July 27, 2001

EA-00-262

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

SUBJECT: QUAD CITIES NUCLEAR POWER PLANT
NRC INSPECTION REPORT 50-254/01-13(DRS); 50-265/01-13(DRS)

Dear Mr. Kingsley:

On July 13, 2001, the NRC completed a supplemental inspection at your Quad Cities Nuclear Power Plant. The enclosed report presents the results of that inspection, which were discussed on July 13, 2001, with Mr. Tim Tulon and other members of your staff.

During a baseline NRC inspection conducted on October 16, 2000, through November 27, 2000, the NRC identified a White issue concerning your radiological planning for the safety relief valve work conducted during the Quad Cities Unit 1 refueling outage in October 2000. The issue involved the failure to adequately implement radiological dose controls and maintain doses as-low-as-is-reasonably-achievable (ALARA). As a result of radiological planning problems, the job accrued more than 5 person-rem of dose and exceeded the projected job dose by more than 50 percent. In accordance with the NRC's significance determination process, the NRC characterized this issue as a preliminary White finding.

On February 13, 2001, members of your staff participated in a regulatory conference that was conducted in the NRC Region III office to discuss the preliminary White finding. During that meeting, your staff described your root cause evaluation and planned corrective actions. Following that conference, the NRC transmitted the final results of our significance determination of the finding in a letter dated February 21, 2001. As described in that correspondence, the ALARA finding was determined to be a finding having low to moderate safety significance. Consequently, the NRC issued a White finding for the performance issue.

The NRC conducted this supplemental inspection to assess your completed evaluation of the White ALARA finding. The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspector reviewed selected procedures and records, observed activities, and interviewed personnel. Specifically, the inspector reviewed your root cause evaluation for the White finding and your planned corrective actions to address this performance problem.

We found that your staff performed a thorough review of the radiological planning problems that occurred during the Unit 1 safety relief valve work. The root cause evaluation was systematic and conducted at the appropriate depth. As a result of that evaluation, your staff identified that ineffective job management by the radiation protection and construction staffs resulted in the planning deficiencies and the higher than estimated job exposure. In determining this root cause, your staff also identified contributing causes associated with managing changes in job conduct and as-found conditions, which were appropriately captured by the root cause. We also concluded that your corrective actions were appropriate to address the root cause and contributing causes identified in your evaluation and to prevent recurrence. Although we observed adequate initial implementation of these actions, we plan to more fully review the implementation during future NRC baseline inspections.

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,

/RA by Roy Caniano Acting For/

John A. Grobe, Director
Division of Reactor Safety

Docket Nos. 50-254; 50-265
License Nos. DPR-29; DPR-30

Enclosure: Inspection Report 50-254/01-13(DRS);
50-265/01-13(DRS)

See Attached Distribution

We found that your staff performed a thorough review of the radiological planning problems that occurred during the Unit 1 safety relief valve work. The root cause evaluation was systematic and conducted at the appropriate depth. As a result of that evaluation, your staff identified that ineffective job management by the radiation protection and construction staffs resulted in the planning deficiencies and the higher than estimated job exposure. In determining this root cause, your staff also identified contributing causes associated with managing changes in job conduct and as-found conditions, which were appropriately captured by the root cause. We also concluded that your corrective actions were appropriate to address the root cause and contributing causes identified in your evaluation and to prevent recurrence. Although we observed adequate initial implementation of these actions, we plan to more fully review the implementation during future NRC baseline inspections.

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/RA by Roy Caniano Acting For/

John A. Grobe, Director
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Docket Nos. 50-254; 50-265
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos:	50-254; 50-265
License Nos:	DPR-29; DPR-30
Report No:	50-254/01-13(DRS); 50-265/01-13(DRS)
Licensee:	Exelon Generation Company, LLC
Facility:	Quad Cities Nuclear Power Plant, Units 1 and 2
Location:	22710 206th Avenue North Cordova, IL 61242
Dates:	July 10 through 13, 2001
Inspector:	Steven K. Orth, Senior Radiation Specialist
Approved by:	Wayne Slawinski, Acting Chief Plant Support Branch Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000254-01-13(DRS), IR 05000265-01-13(DRS), on 07/10 - 07/13/2001, Exelon Generation Company, LLC, Quad Cities Nuclear Power Plant, Units 1 and 2. Supplemental Inspection - One or Two White Inputs in a Strategic Area.

