Pilgrim 1

Initiating Events

Significance: G Aug 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Lack of Detailed Fire Protection Review for Emergency Diesel Generator Ventilation Modifications
An emergency diesel generator (EDG) modification changed the EDG building air flow paths and velocity profiles from those of its original design without performing a detailed fire analysis as required by Pilgrim procedure NE 320, "Modifications." The lack of a detailed fire protection evaluation as part of the modification package in accordance with procedure NE 320,is a violation 10 CFR 50, Appendix B, Criteria III, Design Control. The NRC determined that there was low risk associated with this postulated single failure; therefore, this violation is being treated as a Non-Cited Violation. This issue was entered into the Pilgrim corrective action process as Problem Report PR 00.1534.
Inspection Report# : 2000006*(pdf)*

Mitigating Systems

Significance: G Dec 15, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Assure that Surveillance Test Acceptance Criteria Ensured Operability of HPCI Equip.
On June 17, 1999, a procedure revision was performed which removed the HPCI pump discharge pressure criteria. By not having a test acceptance criteria of either pressure or speed along with flow, degradation of the speed controller limiter could go undetected. The surveillance test acceptance criteria no longer ensured operability of all HPCI equipment at the remote shutdown panel. The failure to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service was considered a 10 CFR Part 50, Appendix B, Criterion XI, Test Control, violation. The issue was determined to be of very low safety significance (Green) because a review of the most recent test results from December 1999, showed that the controller speed limiter had not been degraded and rated speed had been achieved.
Inspection Report# : 2000012*(pdf)*

Significance: G Dec 15, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correctly Translate the Design Battery Acceptance Criteria
The team found that the licensee failed to provide adequate review of the acceptance criteria for the battery surveillance discharge tests. The problems identified included incorrect minimum voltage for the service test acceptance criteria for both the HPCI and RCIC station battery technical specification surveillance tests. The failure to correctly provide adequate acceptance criteria in battery surveillance procedures and failure to verify or check the adequacy of test procedures was the first example of a violation of 10 CFR 50, Appendix B, Criterion III, Design Control. The issue was determined to be of very low safety significance (Green) because it had negligible impact on the operability of the systems based on the latest test, since voltage did not drop to the correct minimum voltage level. The team found that the licensee failed to control the inputs and assumptions used in the calculations for determining large battery sizing. The failure to correctly provide adequate design inputs and assumptions for the design margin correction factor in the battery sizing calculations had very low safety significance (Green) because there was negligible impact to the operability of the system based on compensating margins included in the body of the calculation and rounding-up margins to the next larger number of positive plates. The licensee's failure to verify or check the adequacy of design calculations was the second example of a violation of 10 CFR 50, Appendix B, Criterion III, Design Control.
Inspection Report# : 2000012*(pdf)*

Significance: G Dec 15, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Review the Results of the Battery Service Test Data

The team identified that the 125 Volt “B” battery service test documentation failed to record the battery voltages during the critical first hour of the test when the load currents were the highest and the voltage dips the lowest. (During the review of these concerns, the licensee discovered that the 125 V “A” battery, the power supply for the reactor core isolation cooling system (RCIC) motor operated valves (MOVs), also had not been correctly discharged according to its service test duty cycle.) The failure to correctly test and record the appropriate data was concluded to have very low safety significance (Green) based on the results of special tests performed by PNPS during the inspection. The failure to adequately review the results of the service test data was a violation of 10 CFR 50, Appendix B, Criterion XI, Test Control.
Inspection Report# : 2000012*(pdf)*

Significance: G Dec 15, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to properly Mainatin Required QA Records of battery Test Parameters
Performance tests to the manufacturer’s rated eight hour discharge current for the NCN-35 cells were performed in March 1997 for the 250 V battery and in September 1996 for the 125 V “B” battery. Both test records recorded capacities over 100%. However, the team found that there was no data included in the QA test record that substantiated the recorded results for the “B” battery. Therefore the team was unable to independently verify the recorded capacity because of the missing data. The failure to adequately maintain the required records was considered to have very low safety significance (Green) because the results of those tests are used for aging determination and the batteries are relatively new. Failure to properly maintain required QA records was a violation of 10 CFR 50, Appendix B, Criterion XVII, QA Records.
Inspection Report# : 2000012*(pdf)*

