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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

October 8, 2010

EA-10-205

Carolina Power and Light Company
ATTN: Mr. Eric McCartney
Vice President - Robinson Plant
H. B. Robinson Steam Electric Plant, Unit 2
3851 West Entrance Road
Hartsville, SC 29550

SUBJECT: H. B. ROBINSON STEAM ELECTRIC PLANT – NRC PROBLEM
IDENTIFICATION AND RESOLUTION INSPECTION REPORT
05000261/2010006; PRELIMINARY WHITE FINDING AND POTENTIAL
ESCALATED ENFORCEMENT VIOLATIONS

Dear Mr. McCartney:

On August 26, 2010, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at your H. B. Robinson Steam Electric Plant Unit 2. The enclosed report documents the inspection findings, which were discussed on July 30, 2010, and August 26, 2010, with you and other members of your staff.

The 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 examination of selected procedures and representative records, observations of plant equipment and activities, and interviews with personnel.

On the basis of the samples selected for review, the inspectors concluded that, in general, problems were identified, evaluated, and resolved within the corrective action program (CAP). However, based on the results of this inspection, three findings of significance were identified. Two of these findings were related to the identification and resolution of plant issues via nuclear condition reports (NCRs).

~~Enclosure 2 transmitted herewith contains SUNSI. When separated from Enclosure 2, this transmittal document is decontrolled.~~

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The first finding was self-revealing and of very low safety significance (Green) for failure to follow the site's CAP which resulted in degraded control power for the non-vital 4kV Bus 5 feeder breaker 52/24. This issue was not identified and evaluated through an NCR resulting in inadequate corrective actions. This deficiency was incorrectly diagnosed, existed for a period of sixteen months, and ultimately was revealed itself by causing a reactor trip during the 4kV Bus 5 fire event on March 28, 2010.

The second finding involves an apparent violation (AV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action" for your failure to promptly correct a condition adverse to quality involving the failure of "B" Emergency Diesel Generator (EDG) output breaker 52/27B to close in October 2008. The condition was not corrected and a subsequent failure resulted in the inoperability of "B" EDG in April 2009. An NCR was not generated for this problem as required by your CAP, thereby limiting management involvement in the corrective actions taken to address the condition. This finding was assessed, based on the best available information, including influential assumptions, using the applicable Significance Determination Process (SDP) and was preliminarily determined to be a finding of low to moderate safety significance (White). The final resolution of this finding will convey the increment in the importance to safety by assigning the corresponding color, i.e., White, a finding with low to moderate increased importance to safety that may require additional NRC inspections. The SDP analysis is included in the report as Enclosure 2. This finding did not represent an immediate safety concern because corrective actions had been implemented to address the root cause of the problem and the extent of condition.

In accordance with NRC Inspection Manual Chapter 0609, Significance Determination Process, we intend to complete our risk evaluations using the best available information and issue our final determination of safety significance within 90 days of this letter. The SDP encourages an open dialogue between the staff and the licensee; however, the dialogue should not impact the timeliness of the staff's final determination. Before the NRC makes its enforcement decision, we are providing you an opportunity to either (1) present to the NRC your perspectives on the facts and assumptions used by the NRC to arrive at this finding and its significance at a Regulatory Conference or (2) submit your position on this finding to the NRC in writing. If you request a Regulatory Conference, it should be held within 30 days of the receipt of this letter and we encourage you to submit supporting documentation at least one week prior to the conference to make the conference more efficient and effective. If a conference is held, it will be open for public observation. The NRC will also issue a press release to announce the conference. If you decide to submit only a written response, such a submittal should be sent to the NRC within 30 days of the receipt of this letter. If your response contains security-related information please ensure it is marked appropriately. If your response does not contain security-related information, it will be made available for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. If you decline to either request a Regulatory Conference or to submit a written response, you relinquish your right to appeal the final SDP determination; in that, by not doing either you fail to meet the appeal requirements stated in the Prerequisites and Limitations Sections of Attachment 2 of IMC 0609.

The third finding involves an NRC-identified AV of 10 CFR 50.9(a), for which final severity level is to be determined, related to materially inaccurate information provided to the NRC in Licensee Event Report (LER) 05000261/2009-001. This information was material to NRC because it was used, in part, as the basis for determining whether the licensee's response to the degraded condition was adequate and whether additional compensatory actions or NRC review would be necessary. This AV is being evaluated using the NRC's traditional enforcement process because it impacted NRC's ability to perform its regulatory function and is being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy can be found on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. Additional detail for this AV is provided in the enclosed inspection report.

Before NRC makes its enforcement decision for this AV, we are providing you an opportunity to either (1) respond to the apparent violation within 30 days of the date of this letter or (2) request a Predecisional Enforcement Conference (PEC). If a PEC is held, it will be open to public observation in accordance with the NRC Enforcement Policy. If you choose to provide a written response, it should be clearly marked as "Response to Apparent Violation, EA-10-205," and should include: (1) the reason for the apparent violation, or, if contested, the basis for disputing the apparent violation; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further violations; and (4) the date when full compliance will be achieved. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. If an adequate response is not received within the time specified or an extension of time has not been granted, NRC will proceed with its enforcement decision. Because this issue does not involve security-related information, your response will be made available for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

In recognition of the relationship of these two AVs, and to minimize administrative and resource burden, we encourage you to consider requesting a joint Regulatory Conference/PEC to discuss the above matters, or as an alternative, you may include your response to these issues and corrective actions in a single written response.

Please contact George Hopper at (404) 997-4645 within 10 days of the date of this letter to notify the NRC of your intended response. If we have not heard from you within 10 days, we will continue with our significance determination and enforcement decision. You will be advised by a separate correspondence of the results of our deliberations on this matter.

Since the NRC has not made a final determination as to the significance of these violations, no Notice of Violation is being issued at this time. Please be advised that the number and characterization of the apparent violations described in Enclosure 1 may change as a result of further NRC review.

Additionally, if you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region II, and the NRC Resident Inspector at the H. B. Robinson Steam Electric Plant.

CP&L

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In accordance with 10 CFR 2.390 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 the NRC's document system (ADAMS). Adams is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA by Joel T. Munday Acting For/

Leonard D. Wert, Jr., Director
Division of Reactor Projects

Docket No. 50-261
License No. DPR-23

Enclosures: 1. Inspection Report 05000261/2010006
w/Attachment: Supplemental Information
2. Significance Determination, SRA Analysis Number ROB1007
w/Attachments: (Official Use Only – Security Related Information)

cc w/encls: (See next page)

CP&L

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Sincerely,

/RA by Joel T. Munday Acting For/

Leonard D. Wert, Jr., Director
Division of Reactor Projects

Docket No. 50-261
License No. DPR-23

- Enclosures: 1. Inspection Report 05000261/2010006
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w/Attachments: (Official Use Only – Security Related Information)

cc w/encls: (See next page)

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ADAMS: X Yes ACCESSION NUMBER: ML102810633 X SUNSI REVIEW COMPLETE

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NAME	JRivera-Ortiz	CRapp	JPolickoski	RCureton	DBollock	JHickey	RMusser
DATE	10/07/2010	10/08/2010	10/08/2010	10/06/2010	10/06/2010	10/08/2010	10/08/2010
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cc w/o Enclosure 2
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cc w/o Enclosure 2 (continued next page)

