December 27, 2002

Mr. Peter E. Katz
Vice President - Calvert Cliffs Nuclear Power Plant
Constellation Energy Group
Calvert Cliffs Nuclear Power Plant, Inc.
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT - NRC INSPECTION REPORT 50-317/02-12, 50-318/02-12

Dear Mr. Katz:

On November 22, 2002, the NRC completed an inspection at your Calvert Cliffs Nuclear Power Plant Units 1 & 2. The enclosed report documents the inspection findings which were discussed on November 22 with you and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations, and with the conditions of your license. Within these areas, the inspection involved examination of selected procedures and representative records, observation of activities, and interviews with personnel.

On the basis of the sample selected for review, the team concluded that in general, problems were properly identified, evaluated and corrected. Notwithstanding, the team identified a Green finding concerning ineffective corrective actions in response to weld deficiencies in the support systems for the reactor coolant pumps.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

David C. Lew, Chief
Performance Evaluation Branch
Division of Reactor Safety

Docket Nos: 50-317, 50-318

License Nos: DPR-53, DPR-69

Enclosures: Inspection Report 50-317/02-012 and 50-318/02-012

Attachment 1 - Supplementary Information

cc w/encl: M. Geckle, Director, Nuclear Regulatory Matters (CCNPPI)
R. McLean, Administrator, Nuclear Evaluations
K. Burger, Esquire, Maryland People's Counsel
R. Ochs, Maryland Safe Energy Coalition
J. Petro, Constellation Power Source
State of Maryland (2)

Distribution w/encl:
H. Miller, RA/J. Wiggins, DRA
H. Nieh, RI EDO Coordinator
D. Beaulieu - SRI - Calvert Cliffs
J. O'Hara, DRP
J. Laufer, NRR
D. Skay, PM, NRR
P. Tam, PM, NRR (Backup)
M. Evans, DRP
N. Perry, DRP
P. Torres, DRP
W. Lanning, DRS
R. Crlenjak, DRS
D. Lew, DRS
J. Schoppy, DRP
J. Trapp, DRP
Region I Docket Room (with concurrences)

DOCUMENT NAME: G:\PEB\DLEW\CCIR-2002-012.WPD
After declaring this document "An Official Agency Record" it **will** be released to the Public.
To receive a copy of this document, indicate in the box: "**C**" = Copy without attachment/enclosure "**E**" = Copy with attachment/enclosure "**N**" = No copy

OFFICE	RI/DRP		RI/DRP		RI/DRS		RI/DRS			
NAME	JSchoppy		JTrapp		DLew		WSchmidt			
DATE	12/18/02		12/27/02		12/27/02		12/27/02			

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos:	50-317, 50-318
License Nos:	DPR-53, DPR-69
Report Nos:	50-317/02-012, 50-318/02-012
Licensee:	Constellation Generation Group
Facility:	Calvert Cliffs Nuclear Power Plant, Units 1 and 2
Location:	1650 Calvert Cliffs Parkway Lusby, MD 20657-4702
Dates:	November 4 - 8, 2002 November 18 - 22, 2002
Inspectors:	Joseph Schoppy, Senior Resident Inspector (Team Leader) Rick Bennett, NRC Contractor Mel Gray, Senior Reactor Inspector Paulette Torres, Reactor Engineer
Approved by:	David C. Lew, Chief Performance Evaluation Branch Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000317-02-012, 05000318-02-012; on 11/04 - 22/2002; Calvert Cliffs Nuclear Power Plant, Units 1 & 2; biennial baseline inspection of the identification and resolution of problems. A finding was identified in the area of Effectiveness of Corrective Actions.

This inspection was conducted by two regional inspectors, a senior resident inspector, and an NRC contractor. One Green finding of very low safety significance was identified during the inspection. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process (SDP)." Findings for which the SDP does not apply may be "Green" or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

Identification and Resolution of Problems

Based on the sample selected for review, the team concluded that the implementation of the Constellation Energy Group (CEG) corrective action program was adequate. In general, personnel identified problems and entered them into the corrective action program at an appropriate threshold. However, the team identified several minor valve packing and pump seal leaks within the Unit 1 and Unit 2 emergency core cooling system (ECCS) pump rooms that were not identified and captured in CEG's corrective action program.

