

October 23, 2000

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 50-454-00-14(DRP); 50-455-00-14(DRP)

Dear Mr. Kingsley:

On September 30, 2000, the NRC completed an inspection at the Byron 1 and 2 reactor facilities. The enclosed report presents the results of that inspection. The results of this inspection were discussed on September 28, 2000, with Mr. W. Levis and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to safety and to compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, one issue of very low safety significance (GREEN) was 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,

Original signed by
Michael J. Jordan
Michael J. Jordan, Chief
Reactor Projects Branch 3

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

Enclosure: Inspection Report 50-454-00-14(DRP);
50-455-00-14(DRP)

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/s/Michael J. Jordan

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 50-454-00-14(DRP); 50-455-00-14(DRP)

Licensee: Commonwealth Edison Company

Facility: Byron Generating Station, Units 1 and 2

Location: 4450 N. German Church Road
Byron, IL 61010

Dates: August 22 - September 30, 2000

Inspectors: E. Cobey, Senior Resident Inspector
B. Kemker, Resident Inspector
C. Thompson, Illinois Department of Nuclear Safety

Approved by: Michael J. Jordan, Chief
Reactor Projects Branch 3
Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000454-00-14, IR05000455-00-14, on 08/22-09/30/2000; Commonwealth Edison Company; Byron Generating Station; Units 1 & 2. Non-routine Plant Evolutions.

The baseline inspection was conducted by resident inspectors. This inspection identified one green issue. The significance of the issue is indicated by its color (GREEN, WHITE, YELLOW, RED) and was determined by the Significance Determination Process.

Cornerstone: Initiating Events

- Green. Operator actions in response to a failed feedwater regulating valve controller were inappropriate and resulted in making the feedwater regulating valve controller inoperable and an uncomplicated reactor trip.

The risk significance of this issue was very low because all of the mitigation systems were operable and functioned properly and barrier integrity was not challenged. (Section 1R14)

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
<ul style="list-style-type: none">● Initiating Events● Mitigating Systems● Barrier Integrity● Emergency Preparedness	<ul style="list-style-type: none">● Occupational● Public	<ul style="list-style-type: none">● Physical Protection

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>.

Report Details

Summary of Plant Status

The licensee operated Unit 1 at or near full power until September 23, 2000, when the licensee conducted a Unit 1 reactor shutdown for refueling outage B1R10. Unit 1 had been operated for 493 consecutive days prior to commencing the outage. Unit 1 was defueled at the end of the inspection period.

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

1. REACTOR SAFETY Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

1R04 Equipment Alignment

a. Inspection Scope

The inspectors verified the system alignment of the 1B diesel generator (DG) and the 1A essential service water (SX) system train while the 1A DG and 1B SX system train, respectively, were out-of-service for maintenance. 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 1B DG alignment activity, the inspectors also verified that the alignment of normal and reserve offsite power sources supported operability of emergency 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 Limits Procedure (BOL) 8.1, "LCOAR [Limiting Condition for Operation Action Requirement] AC [Alternating Current] Sources - Operating," Revision 2
- Byron Operating Procedure (BOP) DG-1, "Diesel Generator Alignment to Standby Condition," Revision 7
- BOP DG-E1B, "Train 'B' Diesel Generator System Electrical Lineup," Revision 2
- BOP SX-E1A, "Train 'A' Essential Service Water Electrical Lineup," Revision 2
- BOP SX-M1A, "Train 'A' Essential Service Water Valve Lineup," Revision 3
- Byron Operating Surveillance Requirement Procedure (BOSR) 8.1.1-1, "Normal and Reserve Offsite AC Power Availability Weekly Surveillance," Revision 2

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

- CR B2000-01290 Recurring Errors Identified in Abnormal Component Position Sheets
- CR B2000-01294 Abnormal Component Position Sheet Not Closed Out When Work Was Completed

b. Findings

There were no findings identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors examined the Unit 2 Upper Cable Spreading Room (Zone 3.3B-2) to observe conditions related to fire protection. This area was selected for inspection because it was 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 also interviewed engineering department personnel.

b. Findings

There were no findings identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors evaluated the licensee's implementation of the maintenance rule, 10 CFR Part 50.65, as it pertained to identified performance problems with the 1C and 1D steam generator (SG) power operated relief valves (PORVs), the 2A SG narrow range level loop low level bistable (2LI-0519F), and the Unit 2 process sampling system outside containment isolation valve (2PS9356B) that had been documented in the following condition reports.