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Letter to Eric McCartney from Leonard D. Wert, Jr., dated October 08, 2010

SUBJECT: H. B. ROBINSON STEAM ELECTRIC PLANT – NRC PROBLEM
IDENTIFICATION AND RESOLUTION INSPECTION REPORT
05000261/2010006; PRELIMINARY WHITE FINDING AND POTENTIAL
ESCALATED ENFORCEMENT VIOLATIONS

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 50-261

License No.: DPR-23

Report No.: 05000261/2010006

Licensee: Progress Energy (Carolina Power & Light Company)

Facility: H. B. Robinson Steam Electric Plant

Location: Hartsville, SC

Dates: July 12 – August 26, 2010

Inspectors: J. Rivera-Ortiz, Senior Reactor Inspector (Team Leader)
C. Rapp, Senior Project Engineer
J. Polickoski, Resident Inspector
R. Cureton, Resident Inspector
D. Bollock, Resident Inspector

Approved by: G. Hopper, Chief
Reactor Projects Branch 7
Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000261/2010006; July 12 – August 26, 2010; H. B. Robinson Steam Electric Plant; biennial inspection of problem identification and resolution.

The report covers a team inspection conducted by five regional inspectors. The inspectors identified one apparent violation (AV) with potentially low to moderate safety significance (White), one AV with potential severity level greater than Severity Level IV, and one self-revealing finding of very low safety significance (Green). The significance of most findings is indicated by its color (Green, White, Yellow, Red) using the process in Inspector Manual Chapter (IMC) 0609, "Significance Determination Process (SDP)." The cross-cutting aspects were determined using IMC 0310, "Components within the Cross Cutting Areas." Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Identification and Resolution of Problems

The inspectors concluded that, in general, problems were properly identified, evaluated, prioritized, and corrected. The licensee was generally effective at identifying problems and entering them into the corrective action program (CAP) for resolution, as evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee, during the review period. However, the inspectors identified two examples where plant issues were not adequately identified in the CAP as Nuclear Condition Reports (NCRs). Generally, prioritization and evaluation of issues, formal root cause evaluations for significant problems, and corrective actions specified for problems were consistent with licensee CAP procedures. Overall, corrective actions developed and implemented for issues were generally effective and implemented in a timely manner.

The inspectors determined that generally, audits and self-assessments were adequate in identifying deficiencies and areas for improvement in the CAP and appropriate corrective actions were developed to address the issues identified. Use of operating experience was found to be generally acceptable and integrated into the licensee's processes for performing and managing work, plant operations, and cause evaluations.

Based on discussions and interviews conducted with plant employees from various departments, the inspectors determined that personnel at the site felt free to raise safety concerns to management and use the CAP to resolve those concerns.

Cornerstone: Initiating Events

- Green. A self-revealing finding of very low safety significance was identified for the licensee's failure to follow the site's CAP procedure, CAP-NGGC-0200, "Corrective Action Program," Revision 26; in that a degraded control power condition for the non-vital 4kV Bus 5 feeder breaker 52/24 was not identified and evaluated through an NCR which resulted in inadequate corrective actions leading to a plant trip and a complicated plant fire. The licensee implemented corrective actions to replace the affected breaker and inspect all breakers potentially affected by the same degraded control power condition.

This finding is more than minor because it is associated with Equipment Performance attribute of the Initiating Events Cornerstone and affects the cornerstone objective in that the

failure to evaluate and correct the breaker position indicating light, which indicated the lack of breaker control power, resulted in the breaker failing to isolate an electrical fault, resulting in a reactor trip. The inspectors used NRC IMC 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," to evaluate the significance of this issue and determined that this finding contributed to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available. Therefore, further significance determination analysis was performed in accordance with IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." The inspectors conducted a Phase 3 analysis and determined this finding was of very low safety significance because the performance deficiency did not affect the mitigating capabilities of the auxiliary feedwater system and the feed and bleed safety function. This finding has a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to implement the corrective action program with a low threshold for identifying the issue, and ensuring that the issue was identified completely, accurately, and in a timely manner commensurate with its safety significance (P.1.a). (Section 40A2 (a)(3)i)

Cornerstone: Mitigating Systems

- TBD. The NRC identified an apparent violation (AV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action" for the licensee's failure to promptly correct a condition adverse to quality involving the failure of the "B" Emergency Diesel Generator (EDG) output breaker 52/27B to close in October 2008 due to a stuck control relay linkage. As a result, the failure recurred in April 2009 and caused the EDG to become inoperable. The licensee implemented actions to correct the cause of the breaker failure and to inspect all similar breakers susceptible to the same condition.

This finding is more than minor because it is associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone and adversely affects the cornerstone objective in that the failure to correct the "B" EDG output breaker 52/27B resulted in the inoperability of the "B" EDG for a period greater than the allowed outage time in plant Technical Specifications (TS). An SDP analysis using the NRC's Robinson Standardized Plant Analysis Risk (SPAR) model and input from the licensee's full scope model resulted in this finding being characterized as preliminarily White, a finding of low to moderate safety significance. This finding has a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to implement the corrective action program with a low threshold for identifying the issue, and ensuring that the issue was identified completely, accurately, and in a timely manner commensurate with its safety significance (P.1.a). (Section 40A2 (a)(3)ii)

- TBD. The NRC identified an AV of 10 CFR 50.9(a) for failure to provide accurate and complete information in Licensee Event Report (LER) 05000261/2009-001-000. This information was material to NRC because it was used, in part, as the basis for exercising enforcement discretion for a violation of TS Action Statement 3.8.1.B.4 and Condition C. This AV has been entered into the licensee's corrective action program as NCRs 413010 and 419191 to correct the inaccurate and incomplete information.

This violation is being treated as traditional enforcement because the failure to provide complete and accurate information impacted the regulatory process. The inspectors determined the severity level of this apparent violation is potentially greater than Severity

Level IV. Cross-cutting aspects are not assigned to violations being dispositioned through the traditional enforcement process. (Section 4OA2 (a)(3)iii)

REPORT DETAILS

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution (PI&R)

a. Assessment of the Corrective Action Program

(1) Inspection Scope

The inspectors reviewed the licensee's CAP procedures which described the administrative process for initiating and resolving problems primarily through the use of NCRs. The inspectors toured plant areas, including the main control room and selected risk-significant systems to verify that problems were being properly identified and NCRs were initiated. The inspectors also attended daily plant status meetings and work request/work order (WR/WO) screening meetings to assess the licensee's threshold to initiate NCRs for identified plant problems. Additionally, the inspectors reviewed health reports, operator logs, and corrective maintenance work orders for selected risk-significant systems to verify that known system issues were entered into the CAP via NCRs.

In order to assess the licensee's prioritization of NCRs that were generated during this inspection, the inspectors attended NCR prioritization meetings conducted by Performance Improvement Coordinators from the Self-Evaluation group and the Management Review of NCRs meetings to verify that prioritization was performed in accordance with corporate procedure CAP-NGGC-0200.

