

December 14, 2001

Mr. Oliver D. Kingsley, President  
Exelon Nuclear  
Exelon Generation Company, LLC  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: BYRON STATION, UNITS 1 AND 2  
INSPECTION REPORT 50-454/01-15(DRP); 50-455/01-15(DRP)

Dear Mr. Kingsley:

On November 15, 2001, the NRC completed an inspection at the Byron Station, Units 1 and 2. The enclosed report documents the inspection findings which were discussed on November 15, 2001, with Mr. R. Lopriore and other members of your staff.

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

On the basis of the sample selected for review, the inspectors concluded that your corrective action program adequately identified, evaluated, and resolved conditions adverse to quality. However, three findings of very low safety significance (Green) were identified during this inspection. In these cases, your staff addressed the immediate issues using a work request but failed to identify the significance of the issues and evaluate their impact on operability. One finding involved an inadequate post maintenance test which allowed the Unit 2 containment radiation monitor to be returned to service with an inoperable containment isolation function. The second finding involved the failure to identify that the Unit 2 containment radiation monitor "instrument available" light not being lit was an indication that the system was inoperable. The third finding involved a failure to promptly identify and correct the defective Unit 1A emergency diesel generator room ventilation damper controller, which combined with the actions to manually close the outside damper, resulted in the inoperability of the diesel.

These findings were determined to be violations of NRC requirements. However, because of their very low safety significance and because the findings have been entered into your corrective action program, the NRC is treating this issues as Non-Cited Violations (NCVs), consistent with Section VI.A.1, of the NRC's Enforcement Policy. If you deny any or all of these Non-Cited Violations, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory

Commission, Washington, DC 20555-0001; and the NRC Resident Inspectors at the Byron Nuclear Power Station.

In addition, during our interviews, your staff indicated that they would report issues related to safety of the plant or personnel safety. However, a number of your employees expressed a reluctance to raise issues that were related to or would challenge management. We did not identify examples where the reluctance to question management would have resulted in an unraised safety issue. Your staff acknowledged that attention was necessary to ascertain the magnitude of this reluctance to challenge management and the impact it has on raising safety issues.

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).

Sincerely,

Original signed by  
Ann Marie Stone

Ann Marie Stone, Chief  
Branch 3  
Division of Reactor Projects

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

Enclosure: Inspection Report 50-454/01-15(DRP);  
50-455/01-15(DRP)

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REGION III

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

Report No: 50-454/01-15(DRP); 50-455/01-15(DRP)

Licensee: Exelon Generation Company, LLC

Facility: Byron Station, Units 1 and 2

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

Dates: October 29 through November 15, 2001

Inspectors: T. Tongue, Project Engineer, Team Leader  
R. Skokowski, Senior Resident Inspector  
R. Winter, Reactor Engineer, RIII

Approved by: Ann Marie Stone, Chief  
Branch 3  
Division of Reactor Projects

## SUMMARY OF FINDINGS

IR 05000454-01-15(DRP), IR 05000455-01-15(DRP), on 10/29-11/15/2001; Exelon Generation Company, LLC; Byron Station; Units 1 & 2; Identification and Resolution of Problems.

The inspection was conducted by one region-based project engineer, one region-based reactor engineer and one senior resident inspector. This inspection identified three Green findings which all involved Non-Cited Violations. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using NRC Inspection Manual Chapter 0609 "Significance Determination Process" (SDP). The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at <http://www.nrc.gov/NRR/OVERSIGHT/index.html>. Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation.

### Identification and Resolution of Problems

The inspectors concluded that the licensee adequately identified, evaluated, and resolved problems within the requirements of the corrective action program (CAP). In general, the significance threshold for entering issues into the corrective action program appeared appropriate. However, three issues of very low safety significance (Green) were identified which were related to an inconsistency in the threshold for initiating a condition report. In general, corrective actions specified were appropriate based on the identified causes and were effective in preventing recurrence of significant conditions adverse to quality. Licensee audits and assessments were thorough and identified issues similar to NRC observations. During interviews, station personnel stated they were not reluctant to raise safety issues; however, some staff members expressed hesitance to question management decisions. Additionally, while the overall program allowed the station to identify and resolve problems, a potential weakness in the station's implementation of the program related to training timeliness was identified.

### Cornerstone: Barrier Integrity

- Green. The inspectors identified that the licensee's post maintenance test failed to demonstrate that the Unit 2 containment radiation monitor 2AR11J output relay would perform satisfactorily in service.

This finding was determined to be of very low safety significance because the failure did not result in an actual open pathway in the physical integrity of the reactor containment. A Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XI for failure to perform an adequate post maintenance test was identified. (Section 4OA2.a.(2))

### Cross-Cutting Issues: Problem Identification and Resolution

- Green. The inspectors identified that the licensee failed to adequately evaluate the unlit "instrument available" light on the Unit 2 containment radiation monitor 2AR11J which resulted in the failure to identify that the radiation monitor was inoperable.

This finding was determined to be of very low safety significance because the failure did not result in an actual open pathway in the physical integrity of the reactor containment. A Non-Cited Violation of 10CFR 50 Appendix B, Criterion XVI was identified. (Section 40A2.a(2))

- Green. The inspectors identified that on October 5, 2001, the licensee failed to promptly identify and correct the defective Unit 1A emergency diesel generator (EDG) room ventilation damper controller, which, combined with the actions to manually close the outside damper, resulted in the inoperability of the 1A EDG.

This finding was determined to be of very low safety significance because the failure did not result in an actual loss of the safety function for greater than the 14 days allowed by the Technical Specification (TS) if the licensee had completed the required TS actions to ensure operability of the other EDGs and associated equipment. A Non-Cited Violation of 10CFR 50, Appendix B, Criterion XVI, was identified. (Section 40A2.a(2))



## Report Details

### **4. OTHER ACTIVITIES (OA)**

#### 4OA2 Problem Identification and Resolution

##### a. Effectiveness of Problem Identification

##### (1) Inspection Scope

The inspectors conducted a review of the Byron Station process for identifying and correcting problems in the plant. The inspectors reviewed previous licensee and inspector-identified issues related to the seven safety cornerstones in the Reactor Safety, Radiation Safety, and Safeguards strategic performance areas to determine if problems were appropriately identified, characterized, and entered into the corrective action program. Specifically, the inspectors selected items from inspection reports issued since the previous Problem Identification and Resolution inspection, numerous Condition Reports (CRs), audits, self-assessments, selected plant procedures and program description handbooks, licensee completed effectiveness reviews, root cause reports (RCRs), common cause analysis (CCAs), and industry operating experience documents. A listing of the specific documents reviewed is attached to the report.

