March 2, 2001

Mr. Oliver D. Kingsley
President, Nuclear Generation Group
Commonwealth Edison Company
ATTN: Regulatory Services
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: BYRON INSPECTION REPORT 50-454-01-05(DRP); 50-455-01-05(DRP)

Dear Mr. Kingsley:

On February 17, 2001, the NRC completed an inspection at the Byron 1 and 2 reactor facilities. The enclosed report documents the inspection findings which were discussed on February 13, 2001, with Mr. R. Lopriore and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

No findings of significance were identified.

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/NRC/ADAMS/index.html (the Public Electronic Reading Room).

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

/RA/

Michael J. Jordan, Chief
Reactor Projects Branch 3

Docket Nos. 50-454; 50-455
License Nos. NPF-37; NPF-66

Enclosure: Inspection Report 50-454-01-05(DRP);
50-455-01-05(DRP)

See Attached Distribution

DOCUMENT NAME: C:\byr2001005 drp.wpd

To receive a copy of this document, indicate in the box:"C" = Copy without enclosure "**E**"= Copy with enclosure"**N**"= No copy

OFFICE	RIII	E	RIII					
NAME	Tongue:dtp		Jordan					
DATE	03/01/01		03/02/01					

OFFICIAL RECORD COPY

cc w/encl: D. Helwig, Senior Vice President, Nuclear Services
C. Crane, Senior Vice President, Nuclear Operations
H. Stanley, Vice President, Nuclear Operations
R. Krich, Vice President, Regulatory Services
DCD - Licensing
W. Levis, Site Vice President
R. Lopriore, Station Manager
P. Reister, Regulatory Assurance Manager
M. Aguilar, Assistant Attorney General
State Liaison Officer
State Liaison Officer, State of Wisconsin
Chairman, Illinois Commerce Commission

cc w/encl: D. Helwig, Senior Vice President, Nuclear Services
C. Crane, Senior Vice President, Nuclear Operations
H. Stanley, Vice President, Nuclear Operations
R. Krich, Vice President, Regulatory Services
DCD - Licensing
W. Levis, Site Vice President
R. Lopriore, Station Manager
P. Reister, Regulatory Assurance Manager
M. Aguilar, Assistant Attorney General
State Liaison Officer
State Liaison Officer, State of Wisconsin
Chairman, Illinois Commerce Commission

ADAMS Distribution:
DFT
GFD (Project Mgr.)
J. Caldwell
G. Grant
B. Clayton
SRI Byron
C. Ariano (hard copy)
DRP
DRSIII
PLB1
JRK1
BAH3

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos:	50-454; 50-455
License Nos:	NPF-37; NPF-66
Report No:	50-454-01-05(DRP); 50-455-01-05(DRP)
Licensee:	Commonwealth Edison Company
Facility:	Byron Generating Station, Units 1 and 2
Location:	4450 N. German Church Road Byron, IL 61010
Dates:	January 1 - February 17, 2001
Inspectors:	E. Cobey, Senior Resident Inspector B. Kemker, Resident Inspector T. Tongue, Project Engineer W. Scott, Reactor Engineer C. Thompson, Illinois Department of Nuclear Safety
Approved by:	Michael J. Jordan, Chief Reactor Projects Branch 3 Division of Reactor Projects

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.

SUMMARY OF FINDINGS

IR 05000454-01-05, IR 05000455-01-05, on 01/01-02/17/2001; Commonwealth Edison Company; Byron Generating Station; Units 1 & 2. Resident Inspector Report.

The baseline inspections were conducted by resident inspectors, a regional projects engineer, and a regional reactor engineer.

A. Inspection Identified Findings

No findings of significance were identified in any of the cornerstones.

B. Licensee Identified Violations

No violations of significance were identified.