Cornerstone: Occupational Radiation Safety

This supplemental inspection was performed by the NRC to assess the licensee's evaluation associated with the failure to provide adequate radiological planning to maintain radiological doses as-low-as-is-reasonably-achievable (ALARA) during the Fall 2000 Unit 1 outage. This performance issue was previously characterized as having low to moderate risk significance (White) in NRC Inspection Report No. 50-254/00-18(DRS) and 50-265/00-18(DRS).

During this supplemental inspection, performed in accordance with Inspection Procedure 95001, the inspector concluded that the licensee performed a comprehensive evaluation of the radiological planning weaknesses. The licensee's evaluation attributed the planning weaknesses to ineffective job management by the radiation protection and construction staffs (root cause). In determining the root cause, the licensee identified contributing factors which included ineffective management of work force changes and drywell temperature control, inadequate monitoring of job duration and identification of changes in duration, and inadequate consideration of work location dose rates and contamination levels when developing revised job dose estimates.

The inspector reviewed the licensee's corrective actions, both completed and planned, and concluded that the corrective actions appeared to address the identified root cause and contributing causes. In particular, the licensee implemented an ALARA job standard to provide additional guidance to the staff for identifying and managing changes in radiological work. The purpose of the job standard was to fully identify the changes (both prior to the work and based on the as-found conditions) and to communicate the changes to the station ALARA committee so that the planning could be adequately evaluated to determine if replanning was necessary. Initial implementation of the standard during the Spring 2001 Unit 1 recirculation pump seal replacement was adequate; however, the inspector observed weaknesses in the understanding of staff concerning when the standard was to be applied.

Due to the licensee's acceptable performance in assessing the radiological planning problems, the White finding associated with this issue will only be considered in assessing plant performance for a total of four quarters in accordance with the guidance in NRC Manual Chapter 0305, "Operating Reactor Assessment Program." Implementation of the licensee's corrective actions will be reviewed during a future inspection.

Report Details

01 Inspection Scope

This supplemental inspection was performed by the NRC in accordance with Inspection Procedure (IP) 95001 to assess the licensee's evaluation of radiological planning problems identified during its Fall 2000 Unit 1 refueling outage. During a baseline inspection of the occupational radiation safety program (NRC Inspection Report No. 50-254/00-18(DRS); 50-265/00-18(DRS)), the NRC identified that radiological planning weaknesses associated with the safety relief valve work resulted in the licensee accruing a job dose in excess of 5 person-rem and 50 percent greater than its estimate. Based on the issues identified, the NRC issued a White finding (i.e., finding of low to moderate safety significance) for the failure to implement adequate radiological controls to maintain doses as-low-as-is-reasonably-achievable (ALARA).

During this supplemental inspection, the NRC evaluated the licensee's root cause evaluation and corrective actions for the radiological planning problems. Since this supplemental inspection was conducted using the requirements of NRC IP 95001, the following details are organized by the specific inspection requirements of IP 95001 which are noted in italics in the following sections.

02 Evaluation of Inspection Requirements

02.1 Problem Identification

a. Determine that the evaluation identifies who (i.e., licensee, self-revealing, or NRC) and under what conditions the issue was identified.

The licensee identified a number of radiological planning and work control problems during the Fall 2000 refueling outage that concerned the safety relief valve (SRV) work. For example, condition reports (CRs) were initiated concerning the higher than expected dose rates found in the Unit 1 drywell, the heat stress issues, and worker inexperience (rework and work performance inefficiencies). These issues were assigned a safety significance in accordance with the licensee's corrective action program (CAP), and immediate actions were taken to reduce the impact of the concerns. Following the NRC baseline inspection (NRC Inspection Report No. 50-254/00-18(DRS);50-265/00-18(DRS)), the licensee initiated a CR to document the preliminary White finding, which directed a root cause evaluation (RCE).

b. Determine that the evaluation documents, how long the issue existed, and prior opportunities for identification.