Significance: G Dec 15, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify the Degraded HPCI Speed Controller
The team determined that several opportunities had existed for the licensee to identify and correct a degraded HPCI flow controller prior to a failure to meet surveillance test acceptance criteria during September 1, 2000 testing. Based on the result that although degraded, the system could have met its safety function regarding the transient and loop scenarios, this issue was determined to have very low safety significance (Green). Notwithstanding this determination, the team concluded that the licensee’s handling of this issue showed weak problem identification and corrective action relative to a risk significant component and system. The team determined this issue to be a violation of 10 CFR 50 Appendix B, Criterion XVI, Corrective Action, based on the failure to identify the degraded speed controller and correct it prior to failing the surveillance test criteria.
Inspection Report# : 2000012*(pdf)*

Significance: N/A Sep 30, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
EOP Containment Flooding Strategy Issue
Pilgrim failed to perform a 10 CFR 50.59 safety evaluation to determine if a discrepancy between the EOPs and the FSAR involved an unreviewed safety question. The discrepancy related to the transition criteria for containment flooding in response to a design basis loss of coolant accident. Due to the overall low risk significance of containment flooding, this violation was categorized at Severity Level IV and was treated as a Non-Cited Violation.
Inspection Report# : 2000008*(pdf)*

Significance: G Aug 19, 2000
Identified By: Licensee
Item Type: FIN Finding
Malfunction of the High Pressure Coolant Injection System Power Supply Inverter
The malfunction of the high pressure coolant injection (HPCI) system power supply inverter rendered the HPCI system inoperable as documented in LER 293/2000-02. This malfunction was detected immediately by operators who declared the HPCI system inoperable. The inverter was replaced in less than 1 hour. The HPCI system was then restored to an operable status. During the unavailibility time for the HPCI system, the remaining core standby cooling systems remained operable. This issue was determined to be Green in the Significance Determination Process because of the low event likelihood and the full compliment of remaining mitigation equipment capability.
Inspection Report# : 2000007*(pdf)*

Significance: G Aug 18, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Emergency Lighting Units were not installed to support manual operation

The NRC identified that emergency lighting units (ELUs) were not installed to support manual operation of the service water outlet valves for the reactor building closed cooling water heat exchangers. Additionally, these valves were not accessible for local, manual operation. Local, manual operation of these valves would be required in certain circumstances for post-fire shutdown. This finding is characterized as a condition for very low safety significance in accordance with the Fire Protection Significance Determination Process because it does not affect fire barriers, or fire detection or suppression capability.
Inspection Report# : 2000004*(pdf)*

Significance: G Aug 18, 2000
Identified By: Licensee
Item Type: NCV NonCited Violation
Emergency diesel generator watt-meter cables in the cable spreading room were neither protected nor isolated
Emergency diesel generator (EDG) watt-meter cables in the cable spreading room, which could be damaged by a fire, were neither protected nor isolated as part of the Appendix R modifications. This led to the potential for a cable spreading room fire to cause a loss of the EDGs on the start of a residual heat removal pump, resulting in a station blackout condition in the post-fire operating environment. The Significance Determination Process characterizes this finding as a condition of very low safety significance because of the ability to diagnose the problem and recover electrical power.
Inspection Report# : 2000004*(pdf)*

Significance: G Jan 17, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to correct reactor vessel level spiking
The inspector identified a non-cited violation for inadequate corrective actions associated with the December 27, 2001, reactor vessel water level instrumentation spiking. To date, reactor vessel level spiking has been experienced on two other occasions since the April 2001 refueling outage (April 21 and August 13, 2001). The finding was of very low safety significance. The significance was determined by comparing it to a Phase 3 SDP risk evaluation that was conducted for the April 13, 2001, reactor vessel water level spiking event (reference NRC Inspection Report 50-293/01-06). The April 2001 spiking event affected both channels of reactor vessel level instrumentation and was concluded to be of very low safety significance (Green). Since this event only affected the "B" level instrumentation, this condition is also determined to be of very low safety significance. The inspectors determined that this issue involved a human performance causal factor since the instrument rack purge location was not properly identified, which could have resulted in entrapped gasses
Inspection Report# : 2001008*(pdf)*

