safety for the AFW system.

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Title: ESR 95-00041, Eliminox Trial

Description:

This Temporary Modification installs a temporary sampler to support the testing of Carbohydrazide (Eliminox) to be utilized on a trial basis as a replacement for hydrazine as an oxygen scavenger in the secondary plant. An electrochemical potential probe and a redundant corrosion monitor will be installed at the pressure test connection located at the normal feedwater sample point. Baseline data will be collected using hydrazine prior to switching to carbohydrazide.

Safety Summary:

The installation of the sample rig is at a portion of Q class E piping in the Feedwater System. Sample rig components are constructed of materials rated for expected pressures and temperatures. Anticipated feedwater flowrates to the sampling system are less than 1 gpm so even in the case of sampler failure no plant transient would occur. The sampler system installed by this temporary modification has no impact on safe shutdown nor does it increase the risk of plant transient. This temporary modification introduces no common mode failure potentials.

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Title: ESR 95-00059, AH-4 Cooling Coil Repair/Plug

Description:

Containment Air Handling Unit AH-4 (1A&B-SB) had a leak in one of the cooling coils. Temporary Modification ESR 95-00059 Revision 0 provided multiple options for removing the leaking coil from service and an engineering evaluation that showed the containment fan cooler would be able to perform its safety function with the loss of capacity of one cooling coil. The initial analysis imposed a limit on the main reservoir of a minimum 217' lake level and a maximum temperature limit of 60°F on both the main and auxiliary reservoirs to ensure the continued operability of the safety related containment fan coolers. Re-analysis in Revision 1 of the ESR removed the reservoir level and temperature restrictions. The leaking tube was then plugged removing a tube in a cooling coil from service. The coil was subsequently replaced during RFO 6.

Safety Summary:

The ESR showed that Fan Cooler AH-4 would still perform its accident mitigation function with a cooling coil out of service thereby maintaining the design bases defined in the Technical Specifications. The safety related containment fan coolers are not an accident initiation source. The proposed methods for plugging the leaking tube was evaluated and determined to be acceptable methods for stopping the coil leak. Therefore the probability of occurrence and the consequences of accidents or equipment malfunction evaluated previously are unchanged. Given that the fan coolers would continue to perform their accident mitigation function and the tube plugging methodologies have been shown to be acceptable there would be no increase in the probability of occurrence or consequences of an accident analyzed in the FSAR or the creation of a new accident is not analyzed in the FSAR.

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Title: ESR 95-00103, Annunciator Systems

Description:

Annunciator alarms for one Auxiliary Feedwater System line temperature and the primary reactor support temperature were providing false indication by remaining in alarm condition or spuriously alarming due to a faulty input. This temporary modification defeated selected annunciator alarm inputs to eliminate control operator distractions and to prevent masking other valid alarms by any of the remaining sensors that feed those annunciators. The annunciator inputs temporarily removed were not required for nuclear safety and did not require compensatory actions to be taken.

Safety Summary:

The main control board annunciators are not safety related and not taken credit for as an accident mitigation system. The temporarily defeated annunciator inputs do not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, do not increase the probability or consequences of a malfunction of equipment important to safety, do not create the possibility of a new or different type of accident or equipment malfunction, and do not reduce the margin of safety as defined in the Bases of the Technical Specifications

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Title: ESR 95-00223, Temporary Power for 1B1 Bus Outage

Description:

This temporary modification provides temporary electric power to three pieces of equipment in support of two 480 volt bus 1B1 outages scheduled in March 1995. The Turbine Generator Turning Gear and the Turbine Generator Bearing Lift Oil Pump are powered as a contingency against having a turbine-generator trip during the bus outage (to prevent rotor sag). The Pressurizer PORV Isolation Valve 1RC-V527 SN-1 is powered to provide capability to open its associated vent path should it be needed. The power source for these temporary electrical hookups is non-class 1E motor control center 1E12. The impact of shifting these load to the temporary source has been analyzed, including consideration of loading constraints, voltage limits and available fault currents. The installation was determined to be within the design limits for the conditions specified in the procedure.

Safety Summary:

Inadvertent adverse impact of an electrical fault is prevented by proper overcurrent protection and observation of separation criteria in this temporary installation. The design of the A.C. electrical distribution system provides isolation of the non-1E A.C. electrical distribution system (the temporary power source) from the class 1E A.C. electrical distribution system. There are no credible mechanisms by which this installation could interfere with the proper functioning of structures, systems, or components important to safety.