The inspectors evaluated the CRs to determine the licensee's threshold for identifying problems and entering them into the corrective action program. The inspectors conducted a review to determine whether the audit and self-assessment programs were effectively managed, and adequately covered the subject areas. The inspectors also verified that the associated findings were appropriately captured in condition reports. The effectiveness of the audits and assessments was evaluated by comparing the licensee's audit and assessment results against self-revealing and NRC-identified issues. In addition, the inspectors interviewed licensee staff regarding the audit and self-assessment programs. The inspectors also attended meetings, interviewed plant personnel, and reviewed control room logs and work requests to understand the process for problem identification and the interface between the corrective action program and the work control process.

##### (2) Issues

In general, station personnel effectively identified at a low threshold and entered problems as CRs into the corrective action program (CAP). Although thousands of CRs were initiated this past year, the inspectors identified two examples where the licensee failed to initiate a CR and handled the problems through the work control process. In these cases, the licensee addressed the immediate issues using a work request but failed to evaluate the impact on operability. The inspectors noted that the threshold for generating a CR or addressing the issue in a work request was inconsistent. In addition, the inspectors noted a weakness in the implementation of the CR process. Specifically, training on the new corrective action system was not conducted in a timely manner thus, many employees saw the system as complex and difficult to navigate.

The inspectors identified three findings of very low safety significance. The first finding dealt with an inadequate post maintenance test of the Unit 2 containment radiation monitor which resulted in the inoperability of the associated containment isolation function for approximately 15 days. The other two findings dealt with the failure of the licensee to promptly identify and correct conditions adverse to quality. Specifically, during additional maintenance activities on the Unit 2 containment radiation monitor, the licensee did not obtain the expected response and failed to promptly identify and take corrective actions to address indications that the system was inoperable. Finally, during trouble shooting of the Unit 1A emergency diesel generator room ventilation damper controller, the licensee failed to promptly identify and correct the defective controller, left the controller in service, and manually shut the outside dampers causing the diesel generator to be inoperable for approximately 5 days. These findings were dispositioned as Non-Cited Violations.

#### Unit 2 Containment Radiation Monitor

On August 16, 2001, during a planned maintenance activity on the Unit 2 containment radiation monitor 2AR11J, technicians improperly landed an electrical lead which caused damage to several circuit boards. During the ensuing emergent repairs, the technicians improperly installed an output relay that provided the containment ventilation isolation signal to the solid state protection system (SSPS). The faulty installation caused a locked-in containment isolation signal to be present. Upon restoring the radiation monitor to service, a containment isolation signal was generated, and at the time, the licensee concluded the signal was caused by the restoration activities and subsequently reset the signal without further investigation. Furthermore, when the licensee reset the isolation signal received during system restoration, they unknowingly blocked the isolation signal from reactivating even though the incorrectly installed output relay was still providing an isolation signal. Additionally, during restoration, the technicians noted that the "instrument available" light on the radiation monitor was not lit. At that time, the licensee incorrectly concluded that the bulb was burned out and had no adverse impact on operability. Upon completion of a post maintenance test (PMT) the radiation monitor was declared operable; however, the PMT performed was later determined to be inadequate to detect that the output relay was incorrectly installed.

On August 24, 2001, maintenance activities were initiated on the 2AR11J radiation monitor to replace the "instrument available" light socket and lamp. However, even after replacing these components, the "instrument available" light remained out, but due to resource limitations no further troubleshooting was completed. Moreover, the licensee continued to incorrectly believe that the problem with the "instrument available" light only impacted the indicating circuit and had no impact on the operability of the system.

On August 30, during the performance of a surveillance test on the SSPS, the problems with the containment radiation monitor containment isolation signal were revealed as a surveillance test failure. On August 31, the licensee discovered that the input to SSPS from 2AR11J was in a locked-in condition and was the cause of the SSPS surveillance test failure. Subsequent troubleshooting of the radiation monitor identified the improperly installed output relay. This condition was corrected, an adequate PMT was performed, and the system was returned to operable.

The licensee documented the event in LER 50-455-2001-004-00, and concluded that the cause of the event was a failure to properly install the output relay, and knowledge deficiencies. These knowledge deficiencies resulted in the failure to recognize the significance of certain indications, specifically the isolation signal that occurred during system restoration, the "instrument available" light not being lit, and the failure in determining the appropriate PMT. Moreover, the failure of the licensee to perform an adequate PMT of the Unit 2 containment radiation monitor and the failure to recognize the significance of the "instrument available" light not being lit, resulted in 2AR11J being in service without the ability to generate a containment isolation signal for 15 days. This condition was not in accordance with the Technical Specification (TS) requirements.

The inspectors determined that the inability of the Unit 2 containment radiation monitor to generate an isolation signal for 15 days had a credible impact on safety because the licensee failed to have the containment penetrations isolated as required by the TS and the valves were not capable of fulfilling their design safety function. The inspectors evaluated the impact of not isolating these containment penetrations as required by the TSs using the Significance Determination Process (SDP) and concluded that the issues were of very low safety significance (Green), because the failure did not result in an actual open pathway in the physical integrity of the reactor containment.

10 CFR Part 50, Appendix B, Criteria XI, "Test Control," requires, in part, that a test program shall be established to assure that all testing required to demonstrate structures, systems and components will perform satisfactorily in service. Contrary to this, following the August 16, 2001, maintenance activities on the Unit 2 containment radiation monitor which included the replacement of the output relay, the licensee's PMT failed to demonstrate that the output relay would perform satisfactorily in service. This is a violation of 10 CFR 50 Appendix B, Criteria XI; however, in accordance with Section VI.A.1 of the NRC Enforcement Policy, this violation is being treated as a Non-Cited Violation (50-455-01-15-01). The licensee entered this event into its corrective action program as Condition Report B2001-03526.

In addition, the inspectors determined that although the licensee repaired the monitor, the licensee did not adequately evaluate the impact on operability. 10 CFR Part 50, Appendix B, Criteria XVI, "Corrective Action," requires, in part, that measures shall be established to assure that conditions adverse to quality, such as malfunctions and deficiencies are promptly identified and corrected. Contrary to this, following the August 24, 2001, attempted repair to the containment radiation monitor 2AR11J "instrument available" light, when the expected response was not obtained, the licensee failed to identify that the radiation monitor was inoperable; therefore, did not take prompt corrective action to repair it. This is a violation of 10 CFR Part 50, Appendix B, Criteria XVI. However, in accordance with Section VI.A.1 of the NRC Enforcement Policy, this violation is being treated as a Non-Cited Violation (50-455-01-15-02). This issue was entered into the licensee's corrective action program as Condition Report B2001-00082993.