Significance: G Nov 17, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Reference leg backfill system design vulnerability
GREEN. The inspectors identified a Non-Cited violation of the Design Control Program for failure to assure that the 1993 design changes made to the reference leg of the reactor level instrumentation were adequate and subject to the same control measures applied to the original design. This issue was evaluated through the Phase 3 Significance Determination Process and found to be of very low safety significance.
Inspection Report# : 2001007*(pdf)*

Significance: G Sep 29, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Ineffective Corrective Action for Reactor Vessel Level Spiking
The inspector identified an apparent violation of the corrective action requirements of 10 CFR 50, Appendix B, Criterion XVI involving failure to implement effective actions to preclude recurrence of spiking of reactor vessel water level instruments when the reactor coolant system is depressurized.
Inspection Report# : 2001006*(pdf)*

Significance: G Aug 18, 2001
Identified By: NRC
Item Type: FIN Finding
Portions of safety-related cables were submerged in water
The inspector identified that portions of safety-related cables located in Appendix R ductline manholes were submerged in water. The licensee had

not inspected the manholes since initial installation in 1987. The finding was of very low significance because no operability problems have been identified.
Inspection Report# : 2001005*(pdf)*

Significance: N/A Aug 18, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Shipping bolts on the drywell-to-torus vent line expansion bellows were installed
10 CFR 50, Appendix B, Criterion III, "Design Control," for inadequate design implementation. On July 18, 2001, the licensee identified that the shipping bolts on the drywell-to-torus vent line expansion bellows were installed; this condition has existed since original construction. The licensee generated problem report PR 01.9690 to document and address this condition. The licensee determined that the primary containment remains operable in this configuration and is developing a plan to remove the bolts.
Inspection Report# : 2001005*(pdf)*

Significance: N/A Aug 18, 2001
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
A missing step in the restoration section that resulted in the loss of electrical bus A5 and a plant scram
Pilgrim Technical Specifications 5.4.1 requires written procedures, appropriate for the circumstances, be implemented that meet the requirements of Appendix "A" of Regulatory Guide 1.33, which include Surveillance Tests. Entergy Procedure 3.M.3-1, Att. 8A, was not appropriate for the circumstances due to a missing step in the restoration section that resulted in the loss of electrical bus A5 and a plant scram on August 13, 2001. This issue is documented in the licensee's corrective action program as PR 01.9779.
Inspection Report# : 2001005*(pdf)*

Significance: N/A May 19, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to Establish Line Up
The test director failed to establish an appropriate pretest ineup and ensure that an adequate leak off path existed as required during testing of reactor recirculation sample valve AO-220-45. Test boundary valve 2-HO-134 was left open and vent valve GSV-8029 was not closed.
Inspection Report# : 2001003*(pdf)*

Significance: G Mar 31, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Installed Relay Had a Time Delay Function on only Two of the Four Contacts
10 CFR 50 Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," requires measures to assure that purchased equipment conform to procurement documents. On January 2, 2001, the licensee identified that certain relays installed in the 480 Volt emergency load center transfer scheme did not meet the procurement specifications. This condition is in the licensee's corrective action program as PR 01.9004, and the licensee has implemented immediate corrective actions restoring the relays to their as-designed configuration.
Inspection Report# : 2001002*(pdf)*

Significance: G Feb 17, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to include the Safety Related 125V Swing Bus Automatic Transfer Switch
The NRC identified a non-cited violation for the failure to include the safety-related 125 V DC swing bus automatic transfer switch, 83-1 (Y-10), within the scope of the maintenance rule. The failure to scope Y-10 in the maintenance rule is a violation of 10 CFR 50.65 (b)(1), “Maintenance Rule.” The finding was of very low significance because, although the transfer switch may not have functioned, this condition alone would not have prevented the LPCI system from performing its design function.
Inspection Report# : 2000011*(pdf)*

Significance: G Feb 17, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to take Prompt Corrective Actions to Correct the Sticking of the Y-10 Relay
The NRC identified a non-cited violation for the failure to take prompt corrective actions to correct the sticking of the Y-10 relay, nor was it cycled at a frequency to ensure a high degree of reliability. The failure to take prompt corrective actions is a violation of 10 CFR 50, Criterion XVI, “Corrective Actions.” The finding was of very low significance because, although the transfer switch may not have functioned, this condition alone would not

have prevented the LPCI system from performing its design function. This finding has as a direct cause an aspect involving the cross-cutting area of Problem Identification and Resolution.
Inspection Report# : 2000011*(pdf)*