Report Details

Summary of Plant Status

The licensee operated Unit 1 and Unit 2 at or near full power for the duration of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness

1R04 Equipment Alignment

a. Inspection Scope

The inspectors verified the system alignment of the 1A diesel generator (DG) and the Unit 0 and Unit 1 component cooling water (CC) trains while the 1B DG and Unit 1 CC heat exchanger, respectively, were out-of-service for maintenance. The inspectors also performed a complete system walkdown of the Unit 2 auxiliary feedwater (AF) system. The systems were selected because they were identified as risk significant in the licensee's risk analysis. The inspectors performed walkdowns of the accessible portions of the systems and verified the system lineup and each of the system operating parameters (i.e., temperature, pressure, flow, etc.). During the 1A DG alignment activity, the inspectors also verified the alignment of the normal and reserve offsite power sources. The inspectors reviewed applicable portions of the Updated Final Safety Analysis Report and Technical Specifications and the procedures listed below:

- Unit 1 Byron Operating Limiting Condition for Operation Action Requirement Procedure (BOL) 8.1, "LCOAR [Limiting Condition for Operation Action Requirement] AC [Alternating Current] Sources - Operating," Revision 4;
- Byron Operating Procedure (BOP) AF-E2, "Auxiliary Feedwater Electrical Lineup (Unit 2)," Revision 4;
- BOP AF-M2, "Auxiliary Feedwater System Valve Lineup," Revision 8;
- BOP CC-1, "Component Cooling Water System Startup," Revision 5;
- BOP CC-10, "Alignment of the U-0 CC Pump and U-0 CC HX [Heat Exchanger] to a Unit," Revision 10;
- BOP DG-1, "Diesel Generator Alignment to Standby Condition," Revision 7;
- BOP DG-E1A, "Train 'A' Diesel Generator System Electrical Lineup," Revision 2;
- BOP DG-M1A, "Train 'A' Diesel Generator System Valve Lineup," Revision 8;
- Unit 1 Byron Operating Surveillance Requirement Procedure (BOSR) 8.1.1-1, "Normal and Reserve Offsite AC Power Availability Weekly Surveillance," Revision 3;
- Byron Station Auxiliary Feedwater System Point to Point Review, dated September 22, 2000; and
- Byron Systems Training Manual, Chapter 26, Auxiliary Feedwater System.

As part of the complete system walkdown of the Unit 2 AF system, the inspectors interviewed the system engineer and reviewed the mechanical, electrical, and instrumentation and controls alignment through direct observation of the equipment and review of completed test data. The inspectors also reviewed a listing of open maintenance work request tasks and verified that all equipment problems observed by the inspectors during the walkdown had been identified by the licensee and were entered into the licensee's corrective action program. The inspectors evaluated the individual and cumulative affects of the existing problems, the existing temporary modifications, and the outstanding modifications on the AF system to perform its design safety function.

In addition, the inspectors reviewed the issues that the licensee entered into its corrective action program to verify that identified problems were being entered into the program with the appropriate characterization and significance. The inspectors also reviewed the licensee's corrective actions for the issues documented in the following condition reports:

- B2000-02573 Main Steam Valves Required to Be Closed Found Open,
- B2000-02588 BOP CV-7 Procedure Deficiency Directing Boration of the HUTs [Hold-up Tanks], and
- B2000-03307 Charger 2AF01EB Toggle Switch Found in Unexpected Position with Charger OOS [Out-of-Service].

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors examined the plant areas listed below to observe conditions related to fire protection:

- Unit 1 Auxiliary Electric Equipment Room (Zone 5.5-1),
- Unit 2 Auxiliary Electric Equipment Room (Zone 5.5-2), and
- Turbine Building (Zones 8.5-1, 8.5-2, and 8.6-0).

These areas were selected for inspection because they were identified as risk significant in the Byron Station Individual Plant Examination of External Events. The inspectors reviewed applicable portions of the Byron Station Fire Protection Report and assessed the licensee's control of transient combustibles and ignition sources, material condition, and operational status of fire barriers and fire protection equipment. During this inspection, the inspectors interviewed operations and engineering department personnel.

