

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 50-454/97008(DRP); 50-455/97008(DRP)

Licensee: Commonwealth Edison Company

Facility: Byron Generating Station, Units 1 & 2

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

Dates: May 2 through June 12, 1997

Inspectors: S. D. Burgess, Senior Resident Inspector  
N. D. Hilton, Resident Inspector  
C. K. Thompson, Illinois Department of Nuclear Safety

Approved by: Roger D. Lanksbury, Chief,  
Reactor Projects, Branch 3

EXECUTIVE SUMMARY  
Byron Generating Station, Units 1 & 2  
NRC Inspection Report 50-454/97008, 50-455/97008

This inspection included aspects of licensee operations, engineering, maintenance, and plant support. The report covers a 6-week period of resident inspection.

Operations

- Preparations to reduce power and shut down Unit 1 and Unit 2 due to a missed technical specification surveillance were well planned and implemented (Section O1.2).
- Operator performance during two Unit 1 shutdowns and startups for bus duct cooling repairs and the 1A main steam isolation valve (MSIV) repair was excellent (Section O1.3 and O2.1).
- The licensee's procedures and policies concerning non-licensed operator qualifications for the radwaste panel were considered adequate (Section O5.1).
- The inspectors identified that corrective actions as detailed in licensee event report (LER) 454/94-014, were not performed. This was considered a corrective action violation (Section O8.1).

Maintenance

- Routine maintenance and surveillance activities were well performed. The post-job maintenance critique of the 1A MSIV repair was considered excellent for identification of issues and lessons learned (Section M1.1 and M1.2).
- The licensee's corrective actions regarding the identification of alcohol in emergency batteries was considered appropriate and timely (Section M1.1).
- The inspectors identified that the performance of the auxiliary feedwater (AF) pump ASME surveillance prior to the slave relay start surveillance, pre-conditioned the engine. This was considered a violation (Section M1.3).
- The inspectors determined that the licensee did not aggressively review, plan, and document the events surrounding the overcrank of the 2B AF pump (Section M1.3).

Engineering

- The inspectors identified that the licensee did not perform an evaluation of a temporary modification for a strip chart recorder attached to a safety-related 125V bus battery charger. This was considered a design control violation (Section E8.1).

Plant Support

- The inspectors identified a weakness in the posting of contaminated areas on an instrument piping rack (Section R1.1).

## REPORT DETAILS

### Summary of Plant Status

Unit 1 operated at or near full power until May 3, 1997, when reactor power was reduced to approximately 20 percent and the main generator was removed from the grid for bus duct cooling repairs. The main generator was returned to service on May 4, 1997.

Unit 1 continued to operate at full power until May 31, 1997, when the 1A main steam isolation valve hydraulic accumulator on the active train failed during routine testing. To complete repairs the plant was shutdown. The reactor was made critical and the generator returned to service on June 3, 1997.

Unit 2 operated at or near full power during this inspection period.

### I. Operations

#### O1 Conduct of Operations

##### O1.1 General Comments (71707)

Using Inspection Procedure 71707, the inspectors conducted frequent reviews of ongoing plant operations. In general, the conduct of operations was professional and safety-conscious. Observations indicated that the operations staff was knowledgeable of plant conditions, responded promptly and appropriately to alarms, and performed thorough turnovers. Additionally, the inspectors noted that the station has completed four startups and shutdowns since January 1997 and each one was excellent. For instance, the inspectors noted good command and control, communications, and operator proficiency during these evolutions. Inspection Reports 97002 and 97005 also outline specific observations of these startups and shutdowns. Specific events and noteworthy observations during this inspection report period are detailed in the sections below.

