UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

APR 26 1996

EA 96-044

Houston Lighting & Power Company
ATTN: William T. Cottle, Group
Vice President, Nuclear
P.O. Box 289
Wadsworth, Texas 77483

SUBJECT: NRC INSPECTION REPORT 50-498/96-12; 50-499/96-12 AND NOTICE OF VIOLATION

Thank you for your letter of April 4, 1996, in response to our letter and Notice of Violation dated March 15, 1996. We have reviewed your reply and find it responsive to the concerns raised in our Notice of Violation. We will review the implementation of your corrective actions during a future inspection to determine that full compliance has been achieved and will be maintained.

Sincerely,

Thomas P. Gwynn, Director
Division of Reactor Safety

Dockets: 50-498
50-499
Licenses: NPF-76
NPF-80

cc:
Houston Lighting & Power Company
ATTN: Lawrence E. Martin, General Manager
Nuclear Assurance & Licensing
P.O. Box 289
Wadsworth, Texas 77483

City of Austin
Electric Utility Department
ATTN: J. C. Lanier/M. B. Lee
721 Barton Springs Road
Austin, Texas 78704

City Public Service Board
ATTN: K. J. Fiedler/M. T. Hardt
P.O. Box 1771
San Antonio, Texas 78296

Morgan, Lewis & Bockius
ATTN: Jack R. Newman, Esq.
1800 M. Street, N.W.
Washington, D.C. 20036-5869

Central Power & Light Company
ATTN: G. E. Vaughn/C. A. Johnson
P.O. Box 289
Mail Code: N5012
Wadsworth, Texas 77483

INPO
Records Center
700 Galleria Parkway
Atlanta, Georgia 30339-5957

Mr. Joseph M. Hendrie
50 Bellport Lane
Bellport, New York 11713

Bureau of Radiation Control
State of Texas
1100 West 49th Street
Austin, Texas 78756

Office of the Governor
ATTN: Andy Barrett, Director
Environmental Policy
P.O. Box 12428
Austin, Texas 78711

Judge, Matagorda County
Matagorda County Courthouse
1700 Seventh Street
Bay City, Texas 77414

Licensing Representative
Houston Lighting & Power Company
Suite 610
Three Metro Center
Bethesda, Maryland 20814

Houston Lighting & Power Company
ATTN: Rufus S. Scott, Associate
General Counsel
P.O. Box 61867
Houston, Texas 77208

Egan & Associates, P.C.
ATTN: Joseph R. Egan, Esq.
2300 N Street, N.W.
Washington, D.C. 20037

Little Harbor Consultants, Inc
ATTN: Mr. J. W. Beck
44 Nichols Road
Cohasset, MA 02025-1166

E-Mail report to D. Nelson (DJN)
E-Mail report to NRR Event Tracking System (IPAS)

bcc to DMB (IE01)
bcc distrib. by RIV:

L. J. Callan	Resident Inspector
DRP Director	DRS-PSB
Branch Chief (DRP/A)	MIS System
Project Engineer (DRP/A)	RIV File
Branch Chief (DRP/TSS)	R. Bachmann, OGC (MS: 15-B-18)
Leah Tremper (OC/LFDCB, MS: TWFN 9E10)	

DOCUMENT NAME: r:_stp\st612ak1.slm
To receive copy of document, indicate in box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

RIV:RE:OB		C:OB		EO		D:DRS		AC:PBA		D:DRS	
SLMcCrory/lmb		JITapia		GSanborn		TPGwynn		JLPellet		TPGwynn	
04/25/96		04/25/96		04/25/96		04/25/96		04/26/96		04/26/96	

OFFICIAL RECORD COPY

060023

E-Mail report to D. Nelson (DJN)
E-Mail report to NRR Event Tracking System (IPAS)

bcc to ~~DMB~~ (IE01)
bcc distrib. by RIV.

L. J. Callan
DRP Director
Branch Chief (DRP/A)
Project Engineer (DRP/A)
Branch Chief (DRP/TSS)
Leah Tremper (OC/LFDCB, MS: TWFN 9E10)
Resident Inspector
DRS-PSB
MIS System
RIV File
F. Bachmann, OGC (MS: 15-B-18)

DOCUMENT NAME: r:_stp\st612ak1.slm

To receive copy of document, indicate in box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

RIV:RE:OB	C:OB	EO	D:DRS	AC:PBA	D:DRS
SLMcCrory/lmb	JITapia	GSanborn	TRGwynn	JLPellet	TPGwynn
04/25/96	04/25/96	04/25/96	04/26/96	04/26/96	04/26/96

OFFICIAL RECORD COPY

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

April 4, 1996
ST-HL-AE-5325
File No.: G02.04.02
10CFR2.201

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

South Texas Project
Unit 1 and 2
Docket Nos.: STN 50-498, STN-499
Reply to Notice of Violation 9612-02 Regarding
Failure to Follow Emergency Operating Procedure Requirements
and
Reply to Other Performance Issues