## Unit 1 Emergency Diesel Generator (EDG) Room Ventilation System

On September 25, 2001, the licensee initiated a work request to investigate temperatures lower than normal in the 1A EDG room. On October 5, 2001, technicians investigated the concern under Work Order 365095 and efforts were taken to repair the room ventilation damper controller. However, these efforts were unsuccessful and it was determined that a new controller would be needed to correct the problem. System engineering and operations department personnel, which included two licensed Senior Reactor Operators, directed the maintenance technicians to leave the defective controller in service and position the 1A EDG room dampers such that the outside-air damper was fully closed and the recirculation damper was open.

On October 10, 2001, the operators started the 1A EDG as part of a routine surveillance test. During the test, the operators received a 1A EDG ventilation fan differential pressure low alarm, and the operators noted that the room temperature was increasing. Eventually the operators and the system engineer investigated the situation and took manual actions to realign the dampers so that outside air was provided to the EDG room to control the room temperatures during the diesel run. Following the surveillance test, the 1A EDG room ventilation was placed in a condition to provide 100 percent outside air the room until the controller was replaced on October 12, 2001. In addition, immediately following the completion of the surveillance test on the 1A EDG, the licensee inspected the other three EDG room ventilation systems to ensure that proper operation.

Based on a review of the issues associated with this event, the inspectors concluded that the licensee's actions on October 5, 2001, to leave the defective temperature controller in service and manually close the outside dampers, caused the 1A EDG to be inoperable because the room ventilation system is a support system required for the EDG to be operable. With the outside damper closed and the controller incapable of performing the function of modulating the dampers, had the EDG started in response to an actual event, the EDG room temperature could not have been maintained within the limits specified within the Byron Units 1 & 2 Technical Requirements Manual. Furthermore, the licensee's failure to identify that the 1A EDG was inoperable resulted in missing the completion of several TS requirements, including a plant shutdown.

The inspectors determined that this issue had a credible impact on safety because the licensee failed to take the actions required by the TS for the 1A EDG being inoperable. The inspectors evaluated this issue using the SDP and concluded that the issue was of very low safety significance (Green), because the failure did not result in an actual loss of the safety function for greater than the 14 days allowed by the TS if the licensee had completed the required TS actions to ensure operability of the other EDGs and associated equipment.

The inspectors determined that although the licensee repaired the controller, the licensee did not adequately evaluate the impact on operability. 10 CFR Part 50, Appendix B, Criteria XVI, "Corrective Action," requires, in part, that measures shall be established to assure that conditions adverse to quality, such as malfunctions and deficiencies are promptly identified and corrected. Contrary to this, on October 5, 2001, when the 1A EDG damper controller failed and the outside dampers were manually

closed, the licensee failed to identify that the 1A EDG was inoperable and did not take prompt corrective action to address the condition. This is a violation of 10 CFR Part 50, Appendix B, Criteria XVI. However, in accordance with Section V1.A.1 of the NRC Enforcement Policy, this violation is being treated as a Non-Cited Violation (50-455-01-15-03). This issue was entered into the licensee's corrective action program as Condition Report B2001-00082993.

### Trending of Issues

During the inspection, the inspectors determined that the licensee's trending of issues was adequate. The station identified individual, specific deficiencies and entered those deficiencies into the corrective action program database and evaluated them collectively to determine the extent of the problem.

### Effectiveness of Licensee Audits and Assessments

The inspectors determined that the Nuclear Safety Review Board (offsite committee) was effective at identifying concerns. The inspectors also determined that licensee audits were generally thorough and effective at identifying specific issues. Individual items identified in the Nuclear Oversight quarterly data were entered into the CR database. The team concluded that the process was acceptable.

The licensee audits noted that during the year 2001, about 100 CR's which potentially impacted system operability had not been sent to operations shift management for review and assessment. Subsequent review by the licensee verified that in no case was operability impacted. The inspectors noted that the licensee verified that CR's which could potentially affect system operability, were appropriately routed through the shift manager.

## b. Prioritization and Evaluation of Issues

### (1) Inspection Scope

The inspectors reviewed previous inspection reports and corrective action documents to verify that identified issues were appropriately prioritized and evaluated when entered into the licensee's problem identification and resolution program. The inspectors also attended management meetings to observe the assignment of CR categories for current issues and the review of root cause analyses and corrective actions for existing CRs.

The inspectors conducted an independent assessment of the prioritization and evaluation of selected CRs. The assessment included a review of the category assigned, the operability and reportability determinations, the extent of condition evaluations, the cause investigations, and the appropriateness of assigned corrective actions. Other attributes reviewed by the inspectors included the adequacy of the root cause analyses and the corresponding corrective actions. The inspectors also assessed licensee evaluations of Non-Cited Violations (NCVs). In addition, the inspectors reviewed licensee root cause reports (RCRs) generated since December 2000.

The inspectors also reviewed the licensee staff's efforts to capture industry operating experience (OPEX) issues in the corrective actions program. Documents reviewed included the licensee's assessment of industry operating event reports, NRC, vendor generic notices, and interviewed the OPEX coordinator. The inspectors reviewed information recorded since December 2000.

A listing of the specific documents reviewed is attached to the report.

(2) Issues

The Nuclear Oversight (NO) staff audited the corrective action program and also closely monitored how well the program was implemented. One audit issue identified by NO in the past year centered on the increasing number of aging, low priority issues. The inspectors determined the issues were being tracked by the responsible organization and many required spare parts which had not been received. With the exception of this audit issue, the inspectors concluded that the significance of issues was properly assigned and that root cause evaluations were performed as required by the corrective action program. In general, operability and reportability determinations were technically justified. Actions assigned to correct problems were consistent with the specified causes.

With the exception of the two findings discussed earlier, the inspectors determined that, in general, issues were appropriately characterized and classified, and appropriate evaluations were conducted for significant conditions adverse to quality. The inspectors reviewed the licensee's proposed corrective actions for NCVs issued since the last PI&R inspection conducted in December 2000 and noted no concerns with those proposed corrective actions. Likewise, the inspectors' review identified no significant concerns associated with the licensee's operating experience program.

c. Effectiveness of Corrective Action

(1) Inspection Scope

The inspectors reviewed selected CRs and associated corrective actions to evaluate the effectiveness of corrective actions. The inspectors reviewed CRs, operability determinations, and root cause reports to verify that corrective actions, commensurate with the safety significance of the issues, were identified and implemented in a timely manner, including corrective actions to address common cause or generic concerns. The inspectors also verified the implementation of a sample of corrective actions. The samples were selected based on their importance in reducing operational risks. The inspectors reviewed information recorded since December 2000.