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Title: ESR 95-00288, Float Charge 1B-SB Cell #20

Description:

This temporary modification allows a cell that has previously been jumpered out of the safety related 1B-SB Battery to be connected with jumpers to the permanently installed spare cell battery charger thereby allowing the float charging of Cell #20 while it is jumpered out of the battery. The non-safety related battery charger will at no time be connected to Battery 1B-SB. The temporary cables and fuses to be installed by this modification will perform no safety related function. The fuses provide overload and short circuit protection for the cables and will be separated from the safety related battery in accordance with site requirements for temporary cables. Issues related to potential impacts from seismic affects, charger loading, transient combustibles, and increased hydrogen production have been addressed in the temporary modification.

Safety Summary:

The failure of an entire train of DC power has previously been evaluated. This temporary modification will not adversely affect the 1B-SB battery or any other safety related equipment. Therefore, the probability of occurrence and the consequences of accidents or equipment malfunction evaluated previously are unchanged as a result of this temporary modification. The margin of safety as defined in the Bases of the Technical Specifications are not reduced.

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Title: ESR 95-00292, Temporary Modification for Rod Control Fan Damper

Description:

This temporary modification removed the low flow trip from control rod drive cooling fan E81-1A-NNS due to problems with low flow trips when started. The limit switch that provides power to the low flow interlock was taken out of the circuit by lifting one lead in ARP-17. This defeated the low flow trip and allow the fan to operate.

Safety Summary:

Removal of the low flow trip from E81-1A-NNS allowed the fan to be used in the event of failure of fans E80-1A-NNS, E80-1B-NNS, or E81-1B-NNS. The fan was shown to be flowing air at the time of the Temp Mod by a check of the fan running current. Both the Control Rod Drive Mechanisms (CRDM) Fans and the CRDM's themselves are non-safety and are not considered important to safety. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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Title: ESR 95-00428, Temporary Modification for Flanging Waste Gas Compressor B Relief Valve

Description:

This temp modification allowed installation of a blind flange at the discharge connection for 3WG-421 which is the relief valve for the B Waste Gas Compressor moisture separator when the system is under clearance.

Safety Summary:

The installation of this temporary modification provided a pressure boundary when the Waste Gas Compressor B is under clearance. The waste gas compressors are non-seismic, non-safety and as such the most important feature is the ability of the system to maintain its pressure boundary. The flange installed satisfies the requirements of the Q-class C program and is rated at 150 psig. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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Title: ESR 95-00518, Ultrasonic Feed Flow Transmitters Temporary Modification

Description:

This temporary modification attaches temporary performance cables from the ultrasonic feed flow transmitters installed in accordance with procedure EPT-601T to the Emergency Response Facility Information System (ERFIS) computer. These temporary transmitters, cables, and ERFIS points will be used to assess the current method of determining reactor power to ascertain whether or not the plant can increase it's electrical output.

Safety Summary:

This temporary modification will only effect the non-safety ERFIS Mux 54B in the turbine building and add new points to the ERFIS data base. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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Title: ESR 95-00530, Temporary Modification "B" Main Feed Water Regulating Valve (MFRV) to Record DP Across The Valve.

Description:

This temporary modification installed a differential pressure transmitter across "B" MFRV (1FW-249) with the pressure taps and a static pressure transmitter installed on floor drains upstream and downstream of 1FW-249. Also, a potentiometer will be placed on the operator with its output sent to a chart recorder to achieve valve stem position. This was done to determine whether the MFRV's may limit the End-of-Cycle #6 temperature coast down.

Safety Summary:

The instrumentation used has the same or higher temperature/pressure rating as that which is permanently installed in the feedwater piping. The potentiometer will be attached to the outside of the valve operator and will have no effect on the valves movement. Installation of this temporary modification will not adversely effect the ability of the MFRV to perform its function to shut under certain accident conditions. This change does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR. Thus, no unreviewed safety question exists.

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Title: ESR 95-00607, RCS Loop A Wide Range Hot Leg RTD

Description:

The RCS Loop A Wide Range Hot Leg RTD developed high lead resistance in one lead circuit causing the RCS Loop A Hot Leg Temperature to indicate approximately 31 degrees higher than expected. A temporary modification was needed to take the "B" lead out of service. The RTD has four lead circuits, but only 3 of the 4 are used by the RTD amplifier.