Reference: Letter from L. J. Callan, NRC to W. T. Cottle, HL&P dated March 15, 1996 (ST-AE-HL-94463)

South Texas Project has reviewed Notice of Violation 9612-02, dated March 15, 1996, regarding failure to initiate emergency boration when three control rods did not fully insert following a reactor trip. Attached is the reply to the Notice of Violation and the reply, requested by the referenced letter, describing actions by Houston Lighting & Power to address other performance issues discussed in the NRC's inspection reports issued on January 23 and February 20, 1996 and discussed during a predecisional enforcement conference held on March 6, 1996. 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 matter, please contact Mr. S. M. Head at (512) 972-7136 or me at (512) 972-8434.

W. T. Cottle
Executive Vice President and
General Manager, Nuclear

KJT/

Attachments: 1. Reply to Notice of Violation 9612-02
2. Reply to Other Performance Issues

e:\wp\nl\nrc-wk\misc-96\9612-02.doc

96-1137

~~9604050477~~ 7PD

c:

Leonard J. Callan
Regional Administrator, Region IV
U. S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

Thomas W. Alexion
Project Manager
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001 13H15

David P. Loveless
Sr. Resident Inspector
c/o U. S. Nuclear Regulatory Comm.
P. O. Box 910
Bay City, TX 77404-0910

J. R. Newman, Esquire
Morgan, Lewis & Bockius
1800 M Street, N.W.
Washington, DC 20036-5869

K. J. Fiedler/M. T. Hardt
City Public Service
P. O. Box 1771
San Antonio, TX 78296

J. C. Lanier/M. B. Lee
City of Austin
Electric Utility Department
721 Barton Springs Road
Austin, TX 78704

Central Power and Light Company
ATTN: G. E. Vaughn/C. A. Johnson
P. O. Box 289, Mail Code: N5012
Wadsworth, TX 77483

Rufus S. Scott
Associate General Counsel
Houston Lighting & Power Company
P. O. Box 61067
Houston, TX 77208

Institute of Nuclear Power
Operations - Records Center
700 Galleria Parkway
Atlanta, GA 30339-5957

Dr. Joseph M. Hendrie
50 Bellport Lane
Bellport, NY 11713

Richard A. Ratliff
Bureau of Radiation Control
Texas Department of Health
1100 West 49th Street
Austin, TX 78756-3189

U. S. Nuclear Regulatory Comm.
Attn: Document Control Desk
Washington, D. C. 20555-0001

J. R. Egan, Esquire
Egan & Associates, P.C.
2300 N Street, N.W.
Washington, D.C. 20037

J. W. Beck
Little Harbor Consultants, Inc.
44 Nichols Road
Cohassett, MA 02025-1166

Reply to Notice of Violation 9612-02

I. Statement of Violation:

Technical Specification 6.8.1 states, in part, that written procedures shall be established, implemented, and maintained covering referenced activities, including "The emergency operating procedures required to implement the requirements of NUREG-0737 and Supplement 1 to NUREG-0737 as stated in Generic Letter 82-33." It further requires that written procedures be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, dated February 1978. Regulatory Guide 1.33 recommends, in part, that procedures for combating mispositioned control rods be established.

Emergency Operating Procedure 0POP05-EO-ES01, Revision 6, "Reactor Trip Response," Step 3, states "VERIFY All Control Rods - FULLY INSERTED." In the "Response Not Obtained" column of step 3, it further states "IF two OR more control rods NOT fully inserted, THEN emergency BORATE 3200 GALLONS of boric acid (228 ppm) for each control rod which fails to insert."

Contrary to the above, on December 18, 1995, following a reactor trip, three control rods did not fully insert and licensed operating personnel did not initiate emergency boration.

This is a Severity Level IV violation (Supplement I)(498/9612-02).

II. South Texas Project Position:

South Texas Project concurs that the violation occurred.

III. Reason for the Violation:

The root cause of this occurrence was misdiagnosis of the control rod position as fully inserted. Contributing causes were insufficient training on the potential for partial control rod insertion following a reactor trip and unclear wording of Step 3 of 0POP05-EO-ES01 in that "FULLY INSERTED" was not defined in the Emergency Operating Procedure.

When a reactor trip of Unit 1 occurred on December 18, 1995, rod bottom lights were received on all controls rods except for three control rods which indicated inserted to the sixth step (approximately four inches from control rod bottom) position. The six step indicated position is within the accuracy of the digital rod position indication criteria. These control rods were considered fully inserted and the "Expected Response" of Step 3 of 0POP05-EO-ES01 met. Review of this occurrence determined the control rods at the six step position should not have been considered fully inserted.

IV. Corrective Actions:

Written guidance on management expectations regarding Emergency Operating Procedure compliance was issued on December 20, 1995 prior to the reactor startup. Each crew was briefed concerning this written guidance prior to assuming the shift.