CEG generally prioritized and completed evaluations in a timely fashion and evaluated problems in adequate detail commensurate with the safety significance. The evaluations reasonably identified the causes of the problem, the extent of the condition, and provided for corrective actions to address the causes. The evaluations of equipment problems generally included operability assessments of sufficient depth to conclude that equipment remained capable of performing its safety functions. CEG also assessed reportability requirements appropriately.

CEG corrective actions and improvement initiatives were generally effective in improving equipment reliability and human performance. However, inadequate corrective action follow through for a Unit 2 reactor coolant pump (RCP) support system weld deficiency contributed to a Unit 1 reactor trip. The team also noted that CEG was not fully effective in resolving some recurrent equipment deficiencies. CEG's self-assessments and corrective action program audits identified similar findings.

Cornerstone: Initiating Events

- **Green.** CEG did not adequately complete identified corrective actions in response to a weld deficiency in the component cooling water (CCW) line to a Unit 2 reactor coolant pump (RCP) in October 2001. The incomplete corrective actions, due to missed inspections of some welds in the RCP support systems, contributed to a failed weld in a lube oil line to a RCP and a Unit 1 reactor trip in July 2002.

This performance deficiency, although identified by CEG, was self-revealed through a plant trip. While no violation of NRC requirements was identified relative to the nonsafety-related RCP support systems, the issue was more than minor since it resulted in a reactor trip. The finding was of very low safety significance because it did not increase the likelihood of a loss of coolant accident, mitigating equipment unavailability, a fire, or a flooding condition. (Section 4OA2.c)

Report Details

4. OTHER ACTIVITIES (OA)

4OA2 Identification and Resolution of Problems

a. Effectiveness of Problem Identification

(1) Inspection Scope

The team reviewed the procedures describing CEG's corrective action process and determined that CEG identified problems primarily through the initiation of issue reports (IRs). The team also noted that CEG's process required the initiation of maintenance orders (MOs) for IRs associated with equipment deficiencies. Team members attended the daily IR Review Group (IRRG) meetings, where IRs were reviewed for screening and assignment, to better understand CEG's threshold for identifying and entering problems into their corrective action process. Team members also attended management meetings, maintenance Plan of the Day meetings, and a Corrective Action Review Board (CARB) meeting to assess management's role in CEG's corrective action process.

The team selected a sample of IRs for review to determine whether CEG was identifying, accurately characterizing, and entering problems into the corrective action process at an appropriate threshold. The IRs selected covered the period from the last NRC problem identification inspection in May 2001 to the present. The team selected the IRs to cover the seven cornerstones of safety identified in the NRC Reactor Oversight Process (ROP). In addition, the team considered risk insights from CEG's Individual Plant Examination (IPE) reports and probabilistic risk assessment to help focus the IR sample and system walkdowns on risk significant plant equipment. Attachment 1 lists the IRs selected for review.

The team also interviewed selected plant staff to understand whether other processes were used to address problems. The team conducted a walkdown of control room panels and selected plant equipment and observed portions of several surveillances to independently assess whether problems were being adequately addressed. Additionally, the team toured the Central Alarm Station and the Secondary Alarm Station, interviewed guards, and walked down the protected area perimeter to assess security's identification of problems.

The team selected items from CEG's maintenance, operations, engineering, and oversight processes to verify that CEG appropriately considered problems identified in these processes for entry into the corrective action program. Specifically, the team reviewed a sample of engineering service packages (ESPs), operator log entries, control room deficiency and workaround lists, maintenance orders, operability determinations, engineering system health reports, Gold Cards (observations below the IR threshold), procurement related deficiencies, completed surveillances, installed temporary modification packages, quality assessment reports, and departmental self-assessments. The team reviewed issues identified in these documents (see Attachment 1) to ensure underlying problems associated with each issue were appropriately considered for identification and resolution via the corrective action process.