Safety Summary:

The RTD amplifier card uses only three of the four RTD leads to determine temperature. The fourth lead is a spare. The "B" lead currently in use was swapped with the "A" lead which was spared. The A and B leads are on the same side of the RTD and are electronically the same except that high lead resistance is not present on the A lead. This temporary modification caused the amplifier card to provide correct voltage output for the RTD input since RTD leads A, B, and C are approximately equal. This modification does not alter the design intent or design criteria, nor is channel operation affected. Cable separation is not affected, and Technical Specification values associated with the Low Temperature Overpressure Protection System remain in effect. Testing is specified which ensures proper operation of the affected channel. Therefore, this modification does not increase the probability or consequences of an accident or malfunction of equipment important to safety, and does not constitute an unreviewed safety question.

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Title: ESR 95-00653, Containment Cooling System

Description:

The temporary modification installed temporary ductwork at the exhaust of Containment Cooling fan AH-3 as it passes through elevation 286 (operating deck) in Containment. This temporary modification is necessary to change air flow direction on the operating deck in order to free up more laydown area in Containment. It is also needed to aid in loose article control, since the current duct work configuration has an exhaust register blowing across the operating deck.

Safety Summary:

This modification only applies during a refueling outage. Its use is restricted to Modes 5 and 6 only. Since the containment cooling system is only needed in Modes 1-4 to maintain average temperature and to remove heat associated with a LOCA or Main Steam Line Break (MSLB), the possibility of occurrence or the consequences of any FSAR Chapter 15 accident are not increased. Likewise, this temporary modification will not increase the probability of occurrence or the consequences of a malfunction of equipment important to safety. No equipment important to safety is being modified since this is a temporary modification. Also, this temporary modification does not result in a reduction in the margin of safety as defined in the basis of the Technical Specifications.

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Title: ESR 95-00697, Steam Generator Sample

Description:

The normal steam generator sample isolation valve for the C Steam Generator was inoperable. A temporary modification was necessary to install a temporary apparatus to allow the water from this steam generator to be sampled via the blowdown system through a temporary cooler.

Safety Summary:

This temporary modification does not increase the probability or consequences of any previously analyzed Chapter 15 accident. This temporary modification samples the blowdown flowpath from the steam generators via the blowdown containment isolation valves which lead to the sample point in the turbine building. Under accident conditions, these isolation valves would shut to isolate flow. This temporary modification does not affect the operation of any system described in the FSAR, and does not affect the operation of function of the blowdown system. The temporary equipment will be located in an area of the plant where no safety-related equipment is located. Further, use of the system will be limited to periods when no primary to secondary leaks exist.

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Title: ESR 95-00700, Bridge Crane Temporary Cool Room

Description:

During Refueling Outage No. 6, personnel were performing preventive maintenance and installing a modification on the Containment Bridge Crane. The temperature in Containment during this time was a personnel safety concern. Therefore, a temporary "cool room" was constructed on the cat walk below the Bridge Crane to provide relief from the heat.

Safety Summary:

The installation of this temporary modification was significant because of the plant modes in which it was used. Since the installation was in place during Modes 3-6, containment sump blockage was evaluated. The water soluble paper specified for the "cool room" ensured that it did not create the potential for sump blockage since it would disintegrate if subjected to a water spray. The tent frame was also reviewed to ensure it would not fall or damage safety-related equipment. The conduit which was used as framing material could not float, so it would not create sump blockage. The effects of containment spray were considered on the "cool room" materials. The items used in the installation were also reviewed to ensure that they could not fall or damage safety-related equipment. Thus, this temporary modification did not increase the probability of occurrence or consequences of an accident previously evaluated in the SAR, did not increase the probability of occurrence of consequences of a malfunction of equipment important to safety, did not create the possibility of an accident or a malfunction of equipment of a different type from any previously analyzed, and did not reduce the margin of safety as defined in the basis of any Technical Specification.

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Title: ESR 95-00800, Temporary Power for Chilled Water Circ Pump

Description:

Chilled Circ Water Pump P4 (1B-SB) for Chiller WC-2 (1B-SB) required a temporary power source to support refrigerant transfer while the 1B2 bus was down for approximately one week. The temporary power source was provided by removing the 1600A breaker from 1B2-SB and re-installing in a spare cubicle. Temporary power cables were then installed from the output of the new cubicle location to the pump motor cable 12634A-SB.