A listing of the specific documents reviewed is attached to the report.

(2) Issues

The inspectors determined that, in general, the corrective actions reviewed were timely, complete and effective in preventing recurrence of the problem. Root cause evaluations clearly specified the corrective actions which were intended to prevent recurrence of the

problem. Corrective actions were directed to the identified causes and were completed in a generally timely manner through appropriately scheduled completion dates. However, the inspectors noted a few exceptions where corrective actions were ineffective or untimely. These issues were previously identified by the licensee.

In general, station personnel corrected identified issues. The inspectors' review of licensee event reports (LERs) identified no significant concerns. Additionally, the inspectors' review of NCV corrective actions indicated that the licensee's proposed actions were completed as scheduled and the actions appeared appropriate in most cases as evidenced by lack of repeat items.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The inspectors interviewed plant staff to assess the establishment of a safety conscious work environment.

During the conduct of interviews, document reviews and observations of activities, the inspectors looked for evidence that suggested plant employees may be reluctant to raise safety concerns. The inspectors also discussed the implementation of the Employee Concerns Program (ECP) conducted per EI-AA-101, "Employee Concerns Program" with the station's program coordinator. Additionally the inspectors reviewed a recent outside audit of the station's ECP. During the inspection, the inspectors were alert for any indications of unwillingness to raise safety questions. Some of the plant staff were asked questions that were similar to those listed in Appendix 1 to Inspection Procedure 71152, "Suggested Questions for Use in Discussions with Licensee Individuals Concerning PI&R Issues."

(2) Issues

No significant findings were identified. The team noted a low threshold for initiating a CR, the current increasing number of CRs, and management support for using the CR process. Each of the interviewees stated that he/she would not hesitate to report an issue related to safety of the plant or personnel safety. However, a number of the employees interviewed expressed a reluctance to raise issues that were related to or would challenge management. The inspectors did not identify examples where the reluctance to question management would have resulted in an unraised safety issue. The licensee acknowledged that additional attention was needed to ascertain the magnitude of this reluctance to challenge management and the impact it has on raising safety issues.

4OA3 Event Followup

(Closed) Licensee Event Report (LER) 50-455-2001-004-00: "Technical Specification Non-Compliance by Improper Installation and Post Maintenance Test on an Area Radiation Monitor that Generates an Automatic Containment Ventilation Isolation Signal." See Section 4OA2.1 of the report. This LER is closed.

4OA5 Other

4OA6 Meetings

Exit Meeting

The inspectors presented the inspection results to Mr. R. Lopriore and other members of licensee management on November 15, 2001. The licensee acknowledged the findings presented and indicated that no proprietary information was provided to the inspectors.



## KEY POINTS OF CONTACT

### Licensee

R. Lopriorie, Byron Site Vice President  
B. Blaine, Byron Radiation Protection Manager  
Z. Cox, Byron Chemistry CapCo  
P. Donnelly, Byron Maintenance  
D. Drawbaugh, Byron Regulatory Assurance  
W. Grundmann, Byron Regulatory Assurance Manager  
K. Hansing, Byron Nuclear Oversight Manager  
M. Heinzer, Byron Nuclear Oversight  
D. Hoots, Byron Operations Manager  
R. Irby, Byron Regulatory Assurance  
W. Jacobs, Byron Maintenance  
R. Kolo, Byron Work Control Manager  
K. Kovar, Byron Engineering  
R. Krohn, Byron Security  
S. Kuczynski, Byron Plant Manager  
R. Lloyd, Byron Maintenance CapCo  
S. Nosko, Byron Engineering CapCo  
P. Reister, Byron Operations  
T. Roberts, Byron Engineering Manager  
B. Sambito, Byron Radiation Protection  
T. Schuster, Executive Assistant/Self Assessment Coordinator  
D. Spoerry, Byron Training Manager  
W. Walter, Byron Work Controls

### NRC

S. Reynolds, Deputy Director, Division of Reactor Projects  
A. M. Stone, Chief, Division of Reactor Projects, Branch 3

## LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

50-455-01-15-01	NCV	Inadequate post maintenance testing resulted in an inoperable containment isolation instrumentation.
50-455-01-15-02	NCV	Failure to identify and correct the containment radiation monitor after the expected response was not obtained during a maintenance activity
50-454-01-15-03	NCV	Failure to identify and correct 1A EDG room ventilation controller problem that resulted in the EDG being inoperable.

Closed

50-455-01-15-01	NCV	Inadequate post maintenance testing resulted in an inoperable containment isolation instrumentation.
50-455-01-15-02	NCV	Failure to identify and correct the containment radiation monitor after the expected response was not obtained during a maintenance activity
50-454-01-15-03	NCV	Failure to identify and correct 1A EDG room ventilation controller problem that resulted in the EDG being inoperable
455-2001-004-00	LER	Technical Specification Non-Compliance by Improper Installation and Post Maintenance Test on an Area Radiation Monitor that Generates an Automatic Containment Ventilation Isolation Signal

Discussed

None

## LIST OF ACRONYMS USED

CAP	Corrective Action Program
CCA	Common Cause Analysis
CFR	Code of Federal Regulations
CR	Condition Report
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
ECP	Employee Concerns Program
EDG	Emergency Diesel Generator
IR	Inspection Report
LCO	Limiting Condition for Operation
LER	Licensee Event Report
NCV	Non-Cited Violation
NO	Nuclear Oversight
NRC	Nuclear Regulatory Commission
OPEX	Operating Experience
PARS	Publically Available Records System
PI&R	Problem Identification and Resolution
PMT	Post-Maintenance Testing
RCR	Root Cause Report
SDP	Significance Determination Process
SSPS	Solid State Protection System
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
WO	Work Order
WR	Work Request