- CR B2000-01449 Circuit Board Failure
- CR B2000-01515 Unplanned LCOAR [Limiting Condition for Operation Action Requirement] Entry for 1C SG PORV
- CR B2000-01649 Containment Isolation Valve Fails Open
- CR B2000-01749 Unplanned LCOAR Entry Upon Failure of 2MS018D

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 the station's maintenance rule coordinator and system engineers and reviewed Nuclear Station Procedure ER-3010, "Maintenance Rule," Revision 0.

In addition, the inspectors evaluated the appropriateness of the licensee's corrective actions for a maintenance rule program issue documented in the following condition report.

- CR B2000-01520 Multiple Definitions of "Availability"

b. Findings

There were no findings 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 1B and 2A essential service water system trains and the 1A emergency diesel generator. 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 and work control department personnel and reviewed Nuclear Station Procedure WC-AA-103, "On-Line Maintenance," Revision 0.

In addition, the inspectors evaluated the licensee's corrective actions for a maintenance issue documented in the following condition report to verify that identified problems were being entered into the licensee's corrective action program with the appropriate characterization and significance.

- CR B2000-02281 Unit 1 Online Risk Placed in Yellow Unnecessarily

b. Findings

There were no findings identified.

1R14 Personnel Performance During Non-routine Plant Evolutions

Unit 1 Shutdown for Refueling Outage B1R10

a. Inspection Scope

The inspectors observed the heightened level of awareness briefing for the Unit 1 reactor shutdown for refueling outage B1R10 and observed selected portions of the shutdown evolution. This non-routine plant evolution was selected for observation to evaluate operator performance. The inspectors interviewed operations department personnel and reviewed the following procedures.

- Unit 1 Byron General Operating Procedure (BGP) 100-4, "Power Descension," Revision 21
- 1BGP 100-5, "Plant Shutdown and Cooldown," Revision 32

b. Findings

There were no findings identified.

Unit 2 Automatic Reactor Trip Due to Low Steam Generator Level Caused by an Inappropriate Operator Response to a Failed Circuit Card in the Feedwater Flow Control Circuitry

a. Inspection Scope

On July 26th, 2000, Unit 2 experienced an automatic reactor trip from full power due to low level in the 2C steam generator (SG). This event was selected for review to determine if operator actions in response to a failed feedwater regulating valve (FRV) controller were appropriate and in accordance with the response required by the licensee's procedures and training. The inspectors interviewed the shift operations superintendent and reviewed the licensee's root cause evaluation and the following procedures.

- Byron Administrative Procedure 300-1, "OP-AA-101-101, Conduct of Operations Manual, Byron Addendum," Revision 18
- Byron Alarm Response Procedure (BAR) 2-15-C4, "SG 2C Flow Mismatch FW [Feedwater] Flow Low," Revision 1
- BAR 2-15-C6, "SG 2C Level Low," Revision 2
- BAR 2-15-C9, "SG 2C Level Deviation High Low," Revision 2

b. Findings

(Closed) Licensee Event Report (LER) 50-455-00-02-00: "Automatic Reactor Trip System Actuation From Low Steam Generator Level Caused by an Inappropriate Operator Response to a Failed Circuit Card in the Feedwater Flow Control Circuitry." The FRV controllers operate in either a manual or automatic control mode, but normally are operated in the automatic control mode. A control circuit failure in the 2C SG FRV controller resulted in a "full close" manual control mode demand signal for the 2C FRV. Unit 2 was initially unaffected by this control circuit failure because the 2C FRV controller was in the automatic control mode. Operators incorrectly concluded that automatic control for the FRV had failed and switched the controller to manual control, which caused the FRV to go closed. The closure of the FRV resulted in a loss of feedwater flow to the 2C SG, causing SG level to decrease to the automatic reactor trip setpoint. The inspectors concurred with the results of the licensee's root cause evaluation of this event which identified four inappropriate operator actions: (1) operators failed to use alternate indications, such as feedwater flow and SG level, to validate their conclusion that automatic control for the FRV was failing; (2) operators switched the feedwater controller from automatic control to manual control; (3) operators again switched the feedwater controller back to manual control after returning it to automatic control; and (4) operators delayed identifying the need initiate a manual

reactor trip, which resulted in the automatic reactor trip. The inspectors noted that the licensee also identified a concern with the effectiveness of the command and control function of the unit supervisor during the event.