The inspectors reviewed a sample of NCRs initiated since the last biennial PI&R inspection (June 2008) to verify that problems already entered into the CAP were properly evaluated and corrective actions were adequate to address the cause of the identified problems. The NCR sample included plant issues requiring apparent cause or root cause evaluations and plant issues that did not require a cause evaluation to be corrected. To help ensure that samples were reviewed across all cornerstones of safety identified in the NRC's Reactor Oversight Process (ROP), the inspectors selected a representative number of NCRs that were assigned to the major plant departments, including operations, maintenance, engineering, health physics, emergency preparedness, and security. The inspectors also selected a sample of NCRs initiated to address NRC identified non-cited violations, and licensee identified violations issued since the last PI&R. The sample also included a focused review of NCRs for three risk-significant systems: Auxiliary Feedwater System, Reactor Protection System, and Emergency Diesel Generators including a five year review of corrective actions for age-dependent issues in these systems.

The inspectors reviewed the selected NCR sample against the performance attributes listed in NRC inspection procedure IP 71152, Table 1. The inspectors conducted a detailed review to assess the adequacy of the root cause and apparent cause evaluations of the problems identified. The inspectors reviewed these evaluations against the descriptions of the problem described in the NCRs and the guidance in

licensee procedure CAP-NGGC-0200 and CAP-NGGC-0205, “Significant Adverse Condition Investigations and Adverse Condition Investigations – Increased Rigor.” The inspectors assessed if the licensee had adequately determined the cause(s) of the identified problems, and had adequately addressed operability, the need to formally report the condition to the NRC, common cause determination, Maintenance Rule implementation (10 CFR 50.65), generic implications, extent of condition, extent of cause, and the evaluation of operating experience to determine if the condition could have been prevented. The inspectors verified that the corrective actions generated were adequate to correct the cause(s) identified in the cause analysis. The inspectors verified that corrective actions to prevent recurrence addressed the root cause(s) identified in the cause analysis of NCRs involving significant conditions adverse to quality. Where possible, the inspectors independently verified that the corrective actions were implemented as intended.

Control Room walk-downs were also performed to assess the main control room deficiency list and to ascertain if deficiencies were entered into the CAP and tracked to resolution. A sample of operator workarounds and operator burden screenings were reviewed and the inspectors verified compensatory measures for deficient equipment were being implemented in the field.

Additionally, on June 2, 2010, the NRC completed an Augmented Inspection (Inspection Report 05000261/2010009) for an event that occurred on March 28, 2010. The augmented inspection team opened Unresolved Item (URI) 05000261/2010009-09 to evaluate additional information and determine if a performance deficiency was associated with the failure of non-vital 4kV breaker 52/24 to open during the event. This PI&R inspection reviewed work requests, work order history, procedures, and NCRs associated to the event, and interviewed personnel involved on the investigation of the breaker failure to determine if the failure to correct, in a timely manner, the breaker position indication light prior to the event represented a performance deficiency.

Documents critically reviewed are listed in the Attachment.

(2) Assessment

Identification of Issues

The inspectors determined that, in general, the licensee was identifying problems and entering them into the CAP for resolution either via NCRs or WRs/WOs. Generally, plant problems were acknowledged and corrective actions were implemented in a timely manner. The inspectors determined that the requirements for initiating NCRs as described in licensee corporate procedure CAP-NGGC-0200 provided an adequate threshold for entering issues into the CAP. These conclusions were based on the type of problems entered into the CAP as NCRs and the expectations delineated in procedure CAP-NGGC-0200, which stated that: “employees are encouraged to use the Corrective Action Program to report any concern regardless of whether it is a potential, suspect, or actual problem.” In addition, the inspectors’ walk-downs of plant areas and accessible portions of the selected risk-significant systems did not result in deficiencies that were not already identified in the CAP.

However, as described in the “Findings” section of this report, the inspectors identified two findings resulting from inadequate problem identification through the use of NCRs. These findings involved equipment failures that showed early indications of abnormal operation and were recognized by plant personnel. However, the licensee did not follow the requirements in CAP-NGGC-0200 to initiate NCRs for the observed conditions. In both instances, there were multiple opportunities by different individuals to generate NCRs. The failure to write an NCR as required by the licensee’s CAP procedure prevented these issues from being: (a) prioritized by plant management based on significance, (b) evaluated using formal cause investigation tools, (c) resolved through a corrective action plan that directly addressed the cause(s) identified by the cause analysis, and (d) evaluated for other applicable attributes such as operability, extent of condition, extent of cause and Maintenance Rule applicability.

The inspectors attended WRs/WOs meetings and identified four examples where NCRs were not initiated for equipment issues that were documented in WRs/WOs, as required. These examples did not represent immediate safety concerns and did not adversely affect any ROP cornerstone objective, and were considered to be of minor significance. The licensee initiated NCRs to address each equipment problem.

Additionally, the inspectors identified a weakness in the process to review WOs for Maintenance Rule implementation. Procedure CAP-NGGC-0200 required that WRs/WOs determined by a system engineer to be a potential Maintenance Rule functional failure (MRFF) needed an NCR for further evaluation. The inspectors identified that the WOs required to be reviewed by system engineers, in order to meet this procedure requirement, were entered into a dedicated Maintenance Rule database. The inspectors noted that WRs and WOs with certain type codes (e.g. “limited scope”) and status (e.g. “Plan”) were automatically removed from the Maintenance Rule database and made unavailable for review. This created the vulnerability for system engineers to be unaware of system deficiencies that could involve potential MRFFs and therefore require an NCR for further evaluation. For example, WO1446737, initiated in 2008 to replace the light socket of 4kV breaker 52/24, was not entered into the Maintenance Rule database because it was coded in “Plan” status. This prevented the primary opportunity for the system engineer to review the WO for Maintenance Rule applicability and generate an NCR. The licensee initiated NCR 413048 to address the weakness in the WO review process.

Prioritization and Evaluation of Issues

Based on the review of selected NCRs, the inspectors concluded that problems were generally prioritized and evaluated in accordance with the NCR significance determination guidance in CAP-NGGC-0200. Each NCR was assigned a priority level and owner at the NCR screening meeting, which was confirmed in the daily Management Review of NCRs meeting. The inspectors determined that adequate consideration was given to system or component operability and associated plant risk.

The inspectors determined that station personnel had conducted root cause and apparent cause analyses in compliance with the licensee’s CAP procedures and assigned cause determinations were appropriate considering the significance of the

issues being evaluated. A variety of formal causal analysis techniques were used depending on the type and complexity of the issue consistent with CAP-NGGC-0205.

However, the inspectors identified three examples where the evaluation of problems did not clearly meet the guidance in procedures CAP-NGGC-200 and CAP-NGGC-0205 to address the adverse condition described in the NCRs. Because these examples did not adversely affect any ROP cornerstone objectives, the inspectors determined the issues were of minor significance and are not subject to enforcement action in accordance with the NRC's Enforcement Policy.