## LIST OF INFORMATION REQUESTED

1. Copy of the Administrative procedure(s) governing the identification and resolution of problems.
2. Copy of the most recent Quality Assurance audit (self-assessment) of the corrective action program,
3. List of Maintenance Rule (a)(1) systems and components since December 1, 2000,
4. List of all significant conditions adverse to quality Condition Reports since December 1, 2000,
5. List of all Condition Reports involving human performance or corrective action problems since December 1, 2000,
6. List of Operator Work Arounds and Temporary Modifications since December 1, 2000,
7. List of Root Cause evaluations since December 1, 2000,
8. List of Condition Reports since December 1, 2000,
9. List of Prompt Investigations since December 1, 2000,
10. List of Work Orders and Action Requests since December 1, 2000,
11. List of Operability Evaluations performed since December 1, 2000,
12. List of Quality Assurance audits and self assessments performed since December 1, 2000,
13. List of top 10 risk significant systems and components,
14. (NRC identified issues) List of NCV's since December 1, 2000, and a summary of the licensee's actions for issues related to NCV's by corner stones,
15. List of issues identified through employee concerns program,
16. Administrative procedure for incorporating industry operating experience (OPEX),
17. Trend analysis reports for condition reports (Station and Department level,)
18. Corrective Action backlog; work order backlog risk significance assessment,
19. The corrective action system program reports submitted to management since December 1, 2000, and
20. Copies of procedures governing Operator Work Arounds, Temporary Modifications, Operability Evaluations, Root Cause Evaluations, and Prompt Investigations.

Documents requested to be available during the inspection;

21. Updated Final Safety Analysis Report,
22. Technical Specifications,
23. Procedures,
24. Copies of any self-assessments and associated condition reports generated in preparation for the inspection.

## LIST OF DOCUMENTS REVIEWED

### Procedures

LS-AA-125	Corrective Action Program (CAP) Procedure	Revision 0
LS-AA-125-1001	Root Cause Analysis Manual	May 18, 2001
LS-AA-125-1002	Common Cause Analysis Manual	May 18, 2001
LS-AA-125-1003	Apparent Cause Evaluation Manual	May 18, 2001
LS-AA-125-1004	Effectiveness Review Manual	May 18, 2001
LS-AA-125-1005	Coding and Trending Manual	May 18, 2001
LS-AA-125-1006	CAP Process Expectations Manual	June 12, 2001
RS-AA-115	Operating Experience (OPEX)	Revision 2
OP-AA-101-303	Operator Work-Around Program	Revision 0
LS-AA-105	Operability Determinations	Revision 0
CC-AA-112	Temporary Configuration Changes	Revision 4
	Byron/Braidwood Stations Updated Final Safety Analysis Report	
AD-AA-106	Corrective Action Program (CAP) Process Procedure	Revision 3
CAP-3	Root Cause Investigation and Report Handbook	Revision 4
CAP-4	Common Cause Analysis Handbook	Revision 1
CAP-5	Effectiveness Review Handbook	Revision 1
CAP-6	Coding and Trending Handbook	Revision 3
CAP-7	PassPort Action Tracking Record Retention Handbook	Revision 3
CAP-8	Apparent Cause Evaluation (ACE) Handbook	Revision 2
CAP-9	CAPSY Process Instructions Handbook	Revision 1
CAP-10	Corrective Action Program (CAP) Guidance and Expectations Handbook	Revision 2

Byron Technical Procedure (BVP) 800-44	Feedwater Venturi Calibration Unit 1 and 2	Revision 4
E1-AA-101	Employee Concerns Program	Revision 1
Byron Annunciator Response Procedure 0-31-B1	DG Room 2A Temperature High-Low	Revision 8

**Action Requests (AR) and Condition Reports (CR)**

00037765	B2000-03264 Apparent Reluctance to Initiate CRs	October 31, 2000
00040290	B2000-03645 Results of Common Cause Analysis on Condition Report Generation	December 12, 2000
00040290-03	Effectiveness Review CR B2000-03645	July 13, 2001
00040671	B2000-03811 Unexpected LOCAR entry on ESF Bus 212	December 15, 2000
00041369	B2000-03767 125 Vdc Ground Alarm/Spike	December 14, 2000
00041428	B2000-03910 Incomplete Corrective Actions for Conditions	December 28, 2000
00041508	B2001-03930 Emergency Preparedness program element not evaluated	December 29, 2000
00041514	B2000-03903 Inadequate Self-Identification of HP and Programmatic Issues	December 28, 2000
00041519	B2000-03904 Inadequate Determination of Extent of Condition	December 28, 2000
00041799	B2000-03935 CCA Identify inadequate contractor supervisor oversight	December 22, 2000
00041882	B2000-03928 Incongruent Root Cause Review (RCR) for B2000-03043, "Unintentional Entry in Low Temperature Over Pressure Technical Specification 3.4.212 Upon Procedure Restoration."	January 2, 2001
00041998	B2001-00033 N.O. Identified - Maintenance FASA not completed	January 4, 2001
00042252	B2001-00069 Working on undergrounded equipment above 600	January 11, 2001

00042288	B2001-00079 Tamper Seal for Unit 1 Emergency Hatch of No Use	January 8, 2001
00042367	B2001-00122 Posting being obstructed from view	January 9, 2001
00042563	B2001-00168 Ineffective Corrective Actions/Abnormal Component	January 16, 2001
00042642	B2001-00239 Unexpected DC Ground Alarm on SF DC Bus 211	January 18, 2001
00043711	B2001-00394 Centrifugal Charging Pump Lube Oil Flexible Hoses	January 30, 2001
00044301	B2001-00345 Schedule Delay Increases LCOAR Tme	January 25, 2001
00044390	B2001-00328 Online Risk Inconsistencies with CC heat exchangers	January 25, 2001
00044828	B2001-00339 BOP CC-14 Precaution D2 may not be appropriate	January 24, 2001
00044951	B2001-00622 Elevated Grounds ESF Bus 112 and 212	February 9, 2001
00045011	B2001-00401 Chemical Effluvium Discovered/Safety	January 27, 2001
00045014	B2001-00353 PMT Field from WR Cover Sheet is Potentially Misleading	January 25, 2001
00045283	B2001-00390 Operations Focus Area Self- Assessment (FASA) Identifies Lapses in Supervisors' Enforcement of Standards	January 26, 2001
00045326	B2001-00423 Watertight Doors Local Alarm Not Operational	January 29, 2001
00045498	B2001-00410 Non-conservative error, unclear assumption	January 29, 2001
00045524	B2001-00490 Events not submitted for OPEX	February 1, 2001
00045645	B2001-00553 Input Perimeter discrepancy between two voltage	February 5, 2001
00045738	B2001-00601 DC Bus 112 Ground Positive Spikes + 130Vdc	February 8, 2001