In addition, the inspectors reviewed the issues that the licensee entered into its corrective action program to verify that identified problems were being entered into the program with the appropriate characterization and significance. The inspectors also

reviewed the licensee's corrective actions for the issues documented in the following condition reports:

- B2000-02372 Fire Damper 0VC183Y Found Inoperable,
- B2000-02494 Adverse Trend in Housekeeping Deficiencies, and
- B2000-03022 Fire Detection Trouble Alarm Did Not Come in When Smoke Detector Removed.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

The inspectors assessed licensed operator performance and the training evaluators' critique during a licensed operator evaluated training session in the Byron Station operations training simulator on January 29, 2001. The inspectors focused on alarm response, command and control of crew activities, communication practices, procedural adherence, and implementation of emergency plan requirements.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors evaluated the licensee's implementation of the maintenance rule, 10 CFR 50.65, as it pertained to identified performance problems with the circulating water system (CW), fuel handling building filtered exhaust system, control room annunciators and system alarms used during emergency operating procedures, core exit thermal couples (CETC), and fuel handling (FH) equipment that were documented in the following condition reports:

- B1999-02044 Repeat Equipment Failures - 1/2PA19J,
- B1999-02127 Card Labeled Incorrectly,
- B1999-02334 Trip of 2A CW Pump During Start of Pump,
- B2000-00931 Spent Fuel Bridge Crane Malfunction,
- B2000-01195 Refuel Machine Failure,
- B2000-01578 Spent Fuel Bridge Crane Hoist Responded Improperly to FH Operator Demands,
- B2000-01754 Maintenance Rule FH1 Functional Failure Criteria Exceeded,
- B2000-02051 Possible Operability / FME [Foreign Material Exclusion] Concern Caused By Broken Auxiliary Building Duct,
- B2000-02335 1B CW Pump Trip,

- B2000-03177 Unexpected Re-Flash of Unit 2 BDPS [Boron Dilution Protection System] Train A Bypassed Window,
- B2000-03309 CETC's 34 and 51 Failed,
- B2000-03450 Problems with the CETC System on Byron Units 1 &2,
- B2000-03566 Unplanned LCOAR entry Subcooling Margin Monitor,
- B2000-03631 Unplanned LCOAR entry Subcooling Margin Monitor,
- B2000-03837 Failure of CW Blowdown Valve,
- B2000-03924 Unplanned LCOAR Entry Due to U1 Core Exit Thermocouple Failure,
- B2000-03942 Unplanned LCOAR Entry 1BOL3i for CETC #49 Failing High,
- B2001-00151 Hot Spot on 2CW01PC-M exciter Control Transformer Wiper Arm Contact, and
- B2001-00531 U-1 CETC #53 Failed Low.

During this inspection, the inspectors evaluated the licensee's monitoring and trending of performance data, verified that performance criteria were established commensurate with safety, and verified that the equipment failures were appropriately evaluated in accordance with the maintenance rule. The inspectors also interviewed engineering department personnel and reviewed Nuclear Station Procedure ER-3010, "Maintenance Rule," Revision 0.

In addition, the inspectors reviewed the issues that the licensee entered into its corrective action program to verify that identified problems were being entered into the program with the appropriate characterization and significance. The inspectors also reviewed the licensee's corrective actions for the issues documented in the following condition reports:

- B2000-00246 Maintenance Rule (a)(2) At Risk Review - WO Reliability Performance,
- B2000-00579 NRC Maintenance Rule Monitoring Data Request and Review Concerns,
- B2000-02015 Maintenance Rule Functional Failure Monthly Review for May 2000,
- B2000-02034 Maintenance Rule Database In-Scope Designation Depends on Security Level,
- B2000-02458 Maintenance Rule (a)(2) At Risk Reviews - PC5 Reliability & VA7 Availability Concerns,
- B2000-03231 Monthly Review of WR [Work Request] for Maintenance Rule Applicability,
- B2000-03539 Untimely Initiation of ACE's [Apparent Cause Evaluations] for Maintenance Rule Functional Failures,
- B2000-03671 Maintenance Rule IA1 Instrument Air Dryer Function (a)(1)(a)(2) Review, and
- B2000-03909 Maintenance Rule PR1 Fire & Oil Radiation Monitor (a)(1)(a)(2) Review.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed the licensee's evaluation of plant risk for planned maintenance activities on the Unit 1 component cooling water heat exchanger, the 1B diesel generator, and the 2A centrifugal charging pump. The inspectors selected these maintenance activities because they involved systems which were risk significant in the licensee's risk analysis.

During this inspection, the inspectors assessed the operability of redundant train equipment and verified that the licensee's planning of the maintenance activities minimized the length of time that the plant was subject to increased risk. The inspectors also interviewed operations, engineering and work control department personnel and reviewed Nuclear Station Procedure WC-AA-103, "On-Line Maintenance," Revision 3.