The licensee promptly corrected the control circuit card failure and initiated additional corrective actions to address the operator performance issues. The inspectors determined that the trip was uncomplicated, all of the mitigation systems were operable and functioned properly, and barrier integrity was not challenged. The licensee reported this event as a condition that resulted in an automatic actuation of the reactor protection system in accordance with 10 CFR 50.73(a)(2)(iv).

The inspectors noted that operators have been conditioned by training to take manual control of the manual/automatic controllers whenever they believe the controllers are not functioning properly. The inspectors were concerned that in this case, a conditioned operator response to the controller failure caused the event. The inspectors concurred with the licensee's conclusion that there were no adverse plant or public safety consequences as a result of this event. The performance indicator for Unit 2 unplanned scrams for the second quarter of 2000 was in the licensee response band at a value of 0.9. It is expected that the indicator's value will change to approximately 1.6 for the third quarter of 2000 as a result of this event, which is still within the licensee response band.

The inspectors concluded that the inappropriate operator actions associated with making the 2C-FRV controller inoperable could reasonably be viewed as a precursor to a significant event and if left uncorrected could become a more significant safety concern. Since only the initiating event cornerstone was affected and associated assumptions for this event had no impact other than increasing the likelihood of an uncomplicated reactor trip, the inspectors determined by utilizing the significance determination process that the operator performance issues associated with this event were of very low safety significance (GREEN).

The inspectors reviewed the licensee's corrective actions for this event and found them to be reasonable. This LER is closed.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors evaluated the licensee's basis that the issue identified in the following condition report did not render the involved equipment inoperable or result in an unrecognized increase in plant risk.

- CR B2000-02405 CVCS [Chemical and Volume Control System] Modeling Assumption for Loss of Offsite Power Analysis

The inspectors evaluated the licensee's basis for its determination that a non-conservative assumption in the licensing basis analysis for the loss of offsite power event identified by Westinghouse did not result in a condition where the design basis

could not be met and verified that the identified issue did not result in an unrecognized increase in risk.

The inspectors interviewed engineering department personnel and reviewed Westinghouse Nuclear Safety Advisory Letter 00-013, "CVCS Modeling Assumption for Loss of Offsite Power Analyses," and applicable portions of the Updated Final Safety Analysis Report.

b. Findings

There were no findings identified.

1R16 Operator Work-Arounds

a. Inspection Scope

The inspectors evaluated a potential operator work-around (OWA) described in the condition report listed below to identify any potential affect on the functionality of the essential service water (SX) system or on operators' response to an initiating event.

- CR B2000-01787 Proceduralizing Operator Work-Around Due to Poor Design

The inspectors selected this issue because the design of the system required disassembly and reassembly of mechanical fittings to vent portions of the SX system piping. It was noted that this design could potentially affect operators' capability to respond to abnormal system operating conditions. The inspectors interviewed operating and engineering department personnel and reviewed the following procedures.

- Nuclear Station Procedure OP-AA-101-303, "Operator Work-Around Program," Revision 0
- Byron Operating Procedure (BOP) SX-7, "Filling and Venting the SX System," Revision 6

In addition, the inspectors evaluated the licensee's corrective actions for an OWA issue documented in the following condition report to verify that identified problems were being entered into the licensee's corrective action program with the appropriate characterization and significance.

- CR B2000-02040 Corrective Action Not Documented and May Not Have Occurred

b. Findings

There were no findings identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors evaluated the licensee's post maintenance testing activities for maintenance conducted on the 1B and 2A essential service water (SX) system trains and the 1A emergency diesel generator (DG). These activities included the following work requests.

- WR 970074699-01 Rebuild Actuator, Regulators and Replace Elastomers on 1A DG Jacket Water Heat Exchanger SX Outlet Valve
- WR 980064885-01 Refurbish 2A SX Pump Discharge Check Valve
- WR 980117422-01 Rebuild Lube Oil System (Portion for the Outboard Bearing) on the 2A SX Pump
- WR 990082179-01 Overhaul 1B SX Pump
- WR 990163204-02 Replace Defective 4X3 Relay - 1A DG Unit Master Run Relay

The inspectors selected these post maintenance testing 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 and engineering department personnel and reviewed the completed post maintenance testing documentation.