- NCR 392524 was initiated to address a temporary power loss that affected the protected area metal detectors. The inspectors noted the NCR did not address an associated adverse condition related to implementation of controls to prevent access through security barriers that are not fully ready for operation. The licensee initiated NCR 410194 to address this issue.
- NCR 310935 was initiated to address a half-trip condition caused by the spurious actuation of relay SL-X(A), Protection Train A Turbine Valve Closed Relay. The inspectors noted that the Maintenance Rule evaluation (MREV) for this NCR did not consider the impact of the relay actuation on the Maintenance Rule function of the Reactor Protection System. The licensee initiated NCR 410020 to address this issue.
- NCR 306903 was initiated to address a reactor trip as a result of high vibration in the main turbine. The inspectors identified that the root cause evaluation eliminated a causal factor that has the potential to be a major contributor for a future similar event. Although the causal factor was not a major contributor for the particular reactor trip addressed in the NCR, the inspectors concluded that the causal factor had the potential to cause a future reactor trip if not fully addressed. The licensee initiated NCR 413003 to address this issue.

Effectiveness of Corrective Actions

Based on a review of corrective action documents, interviews with licensee staff, and verification of completed corrective actions, the inspectors determined that overall, corrective actions for plant issues documented in NCRs were timely, commensurate with the safety significance of the issues, and effective. The inspectors noted that, in general, conditions adverse to quality were corrected. For significant conditions adverse to quality, the corrective actions directly addressed the cause and effectively prevented recurrence in that a review of CAP performance indicators, NCRs, and effectiveness reviews demonstrated that the significant conditions adverse to quality had not recurred. Effectiveness reviews for corrective actions to prevent recurrence (CAPRs) were sufficient to ensure corrective actions were properly implemented and were effective.

However, the inspectors identified two examples where the corrective actions did not fully meet the guidance in procedure CAP-NGGC-200 to address the condition described in the NCRs. Because these examples did not adversely affect any ROP cornerstone objectives, the inspectors determined the issues were of minor significance,

and are not subject to enforcement action in accordance with the NRC's Enforcement Policy.

- NCR 315471 was initiated to address a finding from a Nuclear Oversight Assessment of the Emergency Preparedness organization. The inspectors noted that a corrective action item to revise a procedure was not implemented as intended. The licensee generated NCR 410579 to address this issue.
- The licensee initiated an NCR to address, in part, a weakness in the communication between the main control room and the security staff that was revealed during the event of March 28, 2010 (See NRC inspection report 05000261/2010009 for details). The inspectors noted that the corrective action did not clearly address the communication problem. The licensee initiated NCR 412901 to address this issue.

(3) Findings

i. (Closed) Unresolved Item 05000261/2010009-09: Failure to Repair Circuit Breaker 52/24 Resulting in Breaker Being Unable to Operate

Introduction: A self-revealing finding of very low safety significance (Green) was identified for the licensee's failure to follow the site's CAP procedure, CAP-NGGC-0200, "Corrective Action Program," Revision 26; in that a degraded control power condition for the non-vital 4kV Bus 5 feeder breaker 52/24 was not identified and evaluated through an NCR, which resulted in inadequate corrective actions leading to a plant trip and a complicated plant fire.

Description: Licensee's procedure CAP-NGGC-0200, Revision 26, required an NCR be generated if a "WR/WO required corrective maintenance as defined by the conduct of work management of a "critical" component." In addition, non-safety related breaker 52/24 located between 4kV Buses 4 and 5, was classified as a "critical" component in the licensee's equipment database and as Maintenance Rule high safety significant component due to its potential to cause plant transients should it fail.

On November 8, 2008, licensee personnel discovered that the position indicating lights on breaker 52/24 were not lit. The licensee initiated WR 357740, which resulted in "Limited Scope" WO 1446737 to address this condition. However, the licensee did not initiate an NCR to address the corrective maintenance required by the WO, as required by licensee's procedure CAP-NGGC-0200 for a "critical" component. The reviewers of the WO determined that the problem with the indicating lights was caused by a failure of a light socket and the WO was placed in a "PLAN" status awaiting parts. From November 2008 through February 2009, licensee operations personnel discovered the same condition for the breaker 52/24 indicating lights four additional times, and replaced light bulbs each time with no success. Operations personnel documented their discoveries in four additional WRs (359747, 361747, 368020, and 370899). All four of these WR's were cancelled based on being duplicates of the already existing WO 1446737, which remained in a "PLAN" status awaiting parts. The licensee also did not initiate NCRs for the four additional WRs, as required.

From December 2008 to March 2010, engineering personnel identified the degraded indicating light condition three additional times during system walkdowns and generated WR 375344 to address the problem. However, engineering personnel did not initiate an NCR as required either. In addition, engineering personnel neither reviewed the six total WRs and one WO as potential MRFFs, nor performed the MRFF evaluation of the same as required per procedure ADM-NGGC-0101, "Maintenance Rule Program" for a "critical" and Maintenance Rule high safety significant component, which also would have required NCR initiation by procedure CAP-NGGC-0200.

On March 28, 2010, the plant experienced a ground fault on the feeder cable inside Bus 5 which initiated a fire event that was complicated by breaker 52/24 failing to open, despite breaker protective relays properly sensing an overcurrent condition. The extended fire duration caused by breaker 52/24 not opening resulted in a low voltage condition on Bus 4 which tripped the Bus 4 loads and caused a reactor trip. The licensee's root cause investigation (NCR 390095), following the event, determined that breaker 52/24's failure to open was due to the lack of control power to trip the breaker as a result of a pre-existing defect in the negative 30A control power bus fuse required to open/trip the breaker. Further review, by the licensee, revealed that this same fuse was in the circuit to light the red breaker 52/24 indicating light, and that the fuse defect would prevent energizing of the light. Therefore, the breaker 52/24 indicating lights not being lit as documented in previous WRs and WO 1446737 were a result of the loss of control power condition and not due to a light socket failure.

Analysis: The failure to follow CAP-NGGC-0200 and initiate an NCR for a WO and five WRs that required corrective maintenance in breaker 52/24, a "critical" component according to the licensee's component database, was a performance deficiency. This finding is more than minor because it is associated with Equipment Performance attribute of the Initiating Events Cornerstone and affects the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations because the failure to initiate an NCR to evaluate and correct the breaker position indicating light resulted in a reactor trip.

Using NRC IMC 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," the inspectors determined that this finding affects the Initiating Event Cornerstone based on review of the On-site Power Distribution System design and the consequences of Breaker 52/24's failure to open during the March 28, 2010, event. Since 4kV Bus 4, where breaker 52/24 was located, feeds the "B" RCP (a component whose failure can cause a reactor trip), and the "B" main feedwater (MFW) pump (a component credited in the NRC site specific Risk-Informed Inspection Notebook for transient mitigation), the finding contributed to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available. Therefore, the significance determination was obtained in accordance with IMC 0609, Appendix A. The inspectors determined that a preliminary significance determination could not be obtained using the pre-solved Phase 2 spreadsheet, because the risk increase associated to the breaker's failure to open depends on the probability of an electrical fault to occur in Bus 5. Therefore, a Phase 3 SDP analysis was necessary to determine the final significance.