00045941	B2001-00620 CC SYS TEMP could exceed value considered in current piping analysis	February 9, 2001
00045972	B2001-00614 NRC concern with UFSAR DRP 7-257	February 8, 2001
00046233	B2001-00755 DC Bus 112 Ground Spiking +130 Vdc	February 19, 2001
00046246	B2001-00692 Potential Maintenance HP/Latent Organizational Weakness Increase	February 14, 2001
00046658	B2001-00699 Special Projects Staffing	February 14, 2001
00046882	B2001-00773 U1 ESF 112 Spike on Ground Alarm	February 20, 2001
00047065	B2001-00908 DC Bus 112 Ground Alarms	March 1, 2001
00047684	B2001-01102 Potential Trend Identified in Operations/Chemist	March 14, 2001
00048225	B2001-01293 Increasing Positive Ground on DC Bus 112	March 27, 2001
00048302	B2001-00617 - Unplanned LOCAR entry due to Elevated DC Bus	March 31, 2001
00048387	B2001-01182 Action Tracking Item Closeout Documentation	March 20, 2001
00048420	B2001-01172 ACE for 2A Centrifugal Charging Pump, CR B2001-00394 Identified Additional "Potential Non-Conformance Items"	March 19, 2001
00048421	B2001-01248 Unplanned LOCAR entry into 1BOL DC-1 DC Bus 112	March 22, 2001
00048471	B2001-01175 Unplanned Admin LOCAR entry into 1BOL DC DC 1 Bus 112	March 20, 2001
00048576	B2001-01360 Unplanned LOCAR entry	March 31, 2001
00048689	B2001-00821 OWA work cancelled (2CC9473B)	February 23, 2001
00048783	B2001-01218 Unplanned Admin LOCAR entry into 1BOL DC 1 on Bus	March 22, 2001

00048823	B2001-01379 DC Bus 211 Ground - Unplanned LOCARA entry	April 2, 2001
00048980	B2001-0135 Nuclear Oversight Discovers Failure to Write CR	March 30, 2001
00049085	B2001-01288 DCP Completion Schedule did not support WC milestones	March 26, 2001
00049208	B2001-01311 Negative Motivation for Doing the Right Thing	March 28, 2001
00049211	B2001-01341 Workload and Staffing Levels Impact on INPO Areas for Improvement and Plant Safety	March 30, 2001
00049217	B2001-01431 Unauthorized Protected Areas Access Due to Incomplete Pre- Access Screening	April 5, 2001
00049221	B2001-01466 U2 CC HX, 2BVSR SX-2, stopped due to heat transfer mismatch	April 7, 2001
00049359	B2001-01453 Unplanned LOCAR entry for DC Bus 211	April 6, 2001
00049455	B2001-01442 NRC One Hour Reportable Event Notification	April 6, 2001
00050249	B2001-01745 Incorrect Valve Removed from System	April 16, 2001
00050515	B20001-01909 Leads Lifted in Error	April 23, 2001
00050550	B2001-01878 OOS Program issues warrant a common cause analysis	April 21, 2001
00050609	B2001-01808 Inadequate Out-of-Service During Safety Verification Walkdown	April 18, 2001
00050677	B2001-01330 CRG violates CAP Procedure AD-AA-106 SEC 4.4.5	March 29, 2001
00050802	B2001-01947 Wrong Set Points installed for Rod Insertion Limit Calibration	April 26, 2001
00050943	B2001-01898 Unplanned LOCAR entry 1BOL 8.4, due to DC 112	April 22, 2001
00051993	B2001-02166 Failure to start/complete work as scheduled	May 10, 2001

00052423	B2001-02155 Unit 1 Pressure Power-operated Relief Valve (PORV) Tailpipe Temperature Increasing	May 23, 2001
00052474	B2001-02275 Discrepancies in AMAG Calculation	May 15, 2001
00052543	B2001-02132 DC Bus 111 Terminal Voltage less than Admin Limit	May 9, 2001
00052603	B2001-02183 Unplanned Admin LOCAR entry for DC Bus 212	May 11, 2001
00052924	B2001-02352 Neutron shielding door still open	May 19, 2001
00053991	B2001-02570 Unplanned LOCAR entry into 2BOL DC-1 DC Bus	June 5, 2001
00054286	B2001-02591 Inappropriate Use of Operating Procedures for the Conduct of Troubleshooting/Testing	June 6, 2001
00054347	B2001-02617 110 Volt Positive DC Ground on DC Bus 111 requiring	June 7, 2001
00054949	B2001-02697 Inadequate Operability Assessment of 1SX147B	June 13, 2001
00056221	B2001-02819 Common Cause identified while performing CCA for AT #50684 assignment 2 (FME control)	June 21, 2001
00056431	B2001-02995 250 Volt Battery Charger 223 Failure	July 7, 2001
00056466	B2001-02894 Inappropriate/ineffective corrective actions	June 28, 2001
00056614	B2001-02952 Unexpected Admin LOCAR entry, 1BOL DC1 +55 Volt	July 3, 2001
00056719	B2001-03028 Maintenance ACE Reviews (Maint Staff)	July 10, 2001
00056874	B2001-03024 Radwaste Panel Operator Workaround	July 10, 2001
00056927	B2001-02617 Unexpected Admin LOCAR entry, 2BOL DC1 +90 Volt	July 3, 2001
00057369	B2001-03032 Ground Alarms without Trend Capability	July 10, 2001

00070132	B2001-03122 Response to Overtime CR	July 17, 2001
00070226	B2001-03169 How Many Managers Does it Take to Run a Nuclear Plant?	July 19, 2001
00070338	B2001-03093 Review of Command and Control Control Room Operators	July 15, 2001
00071030	B2001-03165 Effectiveness Review for One Corrective Action to Prevent Recurrence (CAPR)for RCR on CR Generation-Identified as Ineffective	July 19, 2001
00071293	B2001-03362 Unexpected Annunciator for DC Bus 112 Alarmed	August 1, 2001
00071299	B2001-03367 212 Grounds during Storm Result in Unplanned	August 2, 2001
00072591	Unpaid Overtime as a Punishment	August 31, 2001
00072592	Two Temporary Changes Initiated without 50.59 reviews	August 20, 2001
00072728	B2001-03469 Unplanned LCOAR Entry into 2BOL DC 1 due to	August 9, 2001
00073654	Local RAD area monitor (OAR044) readings are incorrect	August 27, 2001
00074183	Unexpected DC 212 +80 V Ground & LOCAR 2BOL DC1 Entry	September 3, 2001
00074213	Incorrectly Installed Relay	September 4, 2001
00074647	Unexpected DC 212 +75 V Ground & LOCAR 2BOL DC1 Entry	September 7, 2001
00074647	Unplanned LOCAR entry 2BOL (Admin) on DC Bus 212	September 9, 2001
00075287	Unplanned LOCAR entry 2BOL DC1	September 14, 2001
00075766	Unfair Treatment of Byron Employee	September 19, 2001
00077703	Chemistry Monthly Self-Assessment Reports not completed	October 4, 2001
00078130	Incorrect PRA Risk Information used in work week analysis	October 28, 2001
00078480	1A DG Ventilation Damper Controller Degraded	October 10, 2001