The licensee assembled an RCE team to review the SRV work, to identify the root and contributing causes, and to develop corrective actions. The results of the team's evaluation were documented in a root cause report titled, "The RWP Dose Estimate for ERV/SRV Replacement was Exceeded Due to Ineffective Job Management by Radiation Protection and the Maintenance Modification Contractor." During its review, the licensee evaluated previous ALARA performance and did not identify any similar

incidents that would have provided prior opportunities to identify the SRV radiological control/planning issues.

The licensee performed an additional RCE that reviewed the higher than expected dose rates found in the Unit 1 drywell. In this evaluation, the licensee reviewed Unit 1 chemistry parameters, which did not present a clear indicator of changing source term during the previous operating cycle. Consequently, the licensee did not identify any notable previous opportunities to predict the higher dose rates in the Unit 1 drywell or to identify and correct the planning deficiencies identified.

c. Determine that the evaluation documents, the plant specific risk consequences (as applicable), and compliance concerns associated with the issue.

The licensee's RCE included an assessment of the risk consequences of the radiological planning problems. In accordance with the licensee's procedures, the RCE team determined that the planning problems did not result in any risk to plant equipment or to nuclear safety. Despite the work performance inefficiencies and rework issues, the SRV maintenance was properly performed, and plant equipment was properly functioning. In addition, no compliance issues were identified.

However, the inspector noted that although the licensee's RCE was completed consistent with procedural requirements, it did not evaluate the radiological and industrial risk to personnel safety that resulted from the planning weaknesses. For example, the licensee identified heat stress issues that affected the workers and identified worker inefficiencies that resulted in higher than estimated personnel exposures. Although there were no worker over-exposures that occurred, the cumulative job exposure (69.772 rem) exceeded the revised estimate by about 25 rem. The RCE did not directly address these risks to personnel safety. However, the inspector noted that the significance level of the CRs that resulted from the SRV work reflected a condition adverse to quality (second highest of three significance levels).

02.2 Root Cause and Extent of Condition Evaluation

a. Determine that the problem was evaluated using a systematic method(s) to identify root cause(s) and contributing cause(s).

The licensee formed an RCE team consisting of a team leader and two members of the radiation protection staff. The team performed the RCE using the guidance contained in the licensee's "Root Cause Investigation and Report Handbook." The inspector reviewed the RCE report and discussed the results with members of the root cause team. The team employed the following techniques: records review, personnel interviews, events and causal factors charting, task analysis, and interrelationship diagraming. The inspector concluded that the evaluation was performed in a systematic manner to determine the root causes and contributing causes.

b. Determine that the root cause evaluation was conducted to a level of detail commensurate with the significance of the problem.

The licensee's RCE was thorough and determined that the radiological planning and dose control problems resulted from ineffective job management by station radiation protection and construction. The licensee formulated the root cause from the following four contributing causes (causal factors):

(1) The change in work force was not managed effectively. Specifically, the work assignment was transferred from the maintenance department to the construction crew, who was less familiar with the work activity. However, the radiological and work planning was based on the maintenance department performing the work. In addition, about 30 percent of the contract construction force had limited nuclear experience and lacked familiarity with the work site.

(2) Change in specific work location dose rates and elevated contamination levels were not considered when re-estimating job exposure.

(3) Change in drywell temperature was not managed effectively.

(4) Change in job duration was not adequately identified or understood.

Based on the above causes identified by the licensee and the scope of the licensee's review, the inspector concluded that the licensee's evaluation was conducted to an adequate level of detail.

c. Determine that the root cause evaluation included a consideration of prior occurrences of the problem and knowledge of prior operating experience.

The licensee's RCE reviewed prior Quad Cities ALARA performance (1997 to present) and other industry ALARA planning problems to assess prior opportunities to identify and to correct the root and contributing causes. Based on this review, the licensee did not identify any ALARA issues at Quad Cities that had similar problems/deficiencies. The inspector discussed this review with the RCE team lead and found the review to be adequate.

The licensee also reviewed recent industry performance and identified two radiological work issues at other NRC reactor licensees that had results similar to the licensee's Unit 1 SRV work. In both of these cases, the work resulted in greater than estimated accumulated exposures as a result of ALARA and work control problems. After reviewing these activities and their root causes, the RCE team determined that the causes for the industry incidents were not similar to the SRV work. Consequently, the RCE team appropriately concluded that the licensee did not miss previous opportunities to correct its performance.