In addition, the inspectors reviewed the issues that the licensee entered into its corrective action program to verify that identified problems were being entered into the program with the appropriate characterization and significance. The inspectors also reviewed the licensee's corrective actions for the issues documented in the following condition reports:

- B2000-01654 NGG [Nuclear Generating Group] Standards and Online Risk, and
- B2000-03113 Online Risk Not Properly Communicated Between Personnel and Work Control.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors evaluated the licensee's basis that the issues identified in the following operability evaluations did not render the involved equipment inoperable or result in an unrecognized increase in plant risk:

- 01-001 Unit 2 Component Cooling Water Chemical Addition Tank and Funnel Are Not Installed Correctly,
- 01-002 Two Pinhole Leaks Identified in the 1B Diesel Generator Jacket Water Upper Cooler Vent Line, and
- 01-003 Root Weld for the Vent Line Associated With High Point Vent Valve 1CC158 May Be Susceptible to Fatigue.

The inspectors interviewed engineering department personnel and reviewed Nuclear Station Procedure (NSP) RS-AA-105, "Operability Determination Process," Revision 0; NSP CC-AA-309, "Control of Design Analyses," Revision 0; and the applicable portions of the Updated Final Safety Analysis Report and Technical Specifications.

In addition, the inspectors reviewed the issues that the licensee entered into its corrective action program to verify that identified problems were being entered into the program with the appropriate characterization and significance. The inspectors also reviewed the licensee's corrective actions for the issues documented in the following condition reports:

- B2000-01847 Taped Cable Splice Issue, and
- B2000-03535 Pressurizer Backup Heater Operation / Operability Assessment 99-023 / Power Uprate.

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds

a. Inspection Scope

The inspectors evaluated the operator work-arounds (OWAs) listed below to identify any potential affect on the functionality of mitigating systems or on the operators' response to initiating events:

- OWA 228 Source Range Noise, and
- OWA 238 Unit-1 Main Generator Synchronization Difficulties to the Grid.

The inspectors selected OWA 228 because of the historic problems experienced with source range instrumentation spiking during refueling outages. The inspectors selected OWA 238 because of the difficulties experienced by operators controlling turbine speed while synchronizing the Unit 1 main generator to the grid following the last Unit 1 refueling outage. The inspectors interviewed operating and engineering department personnel, and reviewed Nuclear Station Procedure OP-AA-101-303, "Operator Work-Around Program," Revision 0.

The inspectors also performed the semiannual review of the cumulative effects of OWAs. During this review the inspectors considered the cumulative effects of OWAs on the following:

- the reliability, availability and potential for mis-operation of a system;
- the ability of operators to respond to plant transients or accidents in a correct and timely manner; and
- the potential to increase an initiating event frequency or affect multiple mitigating systems.

In addition, the inspectors reviewed the issues that the licensee entered into its corrective action program to verify that identified problems were being entered into the program with the appropriate characterization and significance. The inspectors also reviewed the licensee's corrective actions for the issues documented in the following condition reports:

- B2000-00007 Primary Flow Totalizer Function Inaccurate,
- B2000-00090 Boric Acid Blend / Primary Water Totalizer Not Reading Less Than 16 Gallons Per Minute, and
- B2000-01786 Unit 2 SAC [Station Air Compressor] Surge During Swap to Unit 0 SAC.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed the permanent plant modifications listed below to verify that the installations were consistent with design modification documents and that the modifications did not adversely affect the availability, reliability, or functional capability of the systems:

- DCP 9800543 Replace DC [Direct Current] to DC Converters PS1 and PS2 in Diesel Generator Panels 1PL07J and 1PL08J, and
- DCP 9900375 Provide Alternate Cooling to 2A CV [Chemical and Volume Control] Charging Pump for Diesel Generator Allowed Outage Time.

The first modification replaced obsolete power converters in the diesel generator control panels with newer generation power converters. The second modification provides fire protection system water via a temporary hose and quick disconnect fittings as alternate cooling to the 2A CV pump oil cooler and gearbox cooler. In the event of a complete loss of essential service water, the charging pump could continue to operate to provide seal injection to the reactor coolant pump seals and prevent a loss of coolant leak from the seals.