Significance: N/A Feb 17, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
An Area in Torus Room was not Immediately controlled as a Locked High Radiation Area
During a test of the reactor core isolation cooling (RCIC) system, an area in the torus room was found to have a contact dose rate of 3000 milirem/hr and 1500 milirem/hr at 30 centimeters but was not immediately controlled as a locked high radiation area in accordance with Plant Technical Specification 5.7.2. The area was already posted and barricaded as a high radiation area. Upon identification of the higher radiation fields, the area remained unlocked and unguarded for approximately six minutes before the required physical and administrative controls for the condition were implemented. No actual or potential safety consequence resulted due to this condition.
Inspection Report# : 2000011*(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: G May 19, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
ERO Respirator Qualification Lapse
A failure to maintain respirator qualifications current, as required by the licensee's Emergency Plan, Section O and 10 CFR 50.54(q) was identified. The finding was of very low safety significance because there were sufficient responders with respiratory qualifications to fill the positions. Twenty-three percent of the responders were not qualified.
Inspection Report# : 2001003*(pdf)*

Occupational Radiation Safety

Significance: N/A Jan 17, 2002
Identified By: Licensee
Item Type: NCV NonCited Violation
Non-posted high radiation area
Lack of proper posting and barricade for a high radiation area located on the 91' elevation of the reactor building in the skimmer corridor.
Inspection Report# : 2001008*(pdf)*

Public Radiation Safety

Significance: G Nov 18, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Excessive Free-Standing Liquids in Waste Package
The State of South Carolina identified a violation for a disposal container (liner) of dewatered bead resin shipped by the licensee, through a waste processor, to the barnwell Low-level Waste Disposal Facility. Upon arrival, state inspectors determined that the liner contained in excess of 1% by volume non-corrosive free-standing liquid, contrary to the requirements of 10 CFR 61.56(b)(2). The finding was of low safety significance because, although the liner contained free-standing liquid in excess of the 1% limit, the deficiency was not sufficient to disallow access to the disposal facility, and no other issues (e.g., transportation requirements, package integrity, Certificate of Compliance, or radiation limits) were involved. Further,

institutional controls at the Chem-Nuclear System's Low-Level Waste Disposal Facility in Barnwell, South Carolina, were conservative and would have acted to prevent inadvertent radioisotope migration in the case of inadvertent loss of container integrity while disposed. In accordance with the NRC Enforcement Policy and the Public Radiation Safety Significance Determination Process, this matter is considered a Non-Cited Violation.
Inspection Report# : 2000009*(pdf)*

Physical Protection

Miscellaneous

Significance: N/A Jun 09, 2000
Identified By: NRC
Item Type: FIN Finding
Evaluations and Root Cause Analyses were of good Depth and Quality
Evaluations and root cause analyses were of good depth and quality. The licensee's resolution of problems was adequate. The prescribed corrective actions appeared appropriate to correct the problems and were generally completed in a timely manner. However, there were a few instances of minimal safety significance where the prescribed corrective actions were overdue. In the safety conscious work environment area, plant personnel were familiar with, and did not feel reluctant to use, the existing processes to raise safety concerns.
Inspection Report# : 2000005*(pdf)*

Significance: N/A Jun 09, 2000
Identified By: NRC
Item Type: FIN Finding
Licensee was Effective at Identifying Problems
The NRC determined that the licensee was effective at identifying problems. In general, problems were properly captured and characterized in the corrective action program (CAP). Based upon the sample reviewed, items entered into the CAP were properly classified and prioritized for resolution.
Inspection Report# : 2000005*(pdf)*

Significance: N/A Jun 09, 2000
Identified By: NRC
Item Type: FIN Finding
Site was faced with a degrading recirculating pump motor-generator set electrical commutator brush
During the first week of the inspection, the site was faced with a degrading recirculating pump motor-generator set electrical commutator brush that was arcing and wearing at an abnormally high rate. The corrective actions, including risk considerations, were established and evaluated using input from a wide cross-section of plant staff. This identified problem, which resulted in a plant power reduction, was properly evaluated and corrected.
Inspection Report# : 2000005*(pdf)*