Safety Summary:

During the 1B2 bus outage, the Essential Services Chilled Water System (ESCWS) was considered inoperable. However, temporary power was installed to Chilled Water Circ Pump P4 to allow for the transfer of refrigerant. Since ESCWS was inoperable during the 1B2-SB outage, no credit was taken for the system to perform any safety-related function during this period. Following the bus outage, the normal system configuration was restored. This temporary modification did not increase the probability of occurrence or consequences of an accident previously evaluated in the SAR, did not increase the probability of occurrence of consequences of a malfunction of equipment important to safety, did not create the possibility of an accident or a malfunction of equipment of a different type from any previously analyzed, and did not reduce the margin of safety as defined in the basis of any Technical Specification.

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Title: ESR 95-00807, Temporary Power for Turbine Generator Bearing Lift Oil Pump

Description:

This temporary modification provided temporary power during the a planned electrical bus outage for the Turbine Generator Bearing Lift Oil Pump. The temporary power source for the Turbine Generator Bearing Oil Pump was non-class 1E motor control center 1E12.

Safety Summary:

Adverse impact of an inadvertent electrical fault was prevented by proper overcurrent protection and assurance of separation criteria in this temporary installation. The design of the AC electrical distribution system provided isolation of the non-1E AC electrical distribution system (the temporary power source) from the Class 1E system. There were no credible mechanisms by which this installation could interfere with the proper functioning of operable structures, systems or components important to safety. Thus, this temporary modification did not increase the probability of occurrence or consequences of an accident previously evaluated in the SAR, did not increase the probability of occurrence of consequences of a malfunction of equipment important to safety, did not create the possibility of an accident or a malfunction of equipment of a different type from any previously analyzed, and did not reduce the margin of safety as defined in the basis of any Technical Specification.

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Title: ESR 95-00921, Turning Gear Temporary Modification for Pressure Switch Jumper

Description:

The Turbine Lube Oil System Bearing Lift Oil Pump output pressure was fluctuating below the permissive setpoint of pressure switch PS-4134. The pressure switch was jumpered out to allow the turbine to be put on turning gear. A local pressure gauge was monitored to insure that the oil pressure was maintained. The jumper was removed when the turbine was taken off turning gear.

Safety Summary:

The turning gear and bearing lift lube oil system are non-safety related and not used during power operation. Thus, this temporary modification could not have impacted nuclear safety during power operation. No Technical Specifications or FSAR Chapter 15 accident scenarios were applicable to this modification. Thus, this temporary modification did not increase the probability of occurrence or consequences of an accident previously evaluated in the SAR, did not increase the probability of occurrence of consequences of a malfunction of equipment important to safety, did not create the possibility of an accident or a malfunction of equipment of a different type from any previously analyzed, and did not reduce the margin of safety as defined in the basis of any Technical Specification.

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Title: ESR 95-00969, Installation of Temporary Strainers in RCDT Pump Lines