00078541	PI&R Self-assessment (SA) - CRs Requiring Shift Manager Review not Routed to Shift Manager	October 11, 2001
00079821	Unplanned Admin LOCAR entry for DC Bus 212	October 23, 2001
00080070	FASA on 50.59 Process - deficient screening 6D-01-0206	October 24, 2001
00080515	Post Accident Neutron Monitor Connectors Not Covered	October 26, 2001
00080946	+ DC Ground on Bus 112	October 30, 2001
B2000-03043	Unintentional LCOAR Entry in LTOP Tech Spec upon Procedure Restoration	October 8, 2000
B2000-03645	Results of Common Cause Analysis on Condition Report Generation	December 1, 2000
B2000-03774	Use of DOP for VC HEPA Filter Testing	December 13, 2000
B2001-00168	Ineffective Corrective Actions/ Abnormal Component Position Log	January 12, 2001
B2001-00394	Centrifugal Charging Pump Lube Oil Flexible Hoses	January 26, 2001
B2001-00557	Harassment/Hostile Work Environment/Chilling Effect	February 6, 2001
B2001-00604	Component Cooling Flowpath Concern in Byron Emergency Procedure (BEP) ES-1.3	February 8, 2001
B2001-00699	Special Projects Staffing Issues	February 14, 2001
B2001-00774	CCA Evaluation identifies a common Cause in Ops Procedure usage	February 20, 2001
B2001-01005	Corrective actions not entered into action tracking (RP)	March 7, 2001
B2001-01038	P14 Setpoint Review	March 9, 2001
B2001-01063	RWP Panel Unexpected Alarm	March 12, 2001
B2001-01099	B2001-01063 Rebuttal	March 14, 2001
B2001-01161	Byron Staffing and the Process for Maintenance of EOPs Does Not Meet NRC Standards	March 19, 2001

B2001-01172	Apparent Cause Evaluation (ACE) for 2A Centrifugal Charging Pump, CR B2001-00394 Identified Additional "Potential Non-Conformance Items"	March 19, 2001
B2001-01311	Negative Motivation for Doing the Right Thing	March 28, 2001
B2001-01338	True and Relevant Information Removed from Supervisory Review	March 30, 2001
B2001-01341	Workload and Staffing Levels Impact on INPO Areas for Improvement and Plant Safety	March 30, 2001
B2001-01431	Unauthorized Protected Areas Access Due to Incomplete Pre-Access Screening	April 5, 2001
B2001-01722	Review of past EFR finds CR not written for Collectively Ineffective CAPRs	April 15, 2001
B2001-01745	Incorrect Valve Removed from System	April 16, 2001
B2001-01866	82-12 Letters, Questions, and Possible Violations	April 20, 2001
B2001-01977	Unexpected Response to 1 MW Ramp	April 28, 2001
B2001-01993	Reclassification of CR B2001-01977	April 30, 2001
B2001-02055	AB mon tks cross tied	May 2, 2001
B2001-02063	Ineffective Communication during RTS of 0B S/G Blowdown Demin	May 3, 2001
B2001-02080	Harassment & Intimidation by the Station Manager	May 5, 2001
B2001-02125	Continued Byron Annunciator Response (BAR) Response for a "Repetitive" Alarm Possibly Causing Complacency	May 8, 2001
B2001-02137	Diesel Generator Runs	May 9, 2001
B2001-02155	Unit 1 Pressurizer PORV Tailpipe Temperature Increasing	May 9, 2001
B2001-02182	Chilling Environment Apparently Returns to Byron	May 11, 2001
B2001-02241	CRs Not Directed to Shift Manager When Needed	May 14, 2001

B2001-02275	Discrepancies in AMAG Calculation	May 15, 2001
B2001-02585	Routine Use of Overtime Contrary to Generic Letter 82-12	June 6, 2001
B2001-02631	Loss of rapid response capability for Radiation Protection Department	June 8, 2001
B2001-02762	Potential OSHA violation	June 19, 2001
B2001-02819	Common Cause identified while performing CCA for AT #50684 assignment 2 (FME control)	June 21, 2001
B2001-02856	Unit 2 Rx Trip due to 2FW540 Failed Closed	June 26, 2001
B2001-02933	Unplanned Limiting Condition for Operation Action Requirement (LCOAR) 1BOL 4.11 entry, PORV 1RY455A Seat Leakage	July 1, 2001
B2001-03021	Human Factors Qualifications for Ops Procedures (Ops FASA Issue)	July 9, 2001
B2001-03032	111 Ground Alarms without Trend Capability	July 10, 2001
B2001-03122	Response to Overtime CR	July 17, 2001

**Inspection Report findings**

50-254-00-19-01	NCV 1A safety INJECTION pump capable of injecting into RC while Unit 1 is in Operational Mode 5	January 24, 2001
50-454/2001004-01; 50-455/2001004-01	NCV Failure to provide adequate barricade and to conspicuously post as an HRA	March 8, 2001
50-454/455-01-06-02(DRP))	NCV Failed to identify and perform all testing requirements , while installing flexible hoses on Unit 1 and Unit 2 Centrifugal Charging Pumps	April 25, 2001
50-455-01-08-01	NCV a Crew of Contract Disassembled a feedwater system tempering line check valve from the wrong train.	June 12, 2001

50-454-00-09-01	Finding 1SX147B failed to open. Valve was exercised and opened and stroke timed. Preconditioning invalidated test operability.	July 26, 2001
50-454-00-10-01	NCV Unit 2 had unintended increased power because of an error in setting DEHC for turbine generator power increase	September 10, 2001
50-454-00-10-02	Cross-cutting issue adverse trend in Operator errors of not following station procedures and/or incorrect knowledge based decisions	September 10, 2001
50-454-00-10-03	Reactor power limit exceeded due to improperly calculated feedwater mass flowrate utilized in reactor power calorimetric	September 10, 2001