(2) Findings

Based on the sample reviewed, the team concluded that CEG set an acceptable threshold for identifying problems and entering them into their corrective action process. The IRs reviewed adequately described and characterized problems, and generally identified prior similar occurrences. In addition, the team concluded that personnel initiated corrective action IRs for problems identified in other CEG processes that met the IR threshold.

Based on control room and safety-related equipment walkdowns, the team determined that CEG generally recognized problems, initiated IRs, and labeled deficient components. The team noted that CEG had identified approximately 14 minor valve packing and pump seal leaks within the Unit 1 and Unit 2 ECCS pump rooms. However, the team identified 14 additional minor leaks (based on boric acid residue) within the ECCS pump rooms that were not identified and captured in CEG's corrective action program. In response to the team's observation, CEG initiated IRs and maintenance orders for these deficiencies. A subsequent CEG NDE inspector walkdown and exam determined that the leaks were not active and did not affect any carbon steel parts on the components or the adjacent structures, systems, and components (SSCs). The team concluded that these minor leaks did not render any equipment inoperable.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The team reviewed the IRs listed in Attachment 1 to determine whether CEG adequately evaluated and prioritized problems. The review included the appropriateness of the assigned significance, the timeliness of resolutions, and the scope and depth of the root cause analyses (or causal analyses). The IRs reviewed encompassed the full range of CEG evaluations, including root and apparent cause evaluations. The team selected the IRs to cover the seven cornerstones of safety identified in the NRC ROP. The team also considered risk insights from CEG's IPE reports and probabilistic risk assessment to help focus the IR sample. Additionally, the team attended the IRRG meetings to observe the review process and to understand the basis for assigned significance levels (Category I, II, or III).

The team also selected a sample of IRs associated with previous NRC non-cited violations (NCV) to determine whether CEG evaluated and resolved problems associated with compliance to applicable regulatory requirements. The team reviewed CEG's evaluation of industry operating experience (OE) information for applicability to their facility. The team also reviewed the CEG's assessment of equipment operability, reportability requirements, and the potential extent of the problem. The team further reviewed equipment performance results and assessments recorded in completed surveillance procedures, operator log entries, and system engineer trending data to determine whether CEG's evaluation of equipment performance was technically adequate to identify degrading or non-conforming equipment.

(2) Findings

The team concluded that CEG generally prioritized and completed evaluations in a timely manner and evaluated problems in adequate detail commensurate with the safety significance. The evaluations reasonably identified the causes of the problem, the extent of the condition, and provided for corrective actions to address these causes. The evaluations of equipment problems generally included operability assessments of sufficient depth to conclude that equipment remained capable of performing its safety functions. CEG also assessed reportability requirements appropriately.

The team identified some minor instances where documentation was informal or lacking for equipment evaluations.

- The team reviewed IR3-082-665 which documented that dowel pins, credited in the seismic qualification of all four turbine driven auxiliary feedwater (AFW) pumps, were missing. In May 2002, CEG engineering performed an informal calculation to show that the holddown bolts would assure seismic qualification. Based on concerns for adversely impacting AFW pump operability, CEG decided not to physically verify the holddown bolt torque. However, the team noted that engineering did not document their engineering judgment in this regard within their corrective action process. In addition, engineering did not perform a follow-up operability determination to validate their initial informal calculation. As a result of inspector questions, engineering completed ES200200855 on November 21 to formalize their previous calculation. The team reviewed the informal and formal calculations and determined that they accurately calculated the required holddown bolt torque to maintain seismic qualification. While these calculations proved to be accurate and the seismic qualification and operability thus maintained, the team noted that CEG did not demonstrate engineering rigor commensurate with the potential safety significance of the issue.

- The team reviewed IR3-083-183 associated with high pressure safety injection suction piping that was subjected to pressure greater than the design pressure during a quarterly check valve surveillance. The team identified that while the initial and follow-up operability determinations in IR3-083-183 provided a technical basis for operability, CEG did not complete walkdowns for gasket leaks as recommended in the evaluation. However, the team determined that CEG had not identified any active leaks in this piping during subsequent testing. In addition, team members conducted walkdowns of this piping and did not identify any leaks from piping joints. CEG completed the cause evaluation of this problem in a lower level (CAT III) issue report (IR3-076-822) which did not require formal documentation, even though this condition had occurred previously in 1997. However, the team concluded that the corrective action to revise the surveillance procedure to provide more continuous venting appeared to be effective based on subsequent surveillance performance.