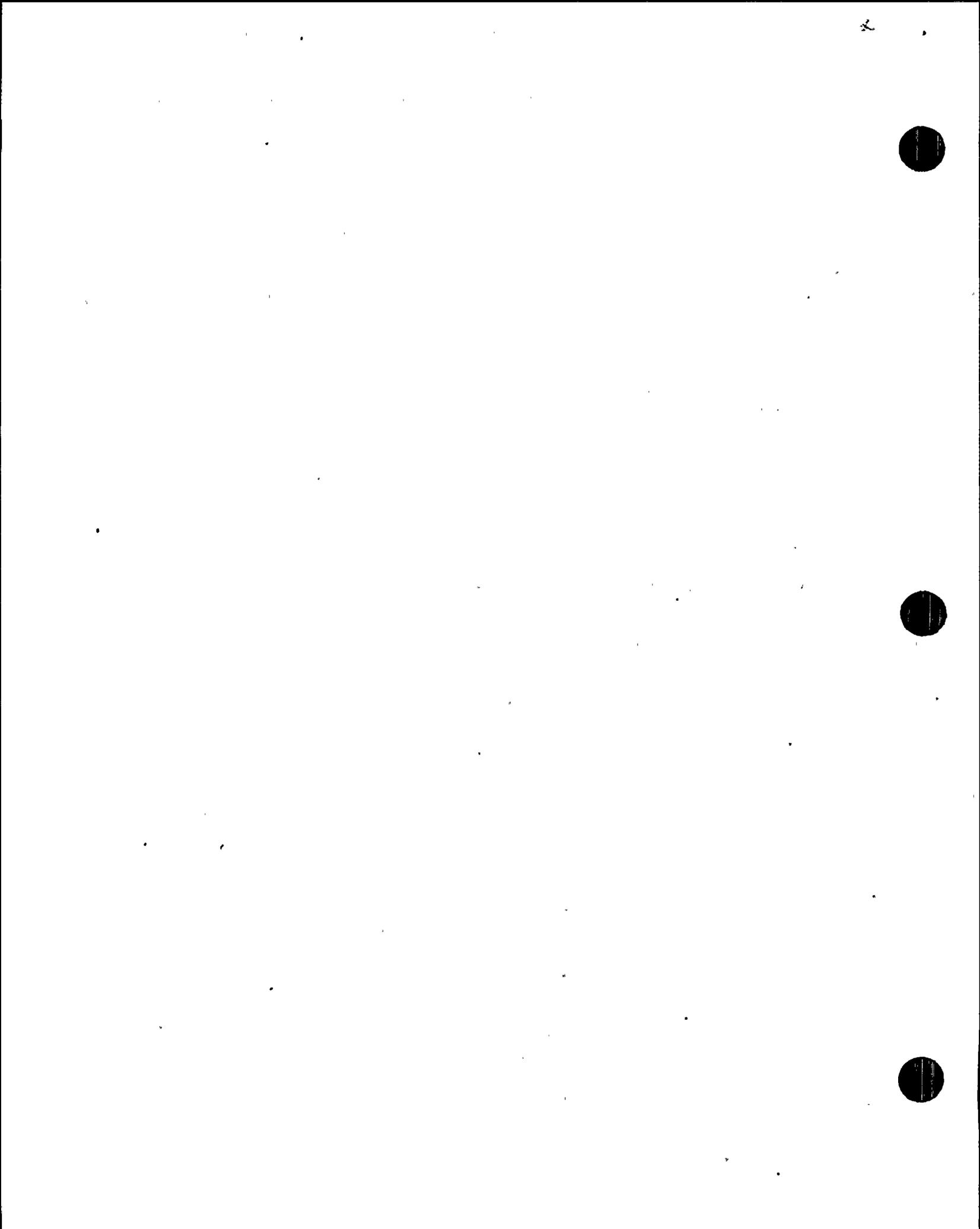
Description:

The installation of temporary strainers were required to protect the reactor coolant drain tank pumps from debris that could be in the lines. If the strainers had become clogged, an alarm would sound notifying operators of the need to clean them.

Safety Summary:

A plant event occurred on November 5, 1995 which caused an inadvertent SI. In response, the pressurizer PORVs remained open for approximately 19 minutes, causing subsequent pressurization of the Pressure Relief Tank (PRT) and rupture of one rupture disk. Because all of the rupture disk material could not be accounted for, it was necessary to install temporary strainers to protect the reactor coolant drain tank pumps. The Reactor Coolant Drain Tank (RCDT) pumps serve no safety function and are used to transfer volume from the RCS during outages and from the RCDT and PRT during normal operation. The only safety related components downstream of the RCDT pumps are the containment isolation valves. The metallic pieces from the rupture disk that could have entered into the system have minimal chance of damaging the valves or preventing closure without the strainers and no chance of failure due to the metallic components with the strainers installed.

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Title: EPT-080T, Temporary Procedure For Collection of Temperature Data from ESW Structure

Description:

EPT-080T collects temperature data from the Emergency Service Water (ESW) screening structure to determine if the HVAC units currently addressed in the Technical Specification Interpretation 87-002 are actually required for the operability of the ESW system. This is done by securing the ventilation manually while the ESW train is in operation and observing subsequent temperature rise. The test would be terminated before either room approaches within 4 deg F of the limits of the Technical Specification 3.7.12. A voluntary LCO would be taken out for the train to be tested, but in fact, the ESW system remains functional throughout the test and will only be technically inoperable due to the interpretation. Revision 1 increases the test time to 36 hours to account for heat buildup.