##### O1.2 Unit 1 Power Reduction Pending Enforcement Discretion Approval

The inspectors questioned surveillance requirements concerning the chemical and volume control system (CV). As a result of discussions between the NRC and the licensee the CV system was declared inoperable for both Unit 1 and Unit 2 because the high points had not been vented as required by Technical Specifications (TS). The licensee requested and was granted a Notice of Enforcement Discretion (NOED) for both Unit 1 and Unit 2. Further details of the emergency core cooling system (ECCS) venting issues are documented in NRC Inspection Report 50-454/455-97009. The inspectors observed the operators' heightened level of awareness (HLA) briefing prior to beginning a shutdown of Unit 1. The briefing was thorough and stressed good communications. The inspectors also observed the shift begin to reduce power on Unit 1 and noted that good communications were utilized in directing and performing activities, that the operators exercised good command and control, and that the number of people in the control room was minimized. Power

reduction continued until the shift was requested to suspend the power reduction for approximately 45 minutes pending approval of the NOED. The inspectors concluded that the licensee conducted a good briefing and was adequately prepared to shutdown both Units if the NOED had not been granted.

### **O1.3 Unit 1 Shutdown and Startup to Repair 1A Main Steam Isolation Valve**

#### **a. Inspection Scope (71707)**

The inspectors observed significant portions of the Unit 1 shutdown and startup due to a failed main steam isolation valve (MSIV) surveillance.

#### **b. Observations and Findings**

On May 29, 1997, the active train of the hydraulic system for the 1A MSIV failed during a partial stroke surveillance. The licensee was unable to repair the system prior to the expiration of the 48-hour limiting condition for operation (LCO) and commenced a reactor shutdown on May 31, 1997. The inspectors observed operators remove the unit from the grid and then trip the reactor. The licensee tripped the reactor per the normal shutdown procedure to verify all rods would insert properly. The inspectors observed all rod bottom indications as expected. The inspectors also observed very good command and control, communications, and procedure adherence. Peer checks were also excellent during the entire shutdown process.

The inspectors observed significant portions of the Unit 1 startup on June 3, 1997. The inspectors observed the HLA brief, which emphasized procedural compliance, control of personnel in the control room, reactivity control, and lessons learned. The inspectors considered operator performance during the approach to criticality excellent and observed strong interaction with the qualified nuclear engineer. The unit reactor operator verified that each expected alarm was due to the specific input. While critical rod height data was collected, the operators also verified every alarm and indication was as expected. Shift turnover occurred with the unit in a safe, stable condition. The inspectors considered the operator performance excellent.

#### **c. Conclusions**

The inspectors concluded that the operators performance during the Unit 1 shutdown and startup was excellent.

### **O2 Operational Status of Facilities and Equipment**

#### **O2.1 Unit 1 Bus Duct Cooling Repairs**

On May 3, 1997, the inspectors observed the licensee reduce power and remove Unit 1 from the grid. The licensee had previously identified that the main electrical bus duct cooling system was not providing sufficient cooling to ensure performance during the summer months. A walkdown performed by the licensee identified that some of the bus duct cooling dampers were in the wrong position. Additionally, the dampers had been in the incorrect position since the spring of 1996. Therefore,

the licensee decided to take the generator off the grid and inspect the bus duct for potential heat generating sources, as well as re-position the dampers.

The inspectors observed portions of both the reduction of power and the restoration of Unit 1 to the grid on May 4, 1997. Good command and control, efficient communications, and good operator proficiency were noted by the inspectors.

The bus duct cooling inspection and damper reposition failed to correct the elevated temperature. Additional troubleshooting by the licensee indicated a gasket had not been installed on the service water side of the heat exchanger divider plate during the previous refueling outage. This allowed cooling water to bypass the heat exchanger. The licensee replaced the heat exchangers and system performance returned to normal. The inspectors also noted some silt plugging the heat exchangers removed from the system.

## **O5 Operator Training and Qualification**

### **O5.1 Radwaste Panel Manning**

The inspectors reviewed the licensee's procedures and policies concerning non-licensed operator qualifications after the regenerative waste drain tank was overfilled as documented in NRC Inspection Report 50-454/455-97002. The radwaste panel operator position was not described in a procedure; however, a policy did describe the split in duties between non-licensed operators (equipment attendants (EA) and equipment operators (EO)). Training procedures also did not specifically identify a split in qualifications, although references to a job task matrix indicated that some training differences between EA and EO qualifications for manning the radwaste panel existed.