- The team noted an instance where CEG did not properly prioritize and evaluate a degraded condition. During a Unit 1 ECCS pump room walkdown, the team identified that CEG had not repaired a leaking plug on a shutdown cooling isolation motor operated valve (1-MOV-658) bonnet that they had identified on January 10, 1997. The associated maintenance order (MO 1199700129) had been scheduled to be worked on several occasions since 1997 but was deferred. The team was concerned with the potential for boric acid corrosion to occur undetected due to insulation surrounding the valve. Once highlighted by the team on November 8, CEG took action to remove the insulation that potentially masked boric acid corrosion, and to inspect and evaluate the valve. An NDE inspector determined that the valve had an active leak but found no valve wastage of the valve's carbon steel components, only light surface rust. CEG planned to repair the valve during the next refueling outage.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The team reviewed CEG's corrective actions associated with selected IRs from Attachment 1 to determine whether the actions addressed the identified causes of the problems. The team also reviewed CEG's timeliness in implementing corrective actions and their effectiveness in preventing recurrence of significant conditions adverse to quality. Furthermore, the team assessed the backlog of corrective actions to determine if any, individually or collectively, represented an increased risk due to the delay in implementation.

(2) Findings

CEG corrective actions and improvement initiatives were generally effective in improving equipment reliability and human performance. However, inadequate corrective action follow through for a Unit 2 RCP support system weld deficiency contributed to a Unit 1 reactor trip. The team determined that CEG was not fully effective in resolving several recurrent equipment deficiencies, such as emergency preparedness sirens; switchgear room HVAC; and RCP oil level transmitters. These issues were either previously reviewed or documented by the NRC. The team also noted that CEG's self-assessments and corrective action program audits identified similar findings and that increased management attention had been directed to address these shortcomings.

Reactor Coolant Pump Piping Weld Deficiency

CEG identified that they did not adequately complete all identified corrective actions in response to an October 2001 Unit 2 RCP CCW weld issue. The failure to complete all corrective actions contributed to a Unit 1 reactor trip in July 2002.

The team reviewed IR3-081-324 regarding a failed RCP CCW pipe weld that resulted in a forced shutdown of Unit 2 in October 2001. CEG personnel evaluated the weld failure on the non-safety related, non-ASME B&PV code, CCW pipe that provides cooling water to the 22A RCP motor upper bearing, and concluded that the weld failed after approximately 20 years of service due to stress fatigue, with a contributing cause being the design did not provide for a full penetration weld. The original equipment manufacturer supplied the piping as part of the skid mounted equipment. This non-safety related and non-ASME code piping did not require a non-destructive examination (NDE) during construction. CEG personnel identified similar welds in CCW and bearing oil piping on each Unit 1 and 2 RCP motor skid that may have been subject to the same failure mode, and initiated corrective actions to inspect and repair the welds as necessary, during the next refueling outage. Personnel also considered whether vendor supplied piping welds on other non-safety, operationally critical balance of plant equipment were susceptible. CEG completed these actions for Unit 1 during a refueling outage in February 2002. However, one bearing oil pipe weld on each RCP motor was not identified to be inspected. Subsequently, on July 24, 2002, this weld on the Unit 1 11A RCP failed, and resulted in operators manually tripping the reactor after observing decreasing bearing oil level and an increase in the 11A RCP thrust bearing temperature. CEG reported this event to the NRC in License Event Report (LER) 317/2002-003-00.

CEG personnel evaluated this condition in detail in IR3-061-964 and concluded that the Unit 1 RCP motor weld failure was physically similar to the previous Unit 2 RCP weld failure. However, engineering had not inspected this failed weld during the previous refueling outage because the personnel who reviewed the vendor drawings in preparing the weld inspection plan did not identify this weld location. CEG concluded this human error occurred due to lack of a systematic method for identifying all susceptible RCP motor welds. Corrective actions included ensuring these missed welds will be inspected on all RCPs during the next refueling outage for both units. Human performance causal factors were addressed in detail by developing formal event free tools for engineering personnel, similar to tools used by operations and maintenance personnel, and training personnel in their use. In addition, CEG implemented corrective actions to have supervisors observe and reinforce the use of these tools weekly during normal engineering activities. CEG personnel continued to evaluate the reliability of the non-safety related RCP bearing oil level indicating system via IR4-002-077.