Based on the review performed by the licensee, the RCE team adequately concluded that the licensee did not have any notable previous opportunities to identify and correct the issues that contributed to the SRV work problems.

d. Determine that the root cause evaluation included consideration of potential common cause(s) and extent of condition of the problem.

The licensee performed an extent of condition review to determine if the root cause was applicable to other licensee processes or programs. Although not well documented in the RCE report, the licensee also reviewed each contributing cause to determine if any of the causes were apparent in the licensee's radiation protection or work control programs. Based on a search of its CAP, the RCE team did not identify any similar symptoms or problems that could be related to the root causes or contributing causes, with the exception of worker inexperience problems.

The licensee and the inspector recognized a generic issue concerning the proficiency of its contract work force. The inspector observed that this issue was not well documented by the licensee in its RCE report. However, licensee management indicated an awareness of the issue. Overall, the licensee had observed a reduction in the skill of certain crafts and in the level of nuclear related knowledge held by the contract work force. The licensee stated that these weaknesses contributed to work production inefficiencies and had the potential to result in higher than estimated job doses. During the Fall 2000 Unit 1 refueling outage, the reduction in workers' skill and experience manifested itself in work that had to be re-performed/corrected and in work delays. Although the licensee's review of this generic issue was ongoing, the licensee's lessons learned review of the Unit 1 outage recognized the need to closely evaluate the use of mock-up training and to improve worker oversight and the adequacy of crew communications/turnovers.

02.3 *Corrective Actions*

a. Determine that appropriate corrective action(s) are specified for each root/contributing cause or that there is an evaluation that no actions are necessary.

The licensee developed corrective actions for each of the causes identified in the RCE. Overall, the inspector concluded that the long-term corrective actions were appropriate to address the root cause and contributing causes and to prevent recurrence.

The licensee identified the following corrective actions to address the contributing causes (i.e., causal factors):

- Construction and radiation protection staffs were to develop a method of more accurately estimating and monitoring projected work duration and actual job progress for category 2 radiation work permits (RWPs) (i.e., work activities estimated for more than 5 person-rem of exposure). (Status: Completed)

- Outage planning was to develop a contingency plan for extended ventilation outages as part of the lessons learned program. (Status: Completed)

- The next SRV replacement was to be video taped (during the next refueling outage) to improve worker familiarization. (Status: Planned and scheduled)

- The procedure for SRV replacement was to be reviewed and revised to include lessons learned. (Status: Planned and scheduled)

In terms of corrective actions to prevent recurrence, the licensee implemented a job standard for the review of category 2 RWPs and ALARA plans. The licensee indicated that the purpose of the standard was to ensure that planning issues (particularly changes) were recognized and evaluated by the ALARA staff. The content of the job standard was specifically described in the RCE report. For example, the RCE report stated that the job standard was to "include specific criteria for revising category two RWPs." The RCE report further stated that the application of the criteria would identify when replanning was necessary and when station ALARA committee approval was required and that the criteria would also address when stop work authority would be exercised based on actual doses versus dose estimates. Based on the inspector's review, the job standard appeared to address the root cause of ineffective job management by identifying the conditions that would warrant additional oversight, training, contingency planning, and project management.

The inspector identified an apparent inconsistency between the RCE recommendations and the licensee's implemented ALARA job standard. The job standard contained issues that were intended to be considered by the ALARA planning staff both before the job was begun and at that time that the as-found work area conditions were identified. The inspector observed that the standard contained adequate considerations to identify the issues and conditions encountered during the Fall 2000 SRV maintenance, criteria for presenting the work to the station ALARA committee, and stop work criteria (based on a comparison of actual to an estimated work dose). However, the inspector did not observe clear criteria for revising the RWP or replanning the work activities, as described in the RCE report. The licensee acknowledged the discrepancy between the RCE report and the job standard but indicated that the considerations in the job standard were adequate to ensure that the radiation protection staff had the information necessary to make a decision regarding RWP and planning revisions. In particular, the licensee indicated that the job standard enabled the staff to provide the ALARA committee with the information necessary to require revisions to the RWPs and/or the radiological planning. Nonetheless, the licensee planned to review the RCE report and the ALARA job standard to ensure that any discrepancies were resolved.