A Phase 3 SDP analysis was performed by a regional senior reactor analyst using the NRC's SPAR model for Robinson and guidance from NRC IMC 0609 Appendix A, Appendix F, NUREG/CR 6850 and Supplement 1. Breaker 52/24 was assumed to fail to open without recovery for a one year exposure period. The analysis assumed that a Bus 5 or feeder cable fault would cause a reactor trip and fire damage to both condensate pumps and the unit auxiliary transformer. The frequency of the bus-cable fire/fault initiator was determined considering self-ignited cable faults, high energy arc faults and thermal fires in Bus 5. The dominant sequences were reactor trip transients due to bus/cable fault initiators with failures of main and auxiliary feedwater, and failure to implement feed and bleed leading to core damage. The resultant core damage frequency risk increase was <1E-6/year. The risk increase was limited because the performance deficiency did not affect the mitigating capabilities of the auxiliary feedwater system and the feed and bleed safety function. The finding was characterized as Green, a finding of very low risk significance.

The licensee initiated NCR 419188 and NCR 419198 to address this issue. The licensee also implemented the following corrective actions:

- Replaced the affected breaker
- Inspected all potentially affected breakers' indicating lights
- Replaced fuses in breakers susceptible to the same fuse defect
- Initiated reviews of all outstanding WR/WOs to verify that any problems with breaker indicating lights were evaluated and corrected to ensure proper breaker operation

This finding has a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to implement the corrective action program with a low threshold for identifying the issue, and ensuring that the issue was identified completely, accurately, and in a timely manner commensurate with its safety significance (P.1.a).

Enforcement: The inspectors determined that this finding did not involve a violation of NRC requirements and therefore is not subject to enforcement action. Because this finding did not involve a violation and its significance is Green, it will be tracked as FIN 05000261/2010006-01, Failure to Correct a Control Power Fuse Defect in 4kV Breaker 52/24.

ii. Failure to Correct a Condition Adverse to Quality in the "B" Emergency Diesel Generator Output Breaker 52/27B

Introduction: The NRC identified an AV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action" for the licensee's failure to promptly correct a condition adverse to quality involving the failure of "B" EDG output breaker 52/27B to close in October 2008 due to a stuck control relay linkage. As a result, the failure recurred in April 2009 and caused the EDG to become inoperable. The significance of this finding was preliminarily determined to be of low to moderate safety significance (White).

Description: 10CFR50, Appendix B, Criterion XVI stated that measures shall be established to assure that conditions adverse to quality are promptly identified and

corrected. In addition, procedure CAP-NGGC-0200, Revision 26, required an NCR be generated for adverse conditions involving “critical” component degradation and, if a WR/WO document requires “corrective maintenance” as defined by the conduct of work management of a “critical” component.

On October 15, 2008, licensee maintenance personnel were performing post modification testing of breaker 52/27B following installation of an Appendix R isolation switch. During this testing, breaker 52/27B failed to close two consecutive times and licensee maintenance personnel observed the breaker control relay was “sticking” and “buzzing.” In response to the abnormal indications in the control relay, licensee maintenance personnel manipulated the lift linkage that was physically connected to, and moved as a part of, the control relay closing solenoid assembly. Following “freeing” of the control relay and successful closure of breaker 52/27B on the third attempt after the control relay lift linkage manipulation, licensee maintenance personnel declared the test satisfactorily completed. After completion of the post modification testing, WR 354550 was written to investigate the breaker failure and the control relay issue. The licensee did not initiate an NCR to evaluate the breaker failure to close as required by CAP-NGGC-0200 for “critical” component degradation.

As documented in NCR 331663 and the completion notes of the post modification testing procedure SP-1534, “Testing Procedure for ECs 64319 and EC 66326”, there was no correlation between the breaker control relay “sticking” and the Appendix R isolation switch modification. This was confirmed during inspector follow-up interviews with licensee maintenance and engineering personnel.

On October 15, 2008, outage management performed their daily review of all recently initiated WRs. During this review, WR 354550 was elevated to WO 1433089 with the following trouble description and work instructions: *“During the performance of SP-1534 breaker failed to operate. Problem appears to be in control relay for this breaker. Need to repair/replace. Test breaker to determine cause. Repair/replace control relay as required.”* Although the Operations Department placed this WO on their emergent work list to implement corrective maintenance in breaker 52/27B, no NCR was initiated to evaluate the breaker failure as required by CAP-NGGC-0200 for corrective maintenance of a “critical” component.

On October 18, 2008, licensee maintenance personnel implemented WO 1433089 to troubleshoot breaker 52/27B. The troubleshooting efforts consisted of electrically cycling the breaker seven times in order to repeat the failure to close. Since the failure to close could not be repeated, the licensee returned the breaker to service using preventive maintenance procedure PM-163, “Inspection and Testing of Circuit Breakers for 480 Volt Bus E2.” Although PM-163 contained a specific section to test and inspect the control relay operation, the inspectors identified that no formal procedural troubleshooting activities were performed to test the control relay. Procedure PM-163 was used only as a procedural communication path for Maintenance and Operations personnel to cycle the breaker and return it to service per section 8.57 of that procedure. While the maintenance personnel involved in the troubleshooting activities were aware of the breaker failure to close, they missed a reasonable opportunity to identify that an NCR

was not generated for a thorough evaluation of the breaker failure as required by CAP-NGGC-0200 for corrective maintenance of a “critical” component.

On November 6, 2008, engineering personnel completed their MRFF review of WO 1433089. While engineering personnel were aware of the breaker failure to close, the licensee missed another opportunity to identify that an NCR was not generated for a thorough evaluation of the failure as required by CAP-NGGC-0200 for “critical” component degradation. The inspectors found that engineering personnel lacked understanding of the Appendix R isolation switch modification, and incorrectly assumed that other “B” EDG outage maintenance activities caused the breaker failure. This prevented NCR initiation as required by CAP-NGGC-0200 for a WO that was a potential MRFF.

On April 20, 2009, breaker 52/27B failed to close twice during a scheduled surveillance test. As described in NCR 331663, investigating breaker 52/27B failure, the licensee and the breaker vendor found the root cause of this failure to be a control relay lift linkage cotter pin that had rotated to a vertical position preventing full travel of the lift linkage, and resulting in the inability of the breaker to close. The licensee and breaker vendor further isolated the root cause to a breaker refurbishment design change completed on May 18, 2008, for this breaker, which was installed as the “B” EDG Output Breaker on June 18, 2008. Based on the breaker’s failure mechanism and the history of surveillance tests involving the closure of “B” EDG output breaker, the licensee concluded the “B” EDG had been inoperable from March 28, 2009, to April 23, 2009, which was greater than the allowed outage time in TS 3.8.1.B.4 and Condition C.