Significance: N/A Jun 09, 2000
Identified By: NRC
Item Type: FIN Finding
The Problem Report process was not Effectively using the Repear Occurrence portion of the PR Database
One negative observation of the inspection team was that the problem report (PR) process was not effectively using the Repeat Occurrence portion of the PR database. The identification of repeat problems was dependant on the memories of individuals involved in the PR process, rather than being retrievable from the PR database. In addition, the definition of a repeat issue was not fully inclusive. The lack of a clear definition of what was a repeat issue and the reliance on staff recollection for repeat issues presented a limitation on the ability to establish the effectiveness of corrective actions over an extended time period.
Inspection Report# : 2000005*(pdf)*

Significance: N/A Jun 09, 2000
Identified By: NRC
Item Type: FIN Finding
The Problem Report program was well-integrated on-site, and included a Daily multi-departmental panel review
The NRC noted that the PR program was well-integrated on-site, and included a daily multi-departmental panel review of newly issued PRs to assess the significance of each PR and assign responsibility for resolution through the action tracking process. The PR Panel screened out those PRs that had no or low safety significance. Closeout of low significance items early with no actions except for tracking was an important favorable factor in effective PR management. Keeping the PR process active while dropping low level issues and providing feedback to PR originators were key factors in the program.
Inspection Report# : 2000005*(pdf)*

Significance: N/A Jan 17, 2002
Identified By: NRC
Item Type: FIN Finding
Apparent trend in human performance area, attributed mostly with engineering involvement.
The inspector noted development of an apparent trend in human performance, attributed mostly with engineering involvement related to procedure development, performance, and corrective action implementation that resulted in findings in multiple cornerstones. The following human performance deficiencies have occurred within the past 12 months: 1. In February 2001, engineering personnel failed to ensure prompt corrective actions to resolve continued problems with the 125 VDC swing bus automatic transfer switch, Y-10 relay, that had the potential to render the low pressure coolant injection (LPCI) system inoperable (NCV 50-293/00-11-01); 2. In March 2001, the licensee failed to identify that certain relays in the 480 volt emergency load center transfer scheme (B-6) did not meet procurement specifications that could result in LPCI function being lost under certain conditions (NCV 50-293/01-02-01); 3. In May 2001, engineering personnel failed to control testing on a reactor recirculation system sample valve that prompted the need for a manual reactor scram during plant startup from the cycle 13 refueling outage (NCV 50-293/01-03-05); 4. In August 2001, the licensees failure to adequately develop a logic system functional test procedure for the A5 electrical emergency bus resulted in the loss of both reactor recirculation pumps and a reactor scram (NCV 50-293/01-05-03); 5. In December 2001, licensee radiation protection personnel failed to properly post a high radiation area boundary; 6. In December 27, 2001, the NRC identified ineffective corrective actions associated with reactor vessel water level instrumentation spiking involving an inadequate instrument rack purge. (NCV 50-293/01-08-01). These individual issues have a related cause in that they represent human performance errors. They also have a direct impact on safety, increase the frequency of initiating events and affect the reliability, operability and functionality of mitigating equipment. This performance trend is considered a cross-cutting issue and is a finding characterized as "no color."
Inspection Report# : 2001008*(pdf)*

Significance: N/A Jun 29, 2001
Identified By: NRC
Item Type: FIN Finding
Acceptable Corrective Action Program
The team concluded that the implementation of the corrective action program at Pilgrim Nuclear Power Station was acceptable. The Pilgrim Staff adequately identified problems and entered them into a corrective action process. However, the team identified two examples involving minor issues where the licensee had not initiated problem reports (PR) in a timely manner. In one instance, the counterweights for the backdraft damper for the RHR room cooler ducts were not aligned in the same direction. In the other instance, the scale indicators on the RCIC turbine back-pressure indicators did not correspond to the actual switch setpoints. None of the systems involved was degraded and there was no safety consequence. The evaluations and root cause analysis reviewed were adequate and reflected good consideration for common cause and extent of condition. Corrective actions were generally adequate and completed in a timely manner. Where there were instances of recurrent problems, such as with the radiation monitoring system over the past couple of years, and the control rod drive system, the licensee had appropriately developed more comprehensive and broader corrective actions to address the problems.
Inspection Report# : 2001010*(pdf)*

Last modified : March 28, 2002