The inspectors evaluated the implementation of these design changes to verify that:

- the compatibility, functional properties, environmental qualifications, seismic qualifications, and classification of materials and replacement components were acceptable;
- heat removal requirements can be addressed by support systems under accident conditions;
- equipment protection barriers and systems (i.e., fire, flood, missile) have not been compromised;

- affected operating procedures and training have been identified and necessary changes were complete or in progress;
- the revised flowpaths serve functional requirements under accident conditions;
- pressure boundary integrity was not compromised;
- implementation of the modifications did not impair key safety functions, operator response to the loss of a key safety function, or emergency/abnormal operating procedure actions; and
- the licensee maintained the plant in a safe configuration during post-modification testing.

The inspectors also evaluated the conduct of post-modification testing to ensure that system operability was maintained by:

- verifying that unintended system interactions did not occur;
- verifying that system performance characteristics, which could have been affected by the modification, met the design basis;
- validating the appropriateness of the modification design assumptions; and
- verifying that the modification test acceptance criteria were met.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors evaluated the licensee's post maintenance testing activities for maintenance conducted on the Unit 1 component cooling (CC) water heat exchanger, the 1B diesel generator (DG), and the 2A centrifugal charging pump. These activities included the following work requests:

- WR 960103166-01 Disassemble and Inspect Motor - 2A CV Pump,
- WR 980112896-01 Install New Flywheel Guard on 1B DG,
- WR 980132460-01 Investigate/Repair 2A CV Pump Outboard Bearing as Necessary,
- WR 990037325-01 Replace "AR" Relays for 2A CV Pump Cooler Fans 2A and 2B,
- WR 990037363-01 1B DG - Diesel Generator 18-Month Electrical Inspection,
- WR 990040163-01 1B DG - 18-Month Inspection and Engine Analysis,
- WR 990086223-01 Modify Splash Shield on CV Pump Seal,
- WR 990086542-01 1B DG - Fuel Oil Leak at 90-Degree Elbow,
- WR 990091606-01 2A CV Pump - Perform Various Preventive Maintenance Activities,
- WR 990127561-01 Replace Bimba Cylinder on 1B Diesel Generator,
- WR 990148873-01 B1R10 - Perform 18-Month Surveillance on 1B DG Engine,
- WR 990157838-01 2A CV Pump Lube Oil Cooler - Generic Letter 89-13 Heat Exchanger Inspection,

- WR 990157840-01 2A CV Pump Gear Cooler - Generic Letter 89-13 Heat Exchanger Inspection,
- WR 990178881-01 Perform Inspection of Motor - 2A CV Pump,
- WR 990184868-01 Perform Electrical Maintenance Surveillance on 1SX004 Unit 1 CC Heat Exchanger Supply Isolation Valve,
- WR 990190914-01 1B DG Jacket Water Cooler Eddy Current Inspection,
- WR 990191961-01 1B DG - Turbo Lube Oil Outlet Pipe Joint Leaks Oil While Engine Is Running,
- WR 990196785-01 2A CV Pump Mini-flow Check Valve Leakage - Replace Valve or Weld Cap,
- WR 990205687-01 Perform "VOTES" Testing on Unit 1 CC Heat Exchanger SX [Essential Service Water] Outlet Isolation Valve,
- WR 990205688-01 Perform "VOTES" Testing on Unit 1 CC Heat Exchanger SX Supply Isolation Valve,
- WR 990215187-01 Perform Electrical Maintenance Surveillance on 1SX007 Unit 1 CC Heat Exchanger Outlet Isolation Valve, and
- WR 990218876-01 1B DG - 18-Month Mechanical Inspection.

The inspectors selected these post maintenance activities because they involved systems which were risk significant in the licensee's risk analysis.

The inspectors reviewed the scope of the work performed and evaluated the adequacy of the specified post maintenance testing. The inspectors verified that the post maintenance tests were performed in accordance with approved procedures, that the procedures clearly stated acceptance criteria, and that the acceptance criteria were met. During these inspection activities, the inspectors interviewed operations, maintenance, and engineering department personnel and reviewed the completed post maintenance testing documentation.