The inspector also identified a weakness in the ALARA job standard concerning the evaluation of contingencies for environmental conditions. In the SRV work activity, the licensee determined that inadequate contingency planning for drywell cooling greatly affected the radiological outcome of the work activity. Although the licensee had a specific corrective action that provided this contingency in the future, the inspector identified a weakness in the evaluation of generic contingencies for environmental conditions. Specifically, the ALARA job standard did not consider environmental conditions/contingencies until the as-found work area conditions were identified. However, in the case of the SRV work, the licensee identified that preplanning was necessary to provide the contingency (i.e., availability and mobilization of equipment). Consequently, failing to identify the contingency in the pre-job section of the job standard challenged the licensee's ability to prevent similar issues from occurring in the future. The radiation protection staff agreed with this issue and revised the job standard to include these considerations in the pre-job section of the review.

b. Determine that the corrective actions have been prioritized with consideration of the risk significance and regulatory compliance.

The inspector reviewed the prioritization assigned to the corrective actions described above. The licensee assigned a schedule (a due date) to each of the actions based on the risk significance of the issue and the relative importance of the item based on future licensee activities. In particular, most of the items were scheduled for completion prior to the licensee's next scheduled refueling outage (Unit 2 refueling outage). In the case of the ALARA job standard, the licensee placed a higher priority and shorter schedule (90 days). However, the inspector noted that the review and revision of the SRV procedure had a due date that exceeded the planned Unit 2 refueling outage start date. The licensee indicated that its original goal was to have the procedure completed prior to the subsequent Unit 1 refueling outage, which was scheduled to occur after the next Unit 2 refueling outage. However, the radiation protection staff indicated that it would be more appropriate to have the procedure ready for the Unit 2 refueling outage and revised the projected date.

c. Determine that a schedule has been established for implementing and completing the corrective actions.

Evaluated under Section 02.3.b. above.

d. Determine that quantitative or qualitative measures of success have been developed for determining the effectiveness of the corrective actions to prevent recurrence.

The licensee had a specific corrective action assigned to review the effectiveness of its corrective actions. Following the next scheduled refueling outage, the licensee planned to conduct a review of the corrective actions. The licensee indicated that the review would be accomplished in accordance with Section 4.7, "Effectiveness Reviews (EFRs)," of procedure AD-AA-106 (Revision 3), "Corrective Action Program (CAP) Process Procedure." That section delineated the form of the review and the generic criteria for determining the adequacy of the corrective actions.

During this inspection, the inspector reviewed the licensee's initial implementation of the corrective actions during the Spring 2001 maintenance shutdowns of Units 1 and 2. During the Unit 1 shutdown, the licensee had the opportunity to use the ALARA job standard for the recirculation pump seal replacement. The inspector observed that the radiation protection staff adequately used Attachment 2, "As-Found Conditions Review." As a result of its use, the staff identified an expansion of the scope of the work (an additional seal leak), amended the ALARA plan, and presented the change to the station ALARA committee. However, the inspector noted that the standard was not used consistently throughout the seal replacement. For example, the licensee did not have a completed copy of Attachment 1, "Pre-Outage Review," and the ALARA planner did not remember reviewing the attachment for the Unit 1 seal work. In addition, the ALARA planner did not use the standard during the work in-progress review, which did not meet the expectations of the RCE lead. Since the job standard was a reference aid and not a required procedure, no violations of NRC requirements were identified.

However, the radiation protection manager indicated that he planned to better define the expectations concerning the future use of the aid.

03 Exit Meeting Summary

On July 13, 2001, the inspector presented the inspection results to Mr. Tulon and other members of the Quad Cities staff. The licensee acknowledged the findings presented. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. The licensee indicated to the inspector that the root cause report that evaluated the higher than expected dose rates found in Unit 1 contained proprietary information relating to a vendor's corrosion control processes. Otherwise, the remaining materials were not proprietary. Based on the exit meeting, no changes were made to the inspection findings or results.