In reviewing the April 2009 breaker 52/27B failure and its relationship to the October 2008 breaker failure, the inspectors concluded that there was reasonable assurance that the October 2008 and April 2009 failures had the same failure mode based on the observed symptoms, the breaker behavior, and the results of the root cause investigation. This conclusion was based on the fact that the October 2008 failure showed that there was a potential problem with the control relay. Additionally, the licensee personnel involved in the post modification test recognized that the problem was associated with the relay’s lift linkage mechanism because the breaker successfully closed after the linkage was manipulated. Furthermore, the inspectors reviewed the licensee’s root cause investigation and vendor’s proprietary report for the April 2009 failure and determined that the control relay components were in good condition and there were no other identified deficiencies that would have caused mechanical obstruction of the lift linkage, control relay, or closing solenoid. In addition the failure of the breaker to close two consecutive times and then operate successfully following manipulation of the lift linkage was consistent with the failure mode identified by the vendor. Finally, the licensee attributed the cause of the October 2008 failure to misalignment of the secondary disconnects which provide control power to the breaker. However, the inspectors determined that the breaker operation was inconsistent with the licensee’s conclusion because the control relay emitted a buzzing sound during the closure attempts and the breaker successfully closed after mechanical manipulation of the lift linkage, which indicated that the control relay had control power at the time of the failure. Had the secondary contacts been misaligned, the relay would not have had

control power and neither the buzzing sound nor the successful breaker closure would have occurred.

Analysis: The failure to promptly correct the October 2008 failure of Breaker 52/27B to close, a condition adverse to quality, in accordance with 10CFR50, Appendix B, Criterion XVI, was a performance deficiency. This performance deficiency is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the “B” EDG (a high safety significant equipment credited for the mitigation of transients and design basis accidents) was inoperable for a period greater than the allowed outage time in plant TS.

The inspectors used IMC 0609, Attachment 4, to evaluate the significance of this finding. The SDP Phase 1 screening determined that the finding affected the mitigating systems cornerstone as it impacted short term and long term core decay heat removal, and represented an actual loss of a safety function of a single train for greater than its TS Allowed Outage Time. In accordance with IMC 0609, Appendix A, the Phase 2 SDP assessment determined that the finding was preliminarily characterized as White with Loss of Offsite Power (LOOP) and Loss of Offsite Power with Loss of Emergency AC Bus E2 (LEAC) being the dominant sequences. A Phase 3 SDP analysis was performed by a regional SRA using NRC’s Robinson SPAR model and input from the licensee’s full scope model to produce a best estimate risk assessment. The influential assumptions in the analysis were that the EDG was assumed failed due to the performance deficiency and was not recoverable by operations. The exposure period was assumed to be 26 days from the time of the last successful EDG 2B breaker operation. The failure of the breaker was considered to have common cause potential. External event risk contribution was considered for seismic and tornado initiators. Fire and flooding were not significant risk contributors and steam generator tube rupture and inter-system loss of coolant accidents were not among the dominant sequences, indicating that large early release frequency would not impact risk characterization. The dominant sequences were LOOP sequences, followed by failures of EDG 2A, the dedicated shutdown diesel and turbine driven auxiliary feedwater leading to core damage. The resultant core damage frequency risk increase due to the performance deficiency was $> 1E-6/\text{year}$ and $< 1E-5/\text{year}$. The risk increase was limited because the performance deficiency did not affect the mitigating capabilities of the EDG 2A, the dedicated shutdown diesel, and turbine driven auxiliary feedwater pump. The finding was characterized as preliminarily White, a finding of low to moderate safety significance. However, the final significance of this finding has not been determined and will be designated as “To Be Determined” (TBD). The Phase 3 analysis, including the internal risk output and external event risk output for seismic and tornado, is included as Enclosure 2.

This finding did not present an immediate safety concern because the licensee implemented actions to correct the cause of the breaker failure and inspect all breakers susceptible to the same problem. For each affected breaker, the degraded condition was either verified not to exist or the vendor recommended repairs were completed. The licensee also initiated control relay linkage inspections as part of their comprehensive

breaker maintenance procedure as a compensatory measure. The licensee initiated NCRs 419190 and 419198 to address this issue.

This finding has a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to implement the corrective action program with a low threshold for identifying the issue, and ensuring that this issue was identified completely, accurately, and in a timely manner commensurate with its safety significance (P.1.a).

Enforcement: 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, required in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, and non-conformances are promptly identified and corrected. As implemented by NGGM-PM-0007, Quality Assurance Program Manual, Revision 19, Procedure CAP-NGGC-0200, Revision 26, required an NCR be generated for adverse conditions involving “critical” component degradation and if a WR/WO document required “corrective maintenance” as defined by the conduct of work management of a “critical” component. Technical Specifications 3.8.1, Condition B required that an inoperable EDG shall be restored to operable status within 7 days. Contrary to the above, on October 15, 2008, the licensee failed to assure that the failure of the Emergency Diesel Generator Output Breaker 52/27B to close, a condition adverse to quality in a “critical” component, was promptly corrected in that the condition was not evaluated through an NCR when the breaker revealed indications of control relay malfunction during post-modification testing. As a result of the licensee’s failure to correct the adverse condition to quality, the “B” EDG became inoperable from March 28, 2009, to April 23, 2009, which exceeded the TS allowed outage time. Because this violation has been determined to be preliminary low to moderate safety significance (White), it will be tracked as AV 05000261/2010006-02, Failure to Correct a Condition Adverse to Quality in the “B” Emergency Diesel Generator output Breaker 52/27B. This apparent violation has been entered into the CAP as NCRs 419190 and 419198.

iii. Materially Inaccurate and Incomplete Information Provided to the NRC in LER 2009-001 which Impacted the Regulatory Process.

Introduction: The NRC identified an AV of 10 CFR 50.9(a) for failure to provide accurate and complete information in Licensee Event Report (LER) 0500261/2009-001-000. This information was material to NRC because it was used, in part, as the basis for exercising enforcement discretion for a violation of TS Action Statement 3.8.1.B.4 and Condition C. This apparent violation has been entered into the CAP as NCRs 413010 and 419191 to correct the inaccurate and incomplete information.

Description: On June 18, 2009, the licensee submitted LER 2009-001-00 to the NRC reporting that the “B” EDG was found inoperable during the performance of procedure OST-409-2, “EDG B Fast Speed Start.” Section V of the LER referenced a previous event identified during the cause investigation, which involved a similar failure of breaker 52/27B to close during a post modification testing in October 2008. The LER stated that in response to the breaker failure in October 2008: “A work order was written due to the breaker failing to operate. The work order required that 52/27B be inspected and tested. The breaker was tested in accordance with Preventive Maintenance Procedure (PM),

PM-163, "Inspection and Testing of Circuit Breakers for 480 Volt Bus E2." During this testing, the breaker cycled successfully seven times." The same paragraph also stated: "...and the successful completion of PM-163..."

During the initial review of the LER, the NRC used the information above and the detailed instructions in procedure PM-163 to test and inspect the breaker to determine if the inoperability of the "B" EDG needed additional inspection. Based on that information, the NRC determined that the licensee had dedicated a reasonable amount of effort to troubleshoot the breaker when it failed in October 2008. This issue was documented in NRC Inspection Report 05000261/2009005 where the NRC exercised enforcement discretion because the NRC concluded that there was no performance deficiency associated with the violation of TS. However, during this inspection, the inspectors found that the licensee had not performed formal procedural testing and had only completed the instructions in preventive maintenance procedure PM-163 for returning the breaker to service when the failure could not be repeated. The inspectors identified that there was no documentation to support that the applicable steps in PM-163, to inspect and test the breaker, had been successfully completed as stated in the LER.