Procedure 0POP05-EO-ES01, "Reactor Trip Response" was revised with criteria for determining control rods "fully inserted" and action if the expected response is not obtained.

Licensed Operator training has been conducted on the procedure usage, reactivity management and control rod position indication issues from the Unit 1 reactor trip event of December 18, 1995.

The Simulator has been upgraded with the capability to simulate a partial control rod insertion on a reactor trip.

Procedure 0POP01-ZA-0018, "Emergency Operating Procedure User's Guide", will be enhanced by May 1996 to include specific criteria when alternate step performance in an Emergency Operating Procedure can be authorized and the method to document this type of decision.

V. Date of Full Compliance:

South Texas Project is in full compliance.

Reply to Other Performance Issues

References:
1. Letter from L. J. Callan, NRC to W. T. Cottle, HL&P dated March 15, 1996 (ST-AE-HL-94463)
2. Letter from J. E. Dyer, NRC, to W. T. Cottle dated January 23, 1996 (ST-AE-HL-94418)
3. Letter from T. P. Gwynn, NRC, to W. T. Cottle dated February 20, 1996 (ST-AE-HL-94441)

Per Reference 1, Houston Lighting & Power was requested to include, in its response to Notice of Violation 498/9612-02, actions to address other operator performance issues discussed in NRC's inspection reports (References 2 and 3) and discussed during the predecisional enforcement conference of March 6, 1996.

A Special Independent Assessment was conducted in the fall of 1995 by a team of South Texas Project managers and supervisors and experienced industry representatives to assess and evaluate a series of recent human performance issues for common themes and to develop recommended actions as a result of the review. The conclusions and recommendations from that assessment were discussed at a management meeting between Houston Lighting & Power and regional Nuclear Regulatory Commission management on October 26, 1995. While the Special Assessment Team felt that the significance of the events/conditions reviewed was low on an individual basis, when reviewed collectively the events demonstrated issues in the area of human performance. As a result, the following actions were initiated and have been completed by the majority of the nuclear organization:

- A consistent set of management and supervisory expectations is being reconfirmed from senior management to the worker level to include candid discussions at all levels with regard to barriers to achieving those expectations.

- The scope and priorities of supervisors' and managers' duties are being reviewed to ensure that lower priority or administrative tasks are not interfering with their primary responsibilities for supervising, coaching and providing feedback to field personnel.

- Consistent standards and thresholds for identifying, documenting and communicating low level and low consequence errors and events that positively encourage the identification and correction of these items are being developed.

- The effectiveness of the Work Risk Assessment Process is being re-evaluated with regard to scope of consequences, tasks covered, and process ownership.

- Consistent standards are being developed with regard to the evaluation of routine, repetitive, unusual, infrequent, or seemingly non-challenging evolutions to ensure proper controls are exercised.

Human performance events resulting in significant conditions adverse to quality that occurred since the completion of the Special Independent Assessment, some of which were discussed in References 2 and 3, have received close management attention. The human performance issues surrounding the December 18, 1995 Unit 1 reactor trip brought to management's attention that a station issue regarding procedure adherence needed evaluation. As a result, additional comprehensive corrective actions have been initiated along with the actions resulting from the earlier Special Independent Assessment to address the following three primary areas affecting human performance:

- Management expectations

- Procedure adherence

- Questioning, self-critical attitude

Management expectations regarding performance standards are continuously reinforced. Conservative decision making is routinely stressed during the daily Plant Manager Communication and Teamwork Meeting and during the evening senior management conference call with Operations. A strong management monitoring presence during critical control room activities is a standard practice. Recent events have resulted in crew briefings and enhancements to licensed operator requalification training to reinforce management expectations regarding human performance. The Vice President, Nuclear Generation performance expectations are reviewed at meetings with Operations during requalification weeks.

A Conduct of Operations Manual with the objective to continuously improve performance has been developed, and training on this manual has been completed for licensed and non-licensed operators. Recent events regarding a reactor power transient caused by operation of the boron thermal regeneration system and the lifting of a power-operated relief valve have resulted in assessment of activities performed in the control room requiring supervisory oversight. Management expectations regarding supervisory oversight in the control room have been reinforced through management discussions with operators and through the Conduct of Operations Manual. In particular, strengthened expectations are provided regarding organization and responsibilities of shift crew members, shift operating practices in response to instrument indications and alarms, reactivity management, communications and shift operating practices regarding pre-evolution briefings. This Conduct of Operations Manual is considered a key document to capture management expectations regarding performance standards.

A station-wide self assessment on procedure adherence was initiated recently. In early February, 1996, a station-wide human performance day focusing on procedure adherence was conducted to deal with problems in this area in a frank and candid manner. The Executive Vice President and General Manager, Nuclear expectations regarding procedure adherence and utilization of programs and processes with a high level of integrity were transmitted to station personnel. In response to the lessons learned from the December 18, 1995 Unit 1