**Operability Evaluations**

00-10	2A and 2B Accumulator air Operated Sample Isolation Valves 2PS9352A and 2PS9352B	December 7, 2001
01-001	Unit 2 Component Cooling Chemical Addition Tank (2CC03M)	January 16, 2001
01-002	1B DG Jacket Water Upper Cooler, vent line 1SXJ4AB-3/4 leak	January 17, 2001
01-003 & 01-003,Rev.1	Root Weld for vent line to Vent Valve 1CC158	January 19, 2001
01-004	1B DG Diesel Oil Storage Tank Volume	February 6, 2001
01-005 & 01-005,Rev.1	BEP ES-1.3, allows potential for CC pump runout	February 8, 2001 & March 6, 2001
01-006	1B Suction Isolation Valve (1SX001B)	February 14, 2001
01-007	2PS9352C Leaking by	April 21, 2001
01-008	areas of Potential Overstress for pedestal and base support for Essential Service Water Pumps	May 15, 2001
01-009	End Cover for Engine Driver 0B Essential Service Water (SX) Makeup Pump Jacket Water Cooler below required Minimum wall Thickness	June 11, 2001



01-010	Charcoal Filter Equipment Foundations not formally evaluated for additional weight of Charcoal Filters	June 19, 2001
01-011 & 01-011,Rev.1	Steam Generator operability due to unexplained Boron level	June 19, 2001
01-012	Leak from SX Basin can maintain adequate inventory	July 10, 2001
01-013& 01-013, Rev.1	2A Diesel Generator (DG) Lube Oil System is leaking from Lube Oil Cooler	September 24, 2001
01-014	Temperature Controller degraded. DG room temperature and DG operability	October 10, 2001
01-015	Feedwater Regulating Valves may have overtorqued body to bonnet studs	October 18, 2001
01-016	2B CV Pump inboard seal leaking while shut down. Dose Rate concerns	November 11, 2001

#### **Work Orders and Work Requests**

Work Request 00018366	Temperature Indicator is not indicating Room Temperature Properly	September 25, 2001
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#### **Audits and Self Assessments**

Focus Area Self-Assessment	Operations Management and Leadership	January 8 - 18, 2001
Focus Area Self-Assessment	Maintenance Surveillance Execution Quality	January 12, 2001
Focus Area Self-Assessment	Performance Centered Maintenance Program	February 2 - 9, 2001
Focus Area Self-Assessment	Operations Verification Practices	February 19-22, 2001
Focus Area Self-Assessment	Byron Engineering Quarterly Continued Training	March 28, 2001
Focus Area Self-Assessment	Heat Sink Performance	May 5, 2001
Focus Area Self-Assessment	Out-of-Service Program Effectiveness in Protecting Plant Personnel	June 29, 2001
Focus Area Self-Assessment	Maintenance Pre-Job Briefings (PJBs)	June and July , 2001

Focus Area Self-Assessment	Assess Byron's ISI Pressure Test Program	July 2001-September 10, 2001
Focus Area Self-Assessment	Attention to Detail on Surveillances	September 17 - 30, 2001
Focus Area Self-Assessment	Identification and Resolutions of Problems	October 16 - 27, 2001
NOA-BY-00-4Q	Nuclear Oversight Continuous Assessment Report Byron Nuclear Power Station (October - December 2000)	February 2, 2000
NOA-BY-01-1Q	Nuclear Oversight Continuous Assessment Report Byron Nuclear Power Station (January - March 2001)	April 27, 2001
Self-Assessment	Byron Station Operational Areas	1 <sup>st</sup> Quarter 2001
Self-Assessment	Byron Station Operational Areas	2 <sup>nd</sup> Quarter 2001
Self-Assessment	Byron Station Safety Conscious Work Environment	February 2, 2001

### Root Cause Reports

AR 00036504	Unintentional LCOAR Entry in LTOP Tech Spec	October 13, 2000
AR 00040290	Root Cause Evaluation on Condition Report Generation	January 30, 2001
AR 00041799	Multi Standards Breakdowns during Byron Refueling Outage B1R10 due to Inadequate Contractor Supervisory Oversight	December 22, 2000
AR 00042563	Ownership Conflicts Create Ineffective Corrective Actions Associated with Operating Department Abnormal Component Position Program	April 6, 2001
AR 00046156	Operations Department Procedure Use Deficiencies are result of Inadequate System Barriers and Weak Supervisory Oversight	February 20, 2001
AR 00049217	Unescorted Protected Area Access was Granted Prior to the Completion of Pre-Access Screening Due to an Inadvertent Data Entry Error Caused by a Failure to Apply Human Error Reduction Techniques	April 19, 2001

AR 00051245	Personnel Error while Adjusting Reactivity Results in Reactor Overpower Incident followed by less than Adequate Problem Identification by Shift Management	April 28, 2001
AR 00052475	Improper Feedwater Density and Thermal Expansion Coefficients Utilized to Calculate Feedwater Calibration Constants for Byron Units 1 & 2 resulted in an Under Calculation of Reactor Power and a Dual Unit Over Power Event	June 20, 2001
AR 00056146	Byron Unit 2 Reactor Trip due to Feed Water Regulating Valve 2FW540 Failed Closed	June 6, 2001
AR 00072416	OBOL 3.7 1 Hour Action Statement not Met	July 18, 2001
AR 00074213	The Undetected Inoperability of 2AR11J Following an Elective Maintenance Activity, Rendered 'A' Train Solid State Protection System (SSPS) Incapable of Generating an Automatic Containment Isolation Signal from a High Radiation Signal from 2AR11J	October 9, 2001
AR 00074328	Incorrect PS Valve Deactivated and Isolated for LCOAR Required Action	August 18, 2001

**Miscellaneous Documents**

Byron Station TSs	
Byron/Braidwood Stations Updated Final Safety Analysis Report	
Byron Units 1 & 2 Technical Requirements Manual	
Byron Shift Manager Logs	July 1, 2001
Byron Shift Manager Logs	September 10, 2001
Byron Shift Manager Logs	October 10 - 12, 2001
Second Quarter Trend Status	
Operations Department CR Trending	July 2001

Licensee Event Report 455-2001-004-00	Technical Specification Non-Compliance by Improper Installation and Post Maintenance Test on an Area Radiation Monitor that Generates an Automatic Containment Ventilation Isolation Signal	October 30, 2001
NRC Generic Letter 91-18	Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions	Revision 1
NUREG-1022	Event Reporting Guidelines 10 CFR 50.72 and 50.73	Revision 2
NRC Inspection Manual, Part 9900	Operable/Operability: Ensuring the Functional Capability of a System or Component	October 8, 1997
<b>Condition Reports issued as a result of the inspection</b>		
CR 00082993	Station Failed to Identify and Correct Maintenance Issues	November 15, 2001