The inspectors concluded that the information stated in the LER was inconsistent with the actual licensee actions to address the breaker failure in October 2008. The inspectors determined that the licensee's corrective actions as documented in the LER were incomplete and inaccurate to the extent of materially impacting the NRC's decision to exercise enforcement discretion.

Analysis: The failure to provide complete and accurate information in LER 2009-001-00 for the corrective actions taken to address a similar failure of breaker 52/27B in October 2008 is an apparent violation of the regulatory requirements in 10 CFR 50.9(a). This apparent violation impacted the regulatory process in that the inaccurate information was material to the NRC's determination that there was no performance deficiency and the exercise of enforcement discretion. The inspectors concluded that had the information been complete and accurate at the time provided, it likely would have resulted in a reconsideration of a regulatory position. The inspectors reviewed Supplement VII of the Enforcement Policy and determined the severity level of this apparent violation is potentially greater than Severity Level IV. Cross-cutting aspects are not assigned to violations being dispositioned through the traditional enforcement process.

Enforcement: 10 CFR 50.9(a) required, in part, that information provided to the Commission by a licensee shall be complete and accurate in all material respects. Contrary to the above, on June 18, 2009, the licensee provided information to the NRC in LER 2009-001-00 that was not complete and accurate in all material respects. The information provided described corrective actions for a previous and similar "B" EDG output breaker failure in October 2008. The LER stated that in response to the breaker failure "The breaker was tested in accordance with Preventive Maintenance Procedure (PM), PM-163, Inspection and Testing of Circuit Breakers for 480 Volt Bus E2." The same paragraph also stated: "...and the successful completion of PM-163..." The NRC determined that the licensee had not performed formal procedural testing and had only completed the instructions in PM-163 for returning the breaker to service. The

information provided in the LER was material because the NRC relied on the information in exercising enforcement discretion for a violation that would likely have resulted in additional inspection effort. Specifically, the information was used to determine whether the licensee's corrective actions for the breaker failure in October 2008 were adequate to prevent recurrence. The licensee entered this apparent violation into the CAP as NCRs 413010 and 419191 to correct the inaccurate information. Pending final severity level determination, this apparent violation is identified as AV 05000261/2010006-03, Materially Inaccurate Information Provided to NRC in LER 2009-001 which impacted the Regulatory Process.

b. Assessment of the Use of Operating Experience (OE)

(1) Inspection Scope

The inspectors examined the licensee's process for reviewing industry operating experience, reviewed procedure CAP-NGGC-0202, "Operating Experience Program," reviewed the licensee's operating experience database, and interviewed plant personnel, to assess the effectiveness of how external and internal operating experience data was handled at the plant. In addition, the inspectors selected operating experience documents (e.g., NRC generic communications, 10 CFR Part 21 reports, licensee event reports, vendor notifications, and plant internal operating experience items, etc.), which had been issued since June 2008, to verify whether the licensee had appropriately evaluated each notification for applicability to H. B. Robinson Steam Electric Plant, and whether issues identified through these reviews were entered into the CAP. Documents reviewed are listed in the Attachment.

(2) Assessment

Based on interviews with the licensee staff and a review of documentation related to review of operating experience issues, the inspectors determined that the licensee was generally effective in screening operating experience for applicability to the plant. Industry OE was evaluated at either the corporate or plant level depending on the source and type of the document. Relevant information was then forwarded to the applicable department for further action or informational purposes. OE issues requiring action were entered into the CAP for tracking and closure. In addition, operating experience was included in all apparent cause and root cause evaluations in accordance with licensee procedure CAP-NGGC-0205.

(3) Findings

No findings were identified.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The inspectors reviewed audit reports and self-assessment reports, including those which focused on problem identification and resolution, to assess the thoroughness and

self-criticism of the licensee's audits and self-assessments, and to verify that problems identified through those activities were appropriately prioritized and entered into the CAP for resolution in accordance with licensee procedure CAP-NGGC-0201, "Self-Assessment/Benchmark Programs."

(2) Assessment

The inspectors determined that, in general, the scopes of assessments and audits were adequate. Self-assessments were generally detailed and critical, as evidenced by findings consistent with the inspectors' independent review. The inspectors verified that NCRs were created to document all areas for improvement and findings resulting from the self-assessments, and verified that actions had been completed consistent with those recommendations. Generally, the licensee performed evaluations that were technically accurate. Site trend reports were thorough and a low threshold was established for evaluation of potential trends, as evidenced by the NCRs reviewed that were initiated as a result of adverse trends.

However, the inspectors determined that the licensee self-assessments did not always capture adverse conditions that require NCRs to be initiated for further evaluation. As described in the "Identification of Issues" and "Findings" sections of this report, the inspectors identified several instances where the licensee failed to meet the CAP procedure in that NCRs were not generated for conditions that met the criteria for documentation in an NCR. The inspectors reviewed a sample of self-assessments that took place since the last biennial PI&R inspection and noted that the assessments did not focus on the identification of adverse conditions that should have been documented in NCRs.

(3) Findings

No findings were identified.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The team randomly interviewed on-site workers regarding their knowledge of the corrective action program at H. B. Robinson Steam Electric Plant and their willingness to write NCRs or raise safety concerns. During technical discussions with members of the plant staff, the inspectors conducted interviews to develop a general perspective of the safety-conscious work environment at the site. The interviews were also conducted to determine if any conditions existed that would cause employees to be reluctant to raise safety concerns. The inspectors reviewed the licensee's Employee Concerns Program (ECP) and interviewed the ECP coordinator. Additionally, the inspectors reviewed a sample of completed ECP reports to verify that concerns were being properly reviewed and identified deficiencies were being resolved and entered into the CAP when appropriate. Finally, the inspectors reviewed the last Safety Culture Survey to verify that the results on Safety-Conscious Work Environment were consistent with the inspectors' assessment.

(2) Assessment

Based on the interviews conducted and the NCRs reviewed, the inspectors determined that licensee management emphasized the need for all employees to identify and report problems using the appropriate methods established within the administrative programs, including the CAP and ECP. These methods were readily accessible to all employees. Based on discussions conducted with a sample of plant employees from various departments, the inspectors determined that employees felt free to raise issues, and that management encouraged employees to place issues into the CAP for resolution. The inspectors did not identify any reluctance on the part of the licensee staff to report safety concerns.

(3) Findings

No findings were identified.

40A6 Exit

Exit Meeting Summary

On July 30, 2010, the inspectors presented the preliminary inspection results to Mr. Scott Saunders, Plant General Manager, and other members of licensee management. The inspectors returned all proprietary information reviewed to the licensee.

