Enf. Panel 11:00 AM
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6/23 DRP Conf Rm

June 9, 1994

Memo To: J. Johnson, Acting Director, Division of Reactor Projects

Via: M. Sinkule, Branch Chief, Branch 3 MWS 6/16/94

From: Pierce H. Skinner, Section Chief 3B

Subject: Calcon Switches at Vogtle During 3/20/90 Site Area Emergency Event

Background

At the time I assumed the Section Chief position in the region, Ken Brockman informed me that one item remained to be addressed by the Region II staff associated with the March 20, 1990, Site Area Emergency (SAE) enforcement conference. This item was associated with Calcon switches. The issue was based upon whether GPC had taken appropriate corrective action for previous failures of Calcon switches and whether the licensee had been open with their discussions with the NRC in addressing this issue.

Chronology

June 1990 — NUREG 1410 was issued in June 1990. In the Executive Summary, the Incident Investigation Team (IIT) concluded that "The preliminary evaluation of the diesel generator trips indicates that the most probable cause of the trips involved the failure of Calcon jacket temperature sensors." The IIT also identified that a significant number of Calcon sensor failures had occurred at Vogtle since 1985. A list of the failures was identified in Appendix I of the NUREG. This appendix identified a total of 69 Calcon switch failures. From 1985 - 1990, 47 were for temperature sensors and 14 were for pressure sensors.

July 9, 1990 — In a letter to the NRC from GPC, the licensee commented on the NUREG contents. One of the comments was that the conclusions reached by the IIT concerning that Vogtle had a high number of failures of Calcon switches compared to the rest of the industry was not based on comparable data.

Aug. 17, 1990 — In a note to Jim Sniezek from Ed Jordan, Mr. Jordan states that a review was conducted of GPC's comments on NUREG 1410. Based on this review a conclusion that the NRC did not disagree with the GPC comments and no formal reply to GPC was considered necessary.

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Aug. 22, 1990 In correspondence from NRC to GPC announcing the Confirmation of an Enforcement Meeting to discuss items identified by the IIT, three issues were to be included in the GPC presentation. The third issue that was required to be discussed was the reasons that the Vogtle root cause analysis program did not investigate the totality of continuing diesel generator problems which had been experienced at the plant.

Sept. 5, 1990 The licensee made a presentation at Region II offices on September 5, 1990. This conference is addressed in NRC correspondence dated Oct. 1, 1990. This correspondence includes a copy of the slides used by GPC during the meeting. There appears to be no specific slides to address the root cause program. There are slides discussing various historical problems and the actions taken by GPC in response of each of these examples, but there is no indication that root cause analysis was addressed. Also in this presentation , GPC identified that since the unit 1 commenced operation, there had been 8 failures (3 defective and 5 calibration problems) of pressure sensors prior to 3/20/90.

Oct. 19, 1990 On Oct. 19, NRC issued a Notice of Violation and Proposed Imposition of Civil Penalty ($40,000) based on the IIT findings and Enforcement Conference information on Sept. 5. In that letter, a reference is made to the third issue discussed at the conference and states " A third issue discussed at the Enforcement Conference involved our concerns with your root cause analysis of diesel generator problems. This matter will be addressed separately." During discussions between me and Ken Brockman, he was of the opinion that this issue would be addressed as part of the investigation being conducted at that time by Office of Investigation (OI).

Dec. 17, 1993 OI has issued their findings in Case No. 2-90-020R. A review of this report has not identified anything that would address the outstanding issue with respect to the root cause analysis problem discussed in the above documents.

Additional Information:

Following the SAE, NRC has reviewed EDG activities and reviewed root cause/corrective action activities on a frequent basis. The following Inspection Reports have excerpts addressing these issues:

50-424,425/90-13	dated 7/23/90
50-424,425/90-17	dated 9/20/90
50-424,425/90-20	dated 10/25/90
50-424,425/90-25	dated 11/21/90
50-424,425/90-23	dated 12/10/90
50-424,425/91-02	dated 4/22/91
50-424,425/91-09	dated 6/12/91
50-424,425/91-19	dated 8/1/91
50-424,425/91-25	dated 1/2/92 (SALP)
50-424,425/92-07	dated 5/21/92
50-424,425/92-30	dated 2/9/93 (EDG Special Report)
50-424,425/93-15	dated 8/23/93
50-424,425/93-27	dated 1/11/94

In addition, a team of NRR inspectors were onsite 12/17 - 18/90 to review EDG High Jacket Water Temperature trip during postulated Control Room fire.

In a recent inspection performed between May 9 thru May 20, 1994, by two region II DRS inspectors, accompanied by a NRR Instrument and Controls Branch specialist, Calcon switch calibration and histories of failures, was reviewed in depth. This inspection did not identify any violations associated with Calcon switches. In addition, they identified that the licensee had corrected the deficiencies that existed in March 20, 1990, timeframe and failures since that time have been minimal.

Conclusions:

Based on a review of the information contained in the inspection reports and other information identified above, GPC has not had any significant problems with Calcon switches since mid - 1990. Since that time, the switches that were involved with the EDG failure of 3/20/90, have been replaced with a revised model of the switch and the procedures have been modified to provide consistent results during calibration. The review also identified that on numerous occasions the SAER group has been recognized by the resident staff as doing an outstanding root cause analysis and implementing prompt correction of the root causes of deficiencies and occurrences.

Recommendations:

Based on this review, I recommend that the issue concerning failure to take appropriate action for Calcon switch problems identified prior to the March 20, 1990, SAE at Vogtle, be closed without further action. The resurrection of the issue based on events prior to 3/20/90, and issuance of a violation would serve no

purpose and would not enhance public safety. The closure, if approved, could be accomplished by addressing this open issue in the resident inspector's report.

Pierce Skinner,
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