b. Findings

There were no findings 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 3.2.7-602B Unit One ESFAS [Engineered Safety Feature Actuation System] Instrumentation Slave Relay Surveillance (Train B Automatic Safety Injection - K602, K647)
- 1BVSr 3.5.1-2 Unit 1 Bus 142 Undervoltage Protection Monthly Surveillance
- 2BOSR 3.1.5-2 Unit Two Train B Solid State Protection System Bi-monthly Surveillance (Staggered)

The inspectors selected these surveillance tests 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. 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 these surveillance testing activities.

b. Findings

There were no findings 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 9900521 Install Check Valve Between Primary Strainer and Fuel Pump

The temporary modification installed a check valve in the fuel supply line between the primary fuel strainer and the fuel pump on the diesel driven 0B essential service water makeup pump to minimize voiding of fuel in the line and the resultant loss of prime to the fuel pump. 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 associated 10 CFR 50.59 evaluation against the applicable portions of the Updated Final Safety Analysis Report. The inspectors also interviewed engineering department personnel and reviewed Nuclear Station Procedure CC-AA-112, "Temporary Modifications," Revision 0.

In addition, the inspectors reviewed Byron Mechanical Maintenance Procedure 3300-25, "Refueling Water Storage Tank Pipe Tunnel Hatch Cover," Revision 1, and evaluated the licensee's corrective actions for a temporary plant modification issue documented in the following condition report.

- CR B2000-00189 Non-specific Acceptance Criteria and Test Controls

b. Findings

There were no findings identified.

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed a training evolution that was conducted in the licensee's control room simulator on August 30, 2000. The inspection effort was focused on evaluation of the licensee's classifications, notifications, and protective action recommendations during the training evolution. 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

There were no findings identified.

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification

Safety System Unavailability - Auxiliary Feedwater (AF) and Emergency Alternating Current (AC) Power Systems

a. Inspection Scope

The inspectors verified the Safety System Unavailability performance indicators for the AF and emergency AC power systems for both units. The inspectors reviewed operating logs, maintenance rule database entries, maintenance history and surveillance test history for unavailability information for these systems since January 1, 2000. The inspectors also reviewed applicable portions of NEI [Nuclear Energy Institute] 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 0 and Byron Operating Procedure VD-5, "DG Room Ventilation System Operation," Revision 4.

b. Findings

During review of performance indicator data for the emergency AC power system, the inspectors identified that the licensee had not included unavailability time for the 2B diesel generator (DG) on May 18, 2000, when the 2B DG ventilation fan was out-of-service for maintenance to calibrate a differential pressure switch. The inspectors noted that the ventilation system was not able to perform its support function for the diesel generator with the fan out-of-service and that DG room ventilation was necessary for sustained DG operation to ensure operability. Although the DG was declared inoperable and the appropriate Technical Specification limiting condition for operation

was entered during this maintenance activity, the licensee did not consider the DG to be unavailable.

Similarly, the inspectors noted that the licensee had not accounted for unavailability time associated with the performance of annual surveillance test of the carbon dioxide fire suppression system in the DG rooms. The surveillance test involved taking the DG room ventilation fan out-of-service and performing destructive testing of the electronic thermal links that hold open the fire dampers supplying ventilation to the room. Although the DG was declared inoperable and the appropriate Technical Specification limiting condition for operation was entered during this testing, the licensee did not consider the DG to be unavailable. In the event of an emergency start of the DG, actions required to restore the DG room ventilation system to an operable status would involve opening ventilation dampers and reinstalling electronic thermal links (a repair), clearing an out-of-service on the ventilation fan, and starting the ventilation fan. The inspectors noted that the recovery actions were not uncomplicated and that a dedicated operator was not located within the room for the entire duration of the testing. The licensee's argument for DG availability was that the DG remained operable based upon an operability evaluation previously performed to address the impact of the DG ventilation system on DG operability. The licensee concluded that sufficient time exists to restore the ventilation system before environmental conditions in the DG room would render it inoperable. However, as stated in NEI 99-02, the intent of the restrictions on availability are based on virtual certainty of success versus sufficient time to correct the condition.