KEY POINTS OF CONTACT

Licensee

D. Barker, Radiation Protection Manager
G. Barnes, Plant Manager
N. Chrissotimos, Regulatory Assurance
R. Chrzanowski, Nuclear Oversight Manager
D. Kallenbach, Radiation Protection
K. Moser, Chemistry Manager
K. Ohr, Radiation Protection
G. Powell, Radiation Protection
G. Rankin, Radiation Protection
J. Sirovy, Nuclear Oversight
M. Sullivan, Maintenance Support
T. Tulon, Site Vice President
J. Wooldridge, Radiation Protection

NRC

J. Adams, Resident Inspector
J. House, Senior Radiation Specialist
S. Orth, Senior Radiation Specialist
R. Schmitt, Radiation Specialist
W. Slawinski, Acting Chief, Plant Support Branch

LIST OF ACRONYMS USED

ALARA	As-Low-As-Is-Reasonably-Achievable
CAP	Corrective Action Program
CR	Condition Report
DRS	Division of Reactor Safety
IP	Inspection Procedure
RCE	Root Cause Evaluation
RWP	Radiation Work Permit
SRV	Safety Relief Valve

LIST OF DOCUMENTS REVIEWED

Tracking Number	Subject/Title	Date/Revision
	ALARA Plan Amendment, RWP: 01-1014, 1A/1B Recirc Seal Replacement	April 27, 2001
	Meeting Discussion Notes, CRG/MRC Coordinator: NRC White ALARA Finding (CR Q2000-04231)	December 28, 2000
	Root Cause Evaluation Report: The RWP Dose Estimate for ERV/SRV Replacement was Exceeded Due to Ineffective Job Management by Radiation Protection and the Maintenance Modification Contractor	January 9, 2001
AD-AA-106	Attachment 6, Evaluation Report Review and Approval Form, Page 1 of 1	January 9, 2001
AD-AA-106	Corrective Action Program (CAP) Process Procedure	Revision 3
AR 37353-02	Review Venture Report for Inadequacy of SRV/ERV Corrective Actions.	October 27, 2000
AR 37353-03	Q2000-03897 - Review Design Drawings and Submit ER to Provide Definitive Orientation Drawings	October 27, 2000
AR 37353-04	Q2000-03897 - Perform Apparent Cause Evaluation	November 21, 2000
AR 39549-12	Q2000-04231 - Status Briefing for MRC.	November 30, 2001
AR 39549-15	Q2000-04231 - MMC and RP will Develop a Plan to Determine a Method of More Accurately Estimating and Monitoring Person-hours vs Job Progress for Category 2 RWPs	March 26, 2001
AR 39549-16	Q2000-04231 - The Station RPM will Discuss this Event at the Next Peer Group Meeting.	March 15, 2001
AR 39549-19	Submit a Procedure Change to the SRV Replacement Procedure	February 12, 2001
CAP-3	Root Cause Investigation and Report Handbook	September 14, 2000
CR Q2000-03633	Higher Dose Rates Than Expected in Drywell Starting Q1R16	October 14, 2000

CR Q2000-03893	Drywell Temperature Increases Due to Vent Systems OOS Decreasing Work Efficiency	October 26, 2000
CR Q2000-03896	Rework on SRV Valves Due to Incorrect Installation of Bolts	October 24, 2000
CR Q2000-03897	SRV 4F Valve Bolted in 180 Degrees Out	October 25, 2000
CR Q2000-03898	Inefficiencies on SRV/ERV Job Leads to Increased Exposure	October 25, 2000
CR Q2000-03945	ERV Target Rock Valve	October 26, 2000
CR Q2000-03984	Main Steam Safety Relief Valves Tagged Incorrectly in Drywell	October 28, 2000
CR Q2000-03995	DW-1 SRV Labeling Discrepancies	October 29, 2000
CR Q2000-04231	NRC White ALARA Finding for the Safety Relief Valve Replacement	November 20, 2000
RP-QC-401-1001	Attachment 2, As-Found Conditions Review, RWP 01-1014	April 27, 2001
RP-QC-401-1001	Quad Cities Station ALARA Job Standard, Criteria for Category 2 Radiation Work Permits	April 4, 2001
WO 99281316	Install - Remove Temporary Cooling to U2 Drywell During Q2R16	May 2, 2001