Safety Summary:

EPT-080T has adequate safeguards to prevent the creation of malfunctions or accident occurrences not previously analyzed. Since all equipment will remain functional when rendered technically inoperable, there will not be an increase in the probability of accidents or equipment malfunctions. There will be continuous monitoring to prevent temperatures from exceeding the Technical Specification limits, therefore, the margin of safety as defined in the Technical Specification will not be reduced.

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Title: EPT-232T, ABB/Combustion Engineering, XS10370016, Temporary Procedure for Steam Generator Outage Related Activities

Description:

This Harris procedure was developed to envelope the ABB/Combustion Engineering procedures for steam generator work. The ABB procedures contained in EPT-232T in general contain instructions for manipulator installation/removal, manipulator checkout, mechanical tube plugging, plug removal, tool and equipment accountability, sludge lancing, foreign object search and retrieval, Eddy Current testing, and data management.

Safety Summary:

The implementation of these procedures is governed by approved outage fragnets. In all cases, procedures performed on plant equipment are performed when the plant is in cold shutdown. Outage risk assessment is performed on the approved fragnet prior to implementation. This procedure does not increase the probability or consequences of analyzed accidents, nor introduce a different type of accident or equipment malfunction than already evaluated in the FSAR.

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Title: EPT-255T, Temporary Procedure for Installation and Operation of a Portable Demineralizer for Boric Acid Tank Lithium Removal

Description:

This was a new procedure developed to provide guidance for installing and operating a portable demineralizer for boric acid tank lithium removal. Revision 1 removed a vendor valve from the system lineup sheet since a plant valve (1CS-766) would be used for process return isolation purposes.

Safety Summary:

The temporary use of the demineralizer to remove lithium from the boric acid tank did not affect the tank's ability to store and deliver boric acid. Revision 1 was administrative, in that it removed an unnecessary valve from the procedure system line up sheet. The development of this procedure and the subsequent revision did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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Title: EPT-815T, Temporary Acceptance Test Procedure for ESR 9500196

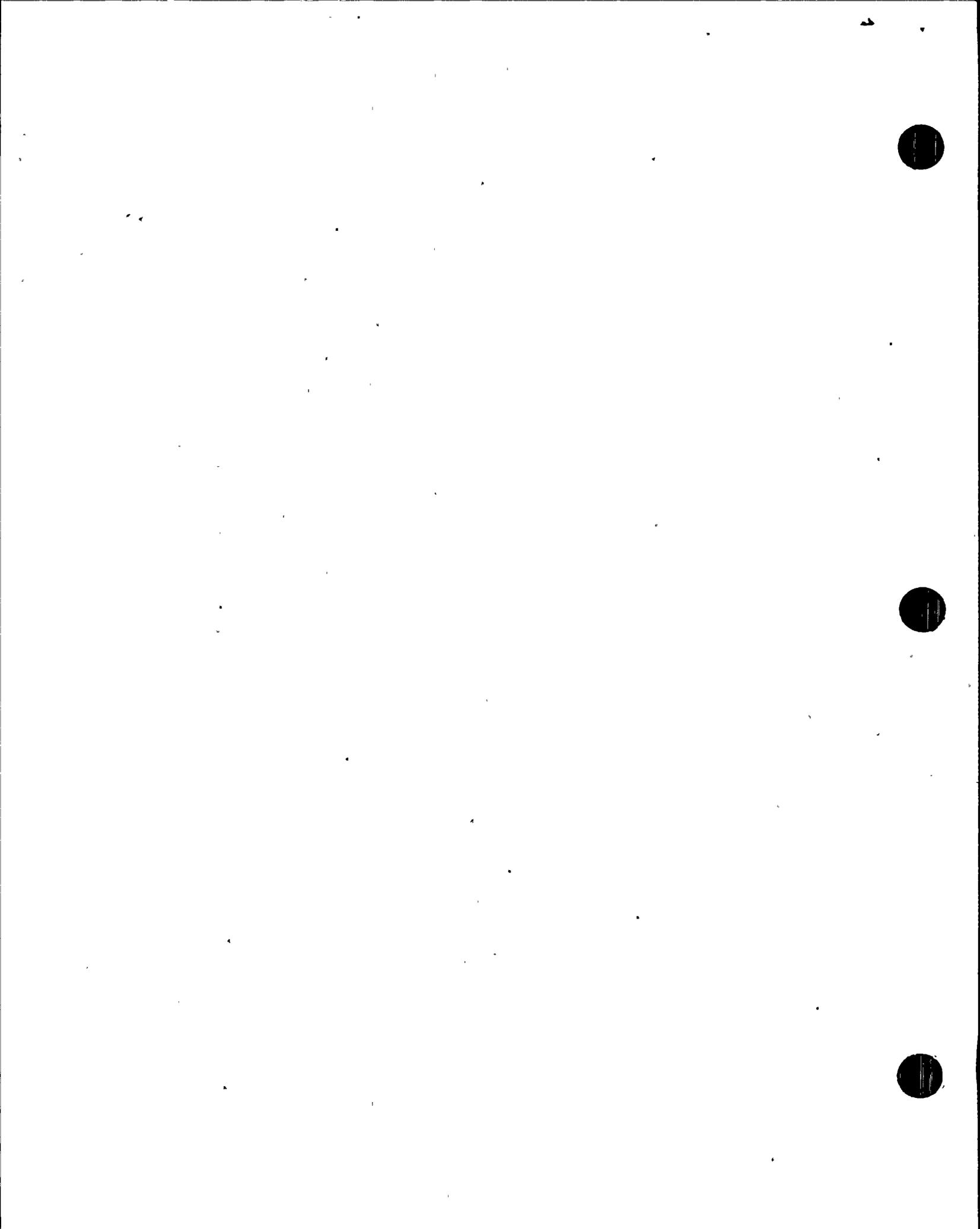
Description:

This was a new procedure developed to test the effectiveness of the new valve trim installed in the Charging Flow Control Valve, 1CS-231.

Safety Summary:

This procedure was developed as a mechanism for determining the effectiveness of the new valve trim in 1CS-231. The operational stability of the valve was verified by monitoring pressurizer level and charging flow with the valve in its normal operational configuration and in accordance with existing plant procedures. Therefore, the performance of this procedure did not increase the probability or consequences of any accident previously evaluated in the Safety Analysis Report, did not increase the probability or consequences of a malfunction of equipment important to safety, did not create the possibility of a new or different type of accident or equipment malfunction, and did not reduce the margin of safety as defined in the Bases of the Technical Specifications.

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Title: EPT-816T, Temporary Procedure for Acceptance Testing of ESR 95-00158,
Screen Wash Pump Sequencer Start

Description:

The test verified that normally closed contacts added to the circuit would allow the ESW Screen Wash Pumps to be started in load block 9 if the ESW pump is not started in its auto start load block.

Safety Summary:

The ESW and ESW Screen Wash systems are accident mitigation systems and cannot initiate an analyzed accident. This test did not prevent the sequencer from performing its intended function and did not cause ESW to be inoperable during the performance of the test. Further, it did not change the ability of the sequencer to start the ESW Screen Wash Pumps. Failure of the ESW Screen Wash Pump was evaluated and it was determined that this temporary procedure would not increase the consequence of a malfunction of equipment important to safety evaluated previously in the SAR. This test could not create the possibility of an accident of a different type or a malfunction of equipment important to safety of a different type than previously evaluated. Finally, the ESW is designed so that only one train is required to mitigate the consequences of an analyzed accident. Since this test was performed one train at a time, there was no reduction in margin as defined in the basis of any Technical Specification.

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Title: EPT-817T, Temporary Procedure for Testing Diesel Jacket Water Service Water Flow

Description:

This procedure installed a test gauge across the installed flow orifice in the ESW return lines from the Diesel Jacket Water Heat Exchangers to measure service water flow.

Safety Summary:

This test was used to gather data on Diesel Jacket Water Heat Exchanger service water flow. The placement of the test gauge was such that a complete rupture of all test equipment and tubing would have no impact on the system. The temporary procedure did not increase the probability of occurrence of an accident previously evaluated in the SAR. The ESW System is an accident mitigation system and this test did not affect that function. With the test gauge in the ESW return line, this procedure did not affect the flow of ESW to the Diesel Jacket Water Heat Exchanger. Therefore, the test did not increase the consequences of an accident evaluated previously in the SAR or increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the SAR. No changes to the ESW design configuration occurred as a result of this test which could have created new or changed existing failure mechanisms. The test did not provide operation of ESW or its loads in an abnormal manner. ESW by itself cannot initiate an analyzed FSAR Chapter 15 accident. Since the system remained fully operable during the data gathering, it did not reduce the margin of safety as defined in the basis of any Technical Specification.

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