

# The Light company

Houston Lighting & Power South Texas Project Electric Generating Station P. O. Box 289 Wadsworth, Texas 77483

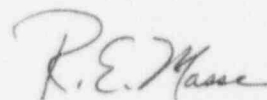
October 31, 1996  
ST-HL-AE-5503  
File No.: G02.04.02  
10CFR2.201

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

South Texas Project  
Units 1 and 2  
Docket Nos. 50-498; 50-499  
Reply to Notice of Violation 96006-03

South Texas Project has reviewed Notice of Violation 96006-03, dated October 2, 1996, regarding a failure to establish procedures for calibration of plant process computer-driven alarm devices, and submits the attached reply. The event described in the Notice of Violation did not have an adverse effect on the health and safety of the public.

If there are any questions regarding this reply, please contact Mr. S. M. Head at (512) 972-7136 or me at (512) 972-7988.



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MKJ/lf

Attachment: Reply to Notice of Violation 96006-03

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Project Manager on Behalf of the Participants in the South Texas Project

Houston Lighting & Power Company  
South Texas Project Electric Generating Station

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**Reply to Notice of Violation 96006-03**

I. Statement of Violation:

Technical Specification 6.8.1.a requires, in part, that written procedures be established, implemented, and maintained concerning the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, recommends, in part, that procedures should be written covering surveillance tests and calibrations of alarm devices.

Technical Specification Surveillance Requirement 4.2.1.1 states, in part, that the indicated axial flux difference shall be determined to be within its limits during power operation above 15 percent of rated thermal power. The bases for this specification states that provisions for monitoring the axial flux difference on an automatic basis are provided from the plant process computer through the axial flux difference monitor alarm.

Contrary to the above, on and before August 23, 1996, the licensee failed to establish written procedures covering surveillance tests and calibrations of the axial flux difference monitor alarm device following system maintenance. As a result, on August 23, 1996, during power operations above 15 percent of rated thermal power, the plant process computer was returned to service following routine maintenance with the alarm device setpoint out of calibration because incorrect equation constants had been entered into the computer memory.

This is a Level IV violation (Supplement 1) (498;499/96006-03).

II. South Texas Project Position:

South Texas Project concurs that the violation occurred.

III. Reason for the Violation:

The reason for the violation is human performance did not meet management expectations. In addition, station expectations regarding timely and effective corrective actions were not met.

It should be noted that in each of the incidents described below, the Proteus computer was capable of performing its intended monitoring function.

On January 30, 1996, following a reboot of the Proteus computer it was noted that nonvalid constants for the axial flux difference monitor alarm portion had been loaded into the computer. It was determined that personnel were utilizing a daily checklist rather than the constants log to enter information lost while the computer was shutdown. Investigation into the cause of this event determined that no formal procedure existed for verifying that the constants were current following a Proteus computer malfunction. As a result of this issue the following actions were taken:

Reason for the Violation (Cont'd.):

- A discussion was held with the individual's involved reemphasizing the use of the STAR process.
- Various guidelines were scheduled for consolidation into one desktop instruction by May 1996.
- A procedure to formalize and provide documentation of the Proteus computer operability was scheduled to be developed by June 1996.

Prior to the procedure becoming effective, another incident occurred on May 10, 1996. Following a reboot of the Proteus computer, it was noted that the previous (nonvalid) constants for the excore nuclear instrumentation reactor power indication had been loaded into the computer. The apparent cause for this event was human performance error. A contributing cause was the procedure was not developed in a timely manner. Corrective actions included:

- The I&C Maintenance Computer Group was reorganized in order to focus management attention on human performance issues and ensure management expectations were clear. This action was scheduled for completion in September 1996.
- A computer application that verifies constants are correct was scheduled to be developed in September 1996.

On August 24, 1996, following maintenance on the Proteus computer, constants were found at old values for axial flux monitors. It was determined the constants had been updated using a checklist instead of the accessible constants log. The cause of this event was failure to meet management expectations in that it was expected that personnel would use the constants log. It should be noted that the Proteus computer has been subject to frequent hardware failures. Various work methods evolved to address the obsolescence of equipment. Some of these methods have, in turn, contributed to poor work practices.

The number of Proteus computer constant validation problems at the South Texas Project, coupled with corrective action timeliness issues, indicated a need for heightened sensitivity on the part of the management team. The magnitude of the need for interdepartmental management involvement in problem resolution for Proteus issues was underestimated. Following the August 24, 1996 incident, firm, positive actions were initiated by senior management, involving all affected departments in corrective action development.

IV. Corrective Actions:

Regarding the Proteus computer issue, the following corrective actions have been taken:

1. A surveillance procedure has been developed for verifying the Proteus computer constants are correct and the Proteus computer functions associated with monitored parameters required by Technical Specifications are operable.
2. The list of accessible computer constants has been consolidated for use in both Units, eliminating potential confusion over unit difference.
3. Operations, Maintenance, and Engineering personnel have been briefed on procedure requirements and performance expectations for rebooting the Proteus computer.
4. Computer software has been developed and is in use to verify constants are correct when updated.
5. The I&C Maintenance computer group was reorganized.

Regarding previous ineffective corrective actions, the following corrective actions have been or will be taken:

1. The issues identified in this Notice of Violation response have been reviewed by the Condition Review Group.
2. The personnel issues regarding the August 24, 1996 occurrence have been addressed in accordance with approved company personnel performance policies.
3. Discussion of the issues involved with this matter will be included in the next Human Performance Enhancement Day. This discussion will include:
  - Management expectations regarding ownership of issues.
  - The need to ensure corrective actions are timely.
  - The need to ensure interim actions are in place during the time frame prior to the implementation of corrective actions.

V. Date of Full Compliance:

South Texas Project is in full compliance.

VI. Additional Information:

On October 14, 1996 while performing the biweekly backup of the Proteus computer and using the verification methods resulting from corrective actions, several constants were discovered to be incorrect. An Event Review Team was assembled to investigate this incident. The cause of this incident was an inadvertent action by the technician when saving the data. The corrective actions from the previous incidents caused this problem to be identified and corrected before any of the incorrect constants were utilized.

With regard to the frequent Proteus computer failures the South Texas Project recognized that this technology must be replaced and is moving aggressively towards this end. The Proteus computers will be replaced with an Integrated Computer System. The Proteus portion of this replacement is scheduled to occur February 1998 and August 1997 for Unit 1 and 2 respectively.

On February 14, 1996, during the exit meeting for Inspection 96-01, the South Texas Project committed to develop a procedure that would require daily checks to ensure all plant computer accessible constants related to Technical Specification functions are current. Since that time, a surveillance procedure has been developed and will be performed after each Proteus reboot; therefore, the daily checks will no longer be required.