The inspector determined that CEG's failure to adequately complete all identified corrective actions represented a performance deficiency in that CEG did not meet the standard of ensuring reliable equipment and safe plant operation. Given their identification of the weld issue in October 2001, this issue was reasonably within CEG's ability to foresee and correct and should have been prevented. Although CEG identified this issue, it manifested itself through a self-revealing event. This issue affected the initiating events cornerstone due to the manual reactor trip. Consistent with example 4.b of IMC 0612, *Power Reactor Inspection Reports*, Appendix E, Examples of Minor Issues, this finding was considered more than minor, because the missed weld inspection resulted in the need for a manual reactor trip. Phase 1 of the At-Power Reactor Safety SDP screened this finding to Green (very low safety significance) because it did not increase the likelihood of a LOCA, mitigating equipment unavailability, a fire, or a flooding condition. The inspectors determined that there were no associated

NRC violations as the failed pipe welds were not safety related or subject to ASME code requirements. **(FIN 50-317; 50-318/02-012-01)**

d. Assessment of Safety Conscious Work Environment

(1) Inspection Scope

Team members interviewed plant staff, observed various activities throughout the plant, and attended a cross section of meetings to determine if conditions existed that would result in personnel being hesitant to raise safety concerns to their management and/or the NRC.

(2) Findings

No findings of significance were identified.

4OA3 Event Follow-up

(Closed) LER 317/2002-003: Reactor Trip Due to Loss of Reactor Pump Motor Oil. This LER discussed the failure of a butt weld on the 11A RCP motor oil cooler line that resulted in a Unit 1 manual trip on July 24, 2002. The inspectors documented this issue in Section 4OA2.c of this report and determined that this LER was complete and accurate.

4OA6 Meetings, Including Exit

The team presented the inspection results to Mr. P. Katz and other members of CEG management on November 22, 2002. CEG management acknowledged the results presented. No proprietary information was identified during the inspection.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Partial List of Persons Contacted (Alphabetically)

R. Cameron, Component Engineer
J. Carroll, POSRC Chairman and Plant General Manager's Assistant
A. Drake, Design Engineer
P. Fatka, System Engineer
M. Gahan, CEG - Supervisor, Issues Assessment
G. Gwiazdowski, CEG - Director, Nuclear Security/Emergency Planning
M. Hunter, System Manager, Auxiliary Feed Water System
P. Katz, CEG - Site Vice President
K. Neitmann, CEG - Plant General Manager
R. Szoch, CEG - General Supervisor, Plant Engineering

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

50-317/2002-003-00	LER	Reactor Trip Due to Loss of Reactor Pump Motor Oil. (Section 4OA3)

Opened and Closed

50-317; 50-318/02-012-01	FIN	Failure to take adequate corrective actions for poor quality welds on reactor coolant pump support systems. (Section 4OA2.c)

LIST OF DOCUMENTS REVIEWED

Procedures

- OC Diesel Generator (OI - 21C)
- HPSI and LPSI PP CKV Closure Test (STP-O-65-2)
- Control of Maintenance Activities (MN-1-101)
- Integrated Work Planning (MN-1-123)
- Managing System Performance (MN-1-112)
- Conduct of the Corrective Action Review Board (QL-2-105)
- Causal Analysis (QL-2-101)
- Functional Evaluation/Operability Determination (NO-1-106)
- Self Assessment/Corrective Action Program (QL-2)
- Issue Reporting and Assessment (QL-2-100)
- Safety Injection and Containment Spray (OI-3A)

- Westinghouse DS-416 Circuit Breaker and Cubicle Inspection (FTE-52)
- Individual Plant Examination Summary Report, dated December 1993
- Individual Plant Examination of External Events Summary Report, dated August 1997
- Calvert Cliffs Probabilistic Risk Assessment Appendix 1 Internal Events Results, dated 10/11/01