Operators identified on a problem identification form (PIF) that non-qualified non-licensed operators could have been assigned to the radwaste panel station. The inspectors reviewed the PIF and the licensee's investigation. The inspectors also discussed the issue with an operator identified on the PIF. The EO requiring a relief did not follow normal manpower control procedure (specifically, contacting the center desk operator). The EO manning the radwaste panel was monitoring radio communications and determined that all the other EOs were busy, without actually requesting a relief. The EO then contacted the radwaste supervisor (not normally responsible for manning) and stated that he wanted a relief. The radwaste supervisor discussed the problem with the shift manager and they determined that the radwaste rover (an EA) could take the panel for a few minutes. There were no radwaste operations in progress at the time. The radwaste rover was dispatched. However, when another EO heard, via the radio, that the radwaste panel operator needed a relief, he dispatched himself and provided the relief. The licensee identified that: 1) it was a newly qualified EO on the radwaste panel who attempted to get a relief for himself (rather than follow the normal procedure), and 2) the PIF was written prior to all the facts being identified. The inspector concluded that the licensee's review was acceptable.

**08 Miscellaneous Operations Issues (92700 and 92901)**

- 08.1 (Closed) LER 50-454/94014: Diesel generator (DG) inoperability in Mode 5 due to misinterpretation of TS requirements. The licensee identified that on September 14, 1994, while Unit 1 was in Mode 5 that the only operable DG required by TS 3.8.1.2.2 was rendered inoperable and the LCO action requirement was not met. The licensee identified the root cause as a misinterpretation of regulatory requirements. The misinterpretation was in understanding the fundamental difference between component operability and system operability.

The inspector reviewed the TS, the Updated Final Safety Analysis Report (UFSAR), TS interpretations, and the licensee's procedures. One of the corrective actions of the LER stated that a TS interpretation (TSI) was to be written to clarify the requirements of DG inoperability when supporting equipment was inoperable. When questioned, the licensee informed the inspectors that the corrective action to initiate the TSI was never implemented because the LER corrective actions had not been entered into the licensee's tracking system; therefore, the corrective actions were not tracked or implemented.

The inspectors considered the failure to take corrective actions to conditions adverse to quality a violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," (50-454/455-97008-01(DRP)). At the end of the inspection period, the licensee was in the process of verifying that all other corrective actions from 1994 LERs were in the tracking system. This LER is closed.

**II. Maintenance**

**M1 Conduct of Maintenance**

**M1.1 Maintenance Observations (62707)**

**a. Inspection Scope**

The inspectors observed all or portions of the following work requests (WR). When applicable, the inspectors also reviewed TS and the UFSAR for potential issues.

- WR 97004594-1 Repair of the 1B Diesel Generator air compressor discharge check valve, 1DG01SB-B
- WR 970041013 Replace back draft dampers on isophase bus cooler
- WR 970041010 Change out isophase louvers and retorque bus bars
- WR 960070266 Perform 5 year inspection on the 1A CC pump motor
- WR 970060346 1A MSIV replace Skinner solenoid valve
- WR 970060347 1A MSIV replace solenoid valve
- WR 970049540 1B turbine feedwater pump leak repair
- WR 960113481 Quarterly inspection of emergency lighting
- WR 970000239 Install banana jack receptacle on DG 2B feed breaker
- WR 970031968 Desilting of essential service water basins

b. Observations and Findings

The inspectors found that the maintenance activities were conducted in accordance with approved procedures and were in conformance with TS. The inspectors observed maintenance supervisors and system engineers monitoring job progress. Quality control personnel were also present when required. When applicable, appropriate radiation control measures were in place. The inspectors determined that the observed routine maintenance activities were well performed.