In addition, the inspectors reviewed the issues that the licensee entered into its corrective action program to verify that identified problems were being entered into the program with the appropriate characterization and significance. The inspectors also reviewed the licensee's corrective actions for the issues documented in the following condition reports:

- B2000-01872 Failed PMT [Post Maintenance Test],
- B2000-01957 OB FWST [Filtered Water Storage Tank] Transfer Pump 0A Inoperable After Repairs to M-Coil (Failed PMT),
- B2000-02116 WR [Work Request] on Shift Engineer's Offices HVAC [Heating, Ventilation and Air Conditioning] Damper Failed Test, and
- B2000-03048 RD [Rod Drive] Logic Cabinet Mis-wired After Enhanced Card Maintenance.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors evaluated the surveillance testing activities listed below to verify that the testing demonstrated that the equipment was capable of performing its intended function:

- 1BOSR 7.5.3-2, "Unit 1 Diesel Driven Auxiliary Feedwater Pump Quarterly Surveillance," Revision 3;
- 2BOSR 8.1.2-1, "Unit 2 2A Diesel Generator Operability Monthly (Staggered) and Semi-Annual (Staggered) Surveillance," Revision 4; and
- Unit 2 Byron Technical Surveillance Requirement Procedure (BVSR) 5.2.4-1, "Unit 2 ASME [American Society of Mechanical Engineers] Surveillance Requirements for Safety Injection Pump 2SI01PA," Revision 4.

The inspectors selected these surveillance test activities because the system functions were identified as risk significant in the licensee's risk assessment and the components were credited as operable in the licensee's safety analysis to mitigate the consequences of a potential accident. During testing of the 2A diesel generator and 2A safety injection pump, the inspectors also observed scheduled visual examinations of selected piping and components. The inspectors interviewed operations and engineering department personnel, reviewed the completed test documentation and applicable portions of the Updated Final Safety Analysis Report and the Technical Specifications, and observed the performance of all or portions of these surveillance testing activities.

In addition, the inspectors reviewed the issues that the licensee entered into its corrective action program to verify that identified problems were being entered into the program with the appropriate characterization and significance. The inspectors also reviewed the licensee's corrective actions for the issues documented in the following condition reports:

- B1999-03834 2A DG Load Oscillations and Subsequent Trip at Cooldown Cycle,
- B2000-00137 Unexpected Load Swings When Running 2A DG
- B2000-01640 LCOAR Entry,
- B2000-02281 Unit 1 On-line Risk Placed in Yellow Unnecessarily,
- B2000-02663 M&TE [Measuring and Test Equipment] Used with Expired Calibration Date, and
- B2000-02840 DC Bus 111 Battery Charger Failure During Testing.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the temporary modification listed below to verify that the installation was consistent with design modification documents and that the modification did not adversely impact system operability or availability:

- DCP 9900890 Temporarily Disable 1C Feedwater Pump Thrust Bearing Alarm to Remove an Operator Distraction.

The temporary modification disabled the 1C feedwater pump thrust bearing alarm to remove a locked-in alarm in the main control room. The inspectors verified that configuration control of the modification was correct by comparing the field installation with design modification documents and confirmed that appropriate post-installation testing was accomplished. The inspectors reviewed the design modification documents and the 10 CFR 50.59 evaluation against the applicable portions of the Updated Final Safety Analysis Report. The inspectors also interviewed operating and engineering department personnel and reviewed Nuclear Station Procedure CC-AA-112, "Temporary Modifications," Revision 2.

In addition, the inspectors reviewed the issues that the licensee entered into its corrective action program to verify that identified problems were being entered into the program with the appropriate characterization and significance. The inspectors also reviewed the licensee's corrective actions for the issues documented in the following condition reports:

B1999-02647	Temporary Chemical Feed System Installed in Violation of NSWP [Nuclear Station Work Procedure] A-21 Requirements, and
B1999-02890	Processing of TMOD [Temporary Modification] 99-0-026 and OOS [Out-of-Service] 990007730.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed a training evolution that was conducted in the licensee's control room simulator on January 29, 2001. The inspection effort was focused on evaluation of the licensee's classifications, notifications, and protective action recommendations for the simulated event. The inspectors also evaluated the licensee's conduct of the training evolution, including the licensee's critique of performance to identify weaknesses and deficiencies.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA3 Event Follow-up