Audits and Self-Assessments

- SA 200100354, Corrective Action Review Board Performance Assessment
- SA 200100268, Self-Assessment of Site Self-Assessment Program
- SA 200100270, Self-Assessment on the IR Process
- SA 200000197, Self-Assessment of Self Assessment of the IR Closure Process
- SA 200100242, Calvert Cliffs' Operating Experience Program
- SA 200100192, Self Assessment of Effectiveness Reviews
- SA 200100336, SA Trending Self-Assessment
- SA 200100335, Maintenance Issue Resolution Critiques Self-Assessment
- SA 200000303
- SA 200100036
- SA 200100334
- SA 200100302
- SA 200200179
- Nuclear Performance Assessment Department 2001-01 Audit Report August 30, 2001
- Nuclear Performance Assessment Department 2001-02 Audit Report February 7, 2002
- Quality and Performance Assessment 2002-01 Audit Report of the Calvert Cliffs Nuclear Power Plant February 1, 2002 - July 31, 2002

CARB, OSSRC, and POSRC Meeting Minutes

- Corrective Action Review Board Meeting Minutes, dated 10/17/02, 10/3/02, 9/26/02, 9/12/02, 8/29/02, 8/22/02, 8/1/02, 7/11/02, 6/20/02, 6/20/02, 2/28/02
- Off-Site Safety Review Committee Meeting Nos. 01-03, 02-03, 02-04
- Plant Operations and Safety Review Committee Meeting Nos. 02-054 through 02-073

Non-Cited Violations

NCV 01-12-03 (IR3-080-027)
NCV 01-12-04 (IR3-014-145)
NCV 01-03-01 (IR3 041-440)
NCV 01-09-03 (IR3-041-445)
NCV 01-09-01 (IR3-059-095)
NCV 01-12-05 (IR3-072-016)
NCV 01-12-06 (IR3-059-464)
NCV 01-14-01 (IR3-072-901)

Issue Reports

IR1-040-744
IR3-000-855
IR3-003-580
IR3-003-747
IR3-003-880
IR3-004-594
IR3-007-892
IR3-007-976
IR3-013-067
IR3-014-116
IR3-014-145
IR3-020-174
IR3-026-939
IR3-028-372
IR3-030-793
IR3-030-796
IR3-031-104
IR3-032-391
IR3-033-953
IR3-034-319
IR3-034-364
IR3-036-022
IR3-037-763
IR3-038-621
IR3-040-727
IR3-041-393
IR3-041-407
IR3-041-440
IR3-041-441
IR3-041-480
IR3-041-483
IR3-043-204
IR3-043-206
IR3-044-693
IR3-044-992
IR3-044-995
IR3-045-346
IR3-045-473
IR3-045-656
IR3-045-663
IR3-045-757
IR3-045-904
IR3-045-939
IR3-046-008
IR3-048-102
IR3-048-794
IR3-049-773
IR3-050-066
IR3-050-196
IR3-050-408
IR3-050-446
IR3-050-784
IR3-050-789
IR3-050-794
IR3-050-799
IR3-050-810
IR3-050-812
IR3-050-814
IR3-051-040
IR3-052-133
IR3-052-135
IR3-052-140
IR3-052-198
IR3-052-199
IR3-052-671
IR3-052-672
IR3-052-673
IR3-053-297
IR3-053-887
IR3-054-080
IR3-054-354
IR3-054-449
IR3-055-324
IR3-056-268
IR3-058-444
IR3-058-933
IR3-059-099
IR3-059-444
IR3-059-464
IR3-059-915
IR3-060-614
IR3-060-666
IR3-061-275
IR3-061-502
IR3-061-720
IR3-061-808
IR3-061-907
IR3-061-964
IR3-062-037
IR3-062-117
IR3-062-136
IR3-062-151
IR3-062-362
IR3-062-364
IR3-062-370
IR3-063-429
IR3-063-440
IR3-063-684
IR3-064-227
IR3-064-402
IR3-064-801
IR3-065-117
IR3-065-680
IR3-070-122
IR3-070-145
IR3-070-168
IR3-070-458
IR3-070-471
IR3-070-498
IR3-070-813
IR3-071-250
IR3-071-967
IR3-072-016
IR3-072-400
IR3-072-406
IR3-072-832
IR3-072-901
IR3-073-028
IR3-073-329
IR3-074-192
IR3-074-412
IR3-075-061
IR3-075-135
IR3-075-552
IR3-075-581
IR3-075-589
IR3-075-648
IR3-075-703
IR3-075-796
IR3-076-253
IR3-076-365
IR3-076-820
IR3-076-821
IR3-076-822
IR3-077-073
IR3-077-124
IR3-077-137
IR3-077-176
IR3-077-300
IR3-077-328
IR3-077-337
IR3-077-340
IR3-077-405
IR3-077-457
IR3-077-718
IR3-077-722
IR3-077-727
IR3-077-783
IR3-077-932
IR3-078-203
IR3-078-581
IR3-078-611
IR3-078-641
IR3-078-828
IR3-079-555
IR3-079-556
IR3-079-681
IR3-080-025
IR3-080-027
IR3-080-051
IR3-080-056
IR3-080-066
IR3-080-290
IR3-080-676
IR3-081-145
IR3-081-258
IR3-081-268
IR3-081-280
IR3-081-324
IR3-081-424
IR3-081-461
IR3-081-587
IR3-081-883
IR3-081-940
IR3-081-975
IR3-081-986
IR3-081-993
IR3-082-109
IR3-082-111
IR3-082-112
IR3-082-403
IR3-082-409
IR3-082-550
IR3-082-577
IR3-082-617
IR3-082-665
IR3-082-866
IR3-082-880