Repair of the 1A MSIV

The inspectors observed portions of the troubleshooting and repair of the 1A MSIV. The licensee conducted a post-job critique following the repair activities. The inspectors discussed the results of the critique with maintenance management. Lessons learned and identified in the critique included: sufficient evidence may have existed to identify the problem sooner (however, even in hindsight, that is not certain), access to the MSIV actuators could be improved (both physical arrangement and radiological controls), the project manager could be more effective in directing the work, and specific guidelines for isolation requirements on high pressure/temperature systems do not exist. The inspectors considered the critique excellent for identification of issues.

The inspectors reviewed UFSAR Section 10.3.2 when the 1A MSIV actuation circuit was declared inoperable. The UFSAR indicated that the standby train would not close the MSIV. The inspectors were concerned that, based on the UFSAR, the 1A MSIV was inoperable because it would not have closed given an engineered safeguards feature (ESF) actuation signal. The LCO allowed outage time (AOT) for an inoperable MSIV was 2 hours versus the 48-hour AOT for an inoperable manual actuation circuit. The inspectors reviewed electrical schematics for the MSIV actuation circuit and discussed modes of MSIV operation with members of system engineering. The inspectors concluded the valve was operable and would close, given an ESF signal, based on review of the circuit. The UFSAR description was accurate for local manual operation of the individual valve. At the end of the inspection period, the licensee was considering clarification of the modes of operation during the next UFSAR revision.

Emergency Lighting Review

The inspectors reviewed WR 960113481. The licensee had written a PIF documenting the inadvertent addition of alcohol to the batteries. The inspectors reviewed the WR and did not identify any issues other than the inadvertent addition of alcohol. The licensee replaced the affected batteries and the voltage readings documented on the WR were typical of the emergency lights. The inspectors also verified that M&TE equipment identified on the WR was checked out and in calibration on the day of the surveillance. The inspectors also discussed the addition of a small amount of alcohol with various engineers and the potential affects were unknown. The licensee's investigation showed that alcohol was inadvertently placed in a bottle labeled as distilled water. The inspectors considered the corrective actions to this incident to be appropriate and timely.

## M1.2 Surveillance Observations (61726)

### a. Inspection Scope

The inspectors observed the performance of all or parts of the following surveillance procedures. The inspectors also reviewed plant equipment and surveillance activities against the UFSAR descriptions.

- OBVS 0.5-3.SX.1-2 Test of the OB Essential Service Water Makeup Pump
- OBOS 7.5.e.1-2 Essential Service Water Makeup Pump OB Monthly Operability Surveillance
- OBOS 7.6.b-1 Control Room Ventilation Train OA Staggered Monthly Surveillance
- 1BOS 8.1.1.2.a-2 1B Diesel Generator Operability Monthly and Semi-Annual Surveillance
- 1BVS 0.5-3AF.1-2 ASME Surveillance Requirements for the Diesel Driven Auxiliary Feedwater Pump
- 1BVS 3.2.1-2 Bus 142 Undervoltage Protection Monthly Surveillance
- 1BVS 7.1.5-2 U-1 Main Steam Isolation Valves Partial Stroke Test
- 2BOS 3.2.1-800 ESFAS Instrument Slave Relay Surveillance
- 2BOS 3.2.1-853 ESFAS Instrument Slave Relay Surveillance (Train B Containment Isolation Phase A - K612)
- 2BOS 7.1.2.1.b2 2B AF Quarterly Surveillance
- 2BVS 3.2.1-2 Bus 242 Undervoltage Protection Monthly Surveillance
- BOP AF-7 Diesel Driven Auxiliary Feedwater Pump B Startup on Recirc

### b. Observations and Findings

The inspectors routinely noted proper authorization from the control room senior reactor operator (SRO) prior to the start of each surveillance. Components removed from service were identified prior to the surveillance and the proper TS LCO was entered. At the completion of the surveillance and after independent verification of system restoration, the TS LCO was cleared. The inspectors verified that test instruments used were calibrated as applicable. The inspectors reviewed completed surveillances and verified the surveillances met the acceptance criteria and that the procedure was acceptable and would perform the required testing.