(Closed) Licensee Event Report (LER) 50-454-99-002-01: "Design Package Fails to Classify Feedwater Vent Valves as Containment Isolation Valves and Results in Missed Technical Specification Surveillance," Supplement 1. The inspectors reviewed the original LER and issued Non-Cited Violation 50-454-99008-02 for the licensee's failure to verify four high point vent valves (1FW118A/B/C/D) closed every 31 days as required by Technical Specification Surveillance Requirement 3.6.3.3. The licensee submitted Supplement 1 to LER 50-454-99-002 to revise the corrective actions delineated in the LER. The inspectors determined that the information provided in Supplement 1 to LER 50-454-99-002 did not raise any new issues or change the conclusions of the initial review which were documented in NRC Inspection Report 50-454/455/99008(DRP). Consequently, this LER is closed.

4OA6 Meetings, including Exit

Exit Meeting Summary

The inspectors presented the inspection results to Mr. R. Lopriore and other members of licensee management at the conclusion of the inspection on February 13, 2001. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

B. Blaine, Radiation Protection Manager
P. Donnelly, Maintenance Support Superintendent
D. Hoots, Operations Manager
J. Kramer, Work Control Manager
S. Kuczynski, Station Manager
R. Lopriore, Site Vice President
P. Reister, Regulatory Assurance Manager
R. Roton, Regulatory Assurance
D. Wozniak , Engineering Manager

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

50-454-99-002-01	LER	Design package fails to classify feedwater vent valves as containment isolation valves and results in missed Technical Specification surveillance

Discussed

50-454-99008-02	NCV	Failure to verify feedwater system vent valves closed every 31 days as required for containment manual isolation valves

LIST OF BASELINE INSPECTIONS PERFORMED

The following inspectable-area procedures were used to perform inspections during the report period. Documented findings are contained in the body of the report.

Inspection Procedure		
Number	Title	Report Section
71111-04	Equipment Alignment	1R04
71111-05	Fire Protection	1R05
71111-11	Licensed Operator Requalification Program	1R11
71111-12	Maintenance Rule Implementation	1R12
71111-13	Maintenance Risk Assessments and Emergent Work Control	1R13
71111-15	Operability Evaluations	1R15
71111-16	Operator Workarounds	1R16
71111-17	Permanent Plant Modifications	1R17
71111-19	Post Maintenance Testing	1R19
71111-22	Surveillance Testing	1R22
71111-23	Temporary Plant Modifications	1R23
71114-06	Drill Evaluation	1EP6
71153	Event Follow-up	4OA3
(none)	Meetings, including Exit	4OA6

LIST OF ACRONYMS USED

AC	Alternating Current
ACE	Apparent Cause Evaluation
AF	Auxiliary Feedwater
ASME	American Society of Mechanical Engineers
BDPS	Boron Dilution Protection System
BOL	Byron Operating Limiting Condition for Operation Action Requirement Procedure
BOP	Byron Operating Procedure
BOSR	Byron Operating Surveillance Requirement Procedure
BVSR	Byron Technical Surveillance Requirement Procedure
CC	Component Cooling Water
CETC	Core Exit Thermocouple System
CFR	Code of Federal Regulations
CV	Chemical and Volume Control
CW	Circulating Water System
DC	Direct Current
DCP	Design Change Package
DG	Diesel Generator
DRP	Division of Reactor Projects
FH	Fuel Handling
FME	Foreign Material Exclusion
FWST	Filtered Water Storage Tank
HUT	Hold-up Tank
HVAC	Heating, Ventilation and Air Conditioning
HX	Heat Exchanger
LCOAR	Limiting Condition for Operation Action Requirement
LER	Licensee Event Report
M&TE	Measuring and Test Equipment
NCV	Non-Cited Violation
NGG	Nuclear Generation Group
NRC	Nuclear Regulatory Commission
NSP	Nuclear Station Procedure
NSWP	Nuclear Station Work Procedure
OOS	Out-of-Service
OWA	Operator Work-Around
PARS	Publically Available Records
PMT	Post Maintenance Test
RD	Rod Drive
SAC	Station Air Compressor
SX	Essential Service Water
TMOD	Temporary Modification
WR	Work Request