IR3-082-883
IR3-083-183
IR3-083-252
IR3-083-871
IR3-083-986
IR3-084-007
IR3-084-178
IR3-084-640
IR3-084-710
IR3-084-717
IR3-479-858
IR4-000-351
IR4-000-995
IR4-001-405
IR4-001-511
IR4-002-077
IR4-002-654
IR4-003-259
IR4-003-261
IR4-003-576
IR4-003-880
IR4-004-652
IR4-007-933
IR4-007-976
IR4-009-229
IR4-013-976
IR5-023-257

Maintenance Orders:

M0 2200102726
MO 1200200885
MO 1199800447
MO 2200103281
MO 1200001176
MO 2200003056
MO 1199700129
MO 2200102726
MO 1199704283
MO 2199705185
MO 2199705186
MO 1200100920
MO 1200200280
MO 1199704283
MO 2700203709
MO 2199703890
MO 2200102078
MO 2200104075
MO 1200202684
MO 1200200921
MO 1200100970
MO 1199601834
MO 2199904668
MO 2200103699
MO 1200104573
MO 2200103862
MO 1200201687
MO 1200101147
MO 2199904745

Engineering Service Packages:

ES 199601674
ES 199602220
ES 199602294
ES 199602324
ES 199700894
ES 199701368
ES 199701808
ES 199800981
ES 199801528
ES 199900948
ES 200000948
ES 200100626
ES 200100767
ES 200200015
ES 200200115
ES 200200212
ES 200200438
ES 200200488
ES 200200574
ES 200200591
ES 200200855

Operating Experience Related Action Items:

AIT IR199701521
AIT IR200100481
AIT IR200100548
AIT IR200100889
AIT IR200100890
AIT IR200203030

Procurement Related Deficiencies

01-RHO-93
01-RHO-167
02-RHO-5
02-RHO-32
02-RHO-78
02-RHO-132
02-RHO-147

Surveillance Tests

- Test of 2B DG and 4 KV Bus 24 LOCI Sequencer (STP O-8B-2), dated 5/6/02 & 10/21/02
- Test of 2A DG and 4 KV Bus 21 LOCI Sequencer (STP O-8A-2), dated 5/20/02 & 11/4/02
- Test of 1B DG and 14 4 4KV Bus LOCI Sequencer (STP O-8B-1), dated 5/24/02 & 10/13/02
- Test of 1A DG and 11 4 KV Bus LOCI Sequencer (STP O-8A-1), dated 6/2/02 & 10/28/02

Miscellaneous

- Shift Turnover Information Sheet, dated 11/6/02
- Operations Performance Evaluation Requirements for a timed emerging start and load of the SBO diesel generator on 12/12/01 and a slow start on 10/23/02
- Steam Generator Blowdown (Functional Evaluation 01-015)
- 12 Charging Pump Degraded Discharge Check Valve (Functional Evaluation 02-011)
- Unit 1 and Unit 2 Containments - Vertical Tendons (Functional Evaluation 99-011)
- Unit 2 Spent Fuel Racks (Functional Evaluation 01-018)
- Calvert Cliffs Site Operational Initiative (Non-equipment Site-wide Issues), dated 08/02
- Top Ten Equipment Issues, dated 08/02
- Procurement Deficiency (RH0) Screening from 5/28/01 - 10/28/01
- All Gold Cards initiated 7/1/02 - 9/30/02
- (a)(1) Evaluation, Corrective Action, and Goal Setting Plan for 2A EDG, dated 3/19/02
- 2B EDG Maintenance/ST History 4/96 - 9/02
- Leader's Role in Human Performance: Recognition and Prevention Training Plan September 2002
- Calvert Cliffs 1 3Q/2002 Performance Summary
- Calvert Cliffs 2 3Q/2002 Performance Summary
- Maintenance Rule System Unavailability Hours October 2002
- Calvert Cliffs Nuclear Power Plant Maintenance Rule Indicator - (a)(1) SSCs
- CCNPP Work Management Performance Measures
- Safety Injection System Health Report May 2002 - August 2002
- Service Water System Health Report 3rd Quarter 2002
- Salt Water System Health Report *3rd Quarter 2002*
- Auxiliary Feedwater System Health Report 3rd Quarter 2002
- Diesel Generators System Health Report 3rd Quarter 2002
- Leader's Role in Human Performance For the Supervisor Training Program at the Calvert Cliffs Nuclear Power Plant (Training Lesson Plan)
- Calvert Cliffs Plant Engineering Human Performance Improvement Plan
- Temporary Modification No. 1-02-0042
- Flood Height Resulting from a Pipe Break in the Intake Structure (Calculation M-90-192, Revision 0, September 1991)
- Equipment Reliability Improvement Project (ERIP) Plan

Operating Experience

- Emergency Diesel Generator Failure Resulting from Inadequate Performance Monitoring and Inadequate Response to Symptoms of Impending Failure (SER 2-01), dated 3/13/01
- Recurring Event, Emergency Diesel Generator Catastrophic Failure (SEN 140), dated 10/16/96

LIST OF ACRONYMS USED

AFW	Auxiliary Feedwater
ASME B&PV	American Society of Mechanical Engineers Boiler and Pressure Vessel
CARB	Corrective Action Review Board
Cat	Category (i.e., level of significance for Irs)
CCW	Component Cooling Water
CEG	Constellation Energy Group
CFR	Code of Federal Regulations
ECCS	Emergency Core Cooling System
ESP	Engineering Service Package
HVAC	Heating Ventilation and Air Conditioning
IAU	Issue Assessment Unit (i.e., corrective action department)
IMC	Inspection Manual Chapter
IPE	Individual Plant Examination
IR	Issue Report (i.e., deficiency document)
IRRG	Issue Report Review Group
LER	Licensee Event Report
LOCA	Loss of Coolant Accident
MO	Maintenance Order
NCV	Non-Cited Violation
NDE	Non-Destructive Examination
NPAD	Nuclear Performance Assessment Department (i.e., quality assurance)
NRC	Nuclear Regulatory Commission
OE	Operating experience
OSSRC	Off-Site Safety Review Committee
PI&R	Problem Identification and Resolution
POSRC	Plant Operations and Safety Review Committee
QPA	Quality and Performance Assessment
RCA	Root Cause Analysis
RCP	Reactor Coolant Pump
RHO	Receiving Hold Order
ROP	Reactor Oversight Process
SDP	Significance Determination Process
SSCs	Structures, Systems, and Components