## M1.3 2B Auxiliary Feedwater Pump Overcrank

### a. Inspection Scope

The inspectors reviewed the licensee's on-site review documents OSR 97-067 and 97-070. The inspectors also reviewed the TS slave start surveillance, the ASME surveillance, and the normal manual start of the auxiliary feedwater (AF) pump procedure. Several discussions were held with system engineers, operators, and operations management.

### b. Observations and Findings

On May 13, 1997, during performance of 2BVS 0.5-3.AF.1-2, "2B AF ASME Surveillance," the 2B diesel driven AF pump failed to start on the initial series of



engine cranks while using the B battery bank. The engine overcrank lockout occurred, preventing additional starting attempts after four series of engine cranks. The licensee then used Byron Operations Procedure (BOP) AF-7, "Diesel Driven Auxiliary Feedwater Pump B Startup on Recirc," to start the engine locally for the ASME surveillance. Per BOP AF-7, the A battery bank was selected and the engine started on the first attempt.

After completion of the ASME surveillance, the licensee performed TS surveillance 2BOS 7.1.2.1.b2, "Diesel Driven Auxiliary Feedwater Pump Quarterly Surveillance." This surveillance was scheduled to be performed and was also used as troubleshooting for the original overcrank condition. The 2B AF pump started on a slave relay signal satisfactorily.

The TS surveillance requirement had recently changed from monthly to quarterly. Immediately prior to the attempted start on May 13, 1997, the engine had been idle for approximately 85 days. An earlier successful start had been completed with the engine idle for approximately 75 days. Prior to that, the TS surveillance had been monthly.

The licensee declared the 2B AF pump inoperable and entered the LCO action requirement prior to the start of the ASME surveillance and remained in the LCO after completion of the slave start surveillance due to the overcrank condition identified during the initial start. A manual start, using the B battery bank, was successfully performed per BOP AF-7 after the engine had cooled to near ambient conditions (as determined by the licensee to be bearing temperatures and jacket water temperatures similar to the 1B AF pump). Additionally, the licensee measured cell voltage of the B battery bank to verify battery capacity.

On May 14, 1997, the inspectors discussed the engine status with the system engineer. The system engineer identified several potential causes of the overcrank condition, including methods of losing fuel oil prime and potential electrical circuit issues. The inspectors also reviewed an on-site review document, OSR 97-067, "Overcrank Alarm on the 2B AF Diesel Pump," and were concerned that little action appeared to have been taken to identify the starting problem prior to declaring the 2B AF pump operable. OSR 97-067 documented the near ambient start and battery capacity check as well as noting that action requests had been prepared for the potential root causes. The OSR also identified a history of successful starts when started on a monthly basis. The licensee committed to performing monthly runs of the 2B AF pump until the work window, scheduled for spring of 1998, was complete. Based on the above information, the licensee declared the 2B AF pump operable.

The inspectors questioned the adequacy of the OSR. The inspectors were concerned that monthly runs were not adequate to ensure the 2B AF pump was operable. Discussions with the licensee identified that additional actions were being planned but had not been documented in the OSR. As a result of the inspectors questioning, on May 16, 1997, the licensee completed OSR 97-070, "2B AF Diesel Pump Corrective Action" to better document the testing plan and bases for operability. The licensee documented an additional start of the engine on May 14, 1997. Increased testing frequency was planned, slowly increasing the period between engine starts until a 30-day period was reached. A multi-disciplined root

cause team was formed with the charter of critical component identification. A work window was also planned to be implemented after the teams identification of components. The inspectors found that although the corrective actions appeared adequate on May 16, 1997, OSR 97-067 was weak and did not provide sufficient documentation of engineering evaluation and corrective actions.