In addition, the inspectors noted that the licensee had not accounted for unavailability time associated with a temporary modification to the DG ventilation system used during cold weather to prevent room temperature from impacting DG operability. The modification involved taking the DG room ventilation fan control switch to pull-to-lock to prevent its operation (caution carding the control switch) and covering the ventilation outside air damper with prefabricated covers. The inspectors noted that the activity was controlled by an operating procedure that also provided instructions to return the DG ventilation system to normal operation. In the event of an emergency start of the DG, these recovery actions involve entering the ventilation plenum with the DG running (the DG turbo charger shares a common plenum with the ventilation system), climbing to the outside air damper, cutting and removing tie-wraps that fasten the covers over the damper, and removing the covers. Operators must exercise caution when entering and exiting the plenum because a sudden pressure change can affect the turbo charger operation and result in shutdown of the DG. The inspectors recognized that these restoration actions were not simple and that the licensee did not position dedicated operators locally for the entire duration of the temporary installation. The licensee's argument for DG availability is that the DG remained operable based upon an operability evaluation previously performed to address the impact of the DG ventilation system on DG operability. The licensee concluded that sufficient time exists to restore the ventilation system before environmental conditions in the DG room would render it inoperable. Although this condition is a temporary modification to the system, the inspectors were concerned that the intent of the restrictions on availability are based on virtual certainty of success versus sufficient time to restore the system.

The reporting of unavailability time for the emergency AC power systems as discussed above is considered an unresolved item (50-454/455-00-14-01 (DRP)) pending further NRC review.

40A5 Other

Performance Indicator Data Collecting and Reporting Process Review Temporary Instruction (TI 2515/144)

a. Inspection Scope

The inspectors reviewed the licensee's performance indicator data collecting and reporting process for the performance indicators listed below.

- Safety System Unavailability - Auxiliary Feedwater System
- Safety System Unavailability - Emergency AC [Alternating Current] Power System

The inspectors reviewed indicator definitions, data reporting elements, calculational methods, definitions of terms, and clarifying notes used by the licensee for consistency with industry guidance contained in applicable portions of NEI [Nuclear Energy Institute] 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 0.

b. Findings

Except for the unresolved issue discussed in Section 40A1, there were no findings identified.

40A6 Meetings, including Exit

Exit Meeting Summary

The inspectors presented the inspection results to Mr. W. Levis and other members of licensee management at the conclusion of the inspection on September 28, 2000. 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

S. Gackstetter, Shift Operations Superintendent
D. Hoots, Operations Manager
W. Levis, Site Vice President
R. Lopriore, Station Manager
P. Reister, Regulatory Assurance Manager
G. Stauffer, Regulatory Assurance
D. Wozniak, Engineering Manager

NRC

S. Burgess, Senior Reactor Analyst

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-454/455-00-14-01 URI Review of the licensee's reporting of unavailability time for the emergency alternating current power system

Closed

50-455-00-02-00 LER Automatic reactor trip system actuation from low steam generator level caused by an inappropriate operator response to a failed circuit card in the feedwater flow control circuitry

Discussed

None

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.

<u>Inspection Procedure</u>		
<u>Number</u>	<u>Title</u>	<u>Report Section</u>
71111-04	Equipment Alignment	1R04
71111-05	Fire Protection	1R05
71111-12	Maintenance Rule Implementation	1R12
71111-13	Maintenance Risk Assessments and Emergent Work Control	1R13
71111-14	Personnel Performance During Non-routine Plant Evolutions and Events	1R14
71111-15	Operability Evaluations	1R15
71111-16	Operator Work-Arounds	1R16
71111-19	Post Maintenance Testing	1R19
71111-22	Surveillance Testing	1R22
71111-23	Temporary Plant Modifications	1R23
71114-06	Drill Evaluation	1EP6
71151	Performance Indicator Verification	4OA1
2515/144	Performance Indicator Data Collecting and Reporting Process Review	4A05

LIST OF ACRONYMS USED

AC	Alternating Current
AF	Auxiliary Feedwater
BAR	Byron Annunciator Response Procedure
BGP	Byron General Operating Procedure
BOL	Byron Operating Limits Procedure
BOP	Byron Operating Procedure
BOSR	Byron Operating Surveillance Requirement Procedure
BVSR	Byron Technical Surveillance Requirement Procedure
CFR	Code of Federal Regulations
CR	Condition Report
CVCS	Chemical and Volume Control System
DG	Diesel Generator
DRP	Division of Reactor Projects
ESFAS	Engineered Safety Feature Actuation System
FRV	Feedwater Regulating Valve
FW	Feedwater
LCOAR	Limiting Condition for Operation Action Requirement
LER	Licensee Event Report
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OWA	Operator Work-Around
PORV	Power Operated Relief Valve
SX	Essential Service Water
TI	Temporary Instruction
URI	Unresolved Item
WR	Work Request