On August 26, 2010, the inspectors conducted an additional exit meeting to present the re-characterization of inspection results after NRC management reviewed the preliminary results presented on July 30, 2010. The inspection results were discussed with Mr. Eric McCartney and other members of licensee management. No proprietary information is documented in the report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel:

C. Castell, Licensing Manager
B. McCabe, Nuclear Regulatory Affairs Manager
G. Sanders, Licensing Engineer
J. Schearer, Supervisor Self-Evaluation

NRC Personnel:

G. Hopper, Chief, Branch 7, Division of Reactor Projects
R. Musser, Chief, Branch 4, Division of Reactor Projects
G. MacDonald, Senior Reactor Analyst, Region II

LIST OF ITEMS OPENED, CLOSED

Opened and Closed

05000261/2010006-01	FIN	Failure to Correct a Control Power Fuse Defect in 4kV Breaker 52/24 (Section 4OA2 (a)(3)i)
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Opened

05000261/2010006-02	AV	Failure to Correct a Condition Adverse to Quality in "B" Emergency Diesel Generator Output Breaker 52/27B (Section 4OA2 (a)(3)ii)
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05000261/2010006-03	AV	Materially Inaccurate Information Provided to NRC in LER 2009-001 which impacted the Regulatory Process (Section 4OA2 (a)(3)iii)
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Closed

05000261/2010009-09	URI	Failure to Repair Circuit Breaker 52/24 Resulting in Breaker Being Unable to Operate (Section 4OA2 (a)(3)i)
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LIST OF DOCUMENTS REVIEWED

Procedures

ADM-NGGC-0101, Maintenance Rule Program, Rev. 20
ADM-NGGC-0104, Work Management Process, Rev. 31, 35, and 36
ADM-NGGC-0107, Equipment Reliability Process Guideline, Rev. 8
ADM-NGGC-0114, Plant Health Process, Rev. 0
AOP-034, Security Events, Rev. 14
AOP-041, Response to a Fire Event, Rev. 2
CAP-NGGC-0200, Corrective Action Program, Rev. 26 & 32
CAP-NGGC-0201, Self-Assessment/Benchmark Programs, Rev. 13
CAP-NGGC-0202, Operating Experience Program, Rev. 16
CAP-NGGC-0205, Significant Adverse Condition Investigations and Adverse Condition Investigations-Increased Rigor, Rev.11
CAP-NGGC-0206, NGG Performance Assessment and Trending, Rev. 5
CM-011, GEMCO Spring Return Selector Refurbishment
EGR-NGGC-0010, System & Component Trending Program and System Notebooks, Rev. 15
FP-001, Fire Emergency, Rev. 57
NOS-NGGC-0400, Employee Concerns Program, Rev. 1
OP-925, Cold Weather Operation, Rev. 43 & 45
OPS-NGGC-1305, Operability Determinations, Rev. 3
OSU-002, Work Order Prioritization Process, Rev. 0
PM-163, Inspection and Testing of Circuit Breakers for 480 Volt Bus E2, Rev. 22 and 29
PM-429, AMSAC System Test, Rev. 11
PM-466, Westinghouse Type 50DH350E 1200 Amp 4160V Air Circuit Breaker Maintenance, Rev. 5
PM-474, 4kv Bus Inspection and Cleaning, Rev. 4
SP-1534, Testing Procedure for EC 64319 and EC 66326, Rev. 2
WCP-NGGC-0300, Work Request Initiation, Screening, Prioritization and Classification, Rev. 0
WCP-NGGC-1000, Conduct of On-Line Work Management, Rev.1 & 2

Nuclear Condition Reports (NCRs)

205117	295266	331663	362531
210720	295570	332881	364194
225897	298913	332970	364853
233313	299029	333530	372697
279173	299933	333530	373111
279210	300903	339914	382272
280724	303293	342536	382604
287525	310935	344013	382620
290074	315777	344234	382720
290724	315817	344234	382738
292855	320522	346350	385704
292862	321257	348923	386068
294049	325384	358171	386165
295266	326302	360876	389521

389540
390059
390063
390086
390095
391738
392524
395012
398129
409999
410020
410194
410382
410419
410425
410434
410436
410442
410579
412642
412860
412901
413001
413003
413010
413043
413044
413048
413081
413087
413354

Self-Assessments

SE-SOER-09, Self-Evaluation Program Assessment, 09/02/2009
R-RP-09-01, Assessment of Radiation Protection, 09/17/2009
R-EP-10-01, Assessment of Emergency Preparedness, 02/12/2010
R-ES-10-01, Assessment of Engineering, 4/17/10
R-NSC-10-01, Assessment of Robinson Plant Nuclear Safety Culture, 05/04/2010

Work Orders

WO 01368418 – Replace or Refurbish Switches 1/SIB-1 A
WO 1433089 – Replace/repair breaker 52/27B control relay
WO 1446737 – 4kV Breaker 52/24 red/green lights not lit
WO 1684592 – “B” Pressurizer Heaters control power indication light not lit
WO 751534 – Replace 52/24 with refurbished breaker
WR 00441681 – IRNI N-35 has erratic indication
WR 00441692 – “A” MSIV has waxy buildup on the stem
WR 00441728 – IRNI N-36 has erratic indication
WR 00441748 – Diagnostic test required on the “B” Loop hot leg inlet valve to the RHR system (RHR-751)
WR 00441781 – Frame on hinge side of Fire Door (FDR-4) is broken
WR 357740 – Breaker 52/24 red/green lights not lit
WR 359747 – 52/24, 4kv bus 4 to 4kv Bus 5 closed indicator does not work
WR 361747 – BKR 52/24 light indication inoperable
WR 368020 – Breaker 52/24 closed indication not lit
WR 370899 – The light indication for the 4kv Bus 5 feeder breaker (52/24) is not working
WR 375344 – No LED light indication (on/off) for breaker 52/24 cubicle
WR 412699 – Loss of “B” Pressurizer heater indication lamp

Other Documents

4kv System Walkdown Reports – 4Q 2008, 1Q 2009, 2Q 2009, 3Q 2009, 4Q 2009
AOP-034-BD, Basis Document, Security Events, Rev. 14
B-190628, Rev. 0, Control Wiring Diagram for Breaker 52/24
Emergency Diesel Generator System Health Reports – 3Q 2009, 1Q 2010
G-190197, Feedwater Condensate and Air Evacuation System Flow Diagram, Revision 55
LER 2010-001 – Emergency Diesel Inoperable in Excess of Technical Specifications Allowed Completion Time
Maintenance Rule Continuing Training, ESP CT, 2009 3rd Cycle
Maintenance Rule Scoping and Performance Criteria
NECEP 08-001 Nuclear Employee Concerns Evaluation Program Performance Objectives and Attributes, Rev. 0
NECEP 08-002 Nuclear Employee Concerns Evaluation Program Evaluation Guidelines, Rev. 0
New WR/WO Review Meeting Agenda/Checklist
Plant Equipment Database
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Reactor Protection System Health Report 1Q 2010
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SEC-LP-102, Nuclear Security Training Department Lesson Plan, Corrective Action Program
Using the KIOSK, Rev. 0
System Health Report – Auxiliary Feedwater System, 01/21/2010
System Health Report – Emergency Diesel Generators, 01/11/2010
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