The inspectors discussed the sequence of performing the surveillances with operators. The inspectors were concerned that performance of ASME surveillance (using the local manual start) pre-conditioned the engine prior to the slave relay start surveillance. The inspectors were concerned that although the engine had failed to start without operator action, the engine actually passed both surveillances. The inspectors noted that the operators declared the engine inoperable based on the initial overcrank and remained in the LCO action requirement after the slave start surveillance. The inspectors noted that this position is consistent with guidance provided in NRC Information Notice 97-16, "preconditioning of Plant Structures, Systems, and Components Before ASME Code Inservice Testing or Technical Specification Tests." The inspectors considered the failure to perform the surveillances in a suitably-controlled manner a violation of 10 CFR Part 50, Appendix B, Criterion II, "Quality Assurance Program," (50-454/455-97008-02(DRP)).

c. Conclusions

The inspectors concluded that the licensee did not aggressively review, plan, and document the events surrounding the overcrank of the 2B AF pump. The inspectors concluded that OSR 97-067 declared the engine operable with marginally acceptable justification and no additional plans for corrective actions except a monthly run and repairs in the spring of 1998. The inspectors agreed with the actions identified in OSR-97-070.

Additionally, the inspectors concluded that operators had not considered possible preconditioning issues due to scheduling prior to the conduct of the surveillances.

**M8 Miscellaneous Maintenance Issues (92903)**

M8.1 (Closed) LER 50-454/455-94002: Main steam safety valves (MSSV) setpoints were outside TS tolerance due to a calculation error. An incorrect mean seat area was used in the Trevitest calculation; therefore, the as-left setpoints of the MSSVs were set greater than the allowed  $\pm 1\%$  tolerance. This calculational error affected 16 MSSVs on Unit 1 and 19 MSSVs on Unit 2. A NOED was requested on March 10, 1994, and was granted. The NOED permitted continued operation of both units until NRC approval of a TS amendment request to revise the as-found setpoint from  $\pm 1\%$  to  $\pm 3\%$ . The NOED allowed the MSSV  $\pm 3\%$  tolerance to be used until May 4, 1994, when the lift settings were reset to  $\pm 1\%$  during testing. The licensee determined through analysis that the effects of the  $\pm 3\%$  setpoint tolerance had no significant negative impact on any system, operating mode, or accident analysis. The proposed amendment was submitted and approved by the NRC. This item is closed.

### III. Engineering

#### E8 **Miscellaneous Engineering Issues (92700 and 92902)**

E8.1 (Closed) URI 50-454/455-97005-05(DRP): Connecting strip chart recorders to operable equipment without a detailed review. NRC Inspection Report 50-545/455-97005 documented a strip chart recorder attached to a safety-related 125 volt dc bus battery charger (Bus 211). The battery charger was considered operable by the licensee and the chart recorder was used as a troubleshooting tool. The inspector considered the chart recorder to be a temporary alteration based on the following:

- the chart recorder was installed for approximately 2 weeks.
- the battery charger was considered operable.
- at least 14 leads with clips were used to connect chart modules to various wires on the circuit card.

Additionally, since the recorder did not have an engineering review, seismic and other related qualifications were not reviewed and the recorder had unknown and undocumented failure modes.

The licensee did not originally agree that the chart recorder was a temporary alteration. The licensee position was that the recorder did not alter the circuit due to its high impedance characteristics. Additionally, the licensee did not want to inhibit troubleshooting efforts on intermittent problems. However, after additional review of the circumstances surrounding the use of the chart recorder on the 211 bus battery charger, the licensee agreed that the recorder should have been a temporary alteration, specifically due to the length of time it was installed and to some extent, the complexity of the connections.

The licensee planned to modify the temporary alteration program to allow chart recorders to be connected for up to 24 hours without a temporary alteration review. Additionally, a person knowledgeable of the recorder and connections would be present on site during that period of time. The inspectors considered the failure to ensure design control measures commensurate with those applied to the original design, while a strip chart recorder was connected on the bus 211 battery charger, a violation of CFR Part 50, Appendix B, Criterion III, "Design Control," (50-454/455-97008-03(DRP)).

### IV. Plant Support

#### R1 **Radiological Protection and Chemistry Controls (71750)**

##### R1.1 Contamination Control Weakness

During a routine inspection of the auxiliary building, the inspector noted a small contaminated area. The area was a small portion of an instrument piping rack adjacent to an open walkway in the auxiliary building. Although the area was identified in accordance with the licensee's procedures, the inspector was concerned that the contaminated area was inadequately contained. The inspector

identified the area to members of radiological protection management. The licensee agreed that the posting did not clearly identify what was contaminated. The licensee noted, and the inspectors agreed, that the basic rule was a vertical imaginary "wall" extended above and below the rope and sign. However, the inspectors noted that for some examples of small areas, the floor space under the rope is easily accessible and likely to be inadvertently walked on or swept. The inspectors have not identified an increase in contamination events; therefore, the inspectors concluded the marking was a weakness due to the potential of spreading contamination.

#### V. Management Meetings

##### X1 **Exit Meeting Summary**

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on June 12, 1997.

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

J. Bauer, Health Physics Supervisor  
D. Brindle, Regulatory Assurance Supervisor  
E. Campbell, Maintenance Superintendent  
P. Donavin, Site Engineering Mod Design Supervisor  
T. Gierich, Operations Manager  
P. Johnson, Engineering Superintendent  
K. Kofron, Byron Station Manager  
K. Passmore, Station Support & Engineering Supervisor  
T. Schuster, Site Quality Verification Director  
M. Snow, Work Control Superintendent  
D. Wozniak, Engineering Manager

## INSPECTION PROCEDURES USED

IP 37551: Onsite Engineering  
IP 61726: Surveillance Observations  
IP 62707: Maintenance Observations  
IP 71707: Plant Operations  
IP 71750: Plant Support  
IP 92700: Onsite Follow-up of Written Reports of Nonroutine Events at Power Reactor Facilities  
IP 92901: Followup - Plant Operations  
IP 92902: Followup - Engineering  
IP 92903: Followup - Maintenance  
IP 92904: Followup - Plant Support

## ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

|                     |     |   |
|---------------------|-----|---|
| 50-454/455-97008-01 | VIO | Failure to take corrective action documented in LER.  |
| 50-454/455-97008-02 | VIO | Failure to test 2B AF pump under suitable conditions.   |
| 50-454/455-97008-03 | VIO | Failure to ensure design control measures commensurate with those applied to the original design. |

### Closed

|                     |     |   |
|---------------------|-----|---|
| 454-94-014          | LER | Inoperable DG due to TS misinterpretation.  |
| 454/455-94-002      | LER | MSSV setpoints outside TS tolerance.  |
| 50-454/455-97005-05 | URI | Failure to ensure design control measures commensurate with those applied to the original design (closed to violation 50-454/455-97008-03). |

## LIST OF ACRONYMS USED

|       |  |
|-------|--|
| AF    | Auxiliary Feedwater System             |
| AOT   | Allowed Outage Time                    |
| BOP   | Byron Operating Procedure              |
| CV    | Chemical and Volume Control System     |
| DG    | Diesel Generator                       |
| EA    | Equipment Attendants                   |
| ECCS  | Emergency Core Cooling System          |
| EO    | Equipment Operator                     |
| ESF   | Engineered Safeguards Feature          |
| HLA   | Heightened Level of Awareness          |
| LCO   | Limiting Condition for Operation       |
| LER   | Licensee Event Report                  |
| MSIV  | Main Steam Isolation Valve             |
| MSSV  | Main Steam Safety Valve                |
| NOED  | Notice of Enforcement Discretion       |
| NOV   | Notice of Violation                    |
| PDR   | Public Document Room                   |
| PIF   | Problem Identification Form            |
| SRO   | Senior Reactor Operator                |
| TS    | Technical Specification                |
| TSI   | Technical Specification Interpretation |
| UFSAR | Updated Final Safety Analysis Report   |
| WR    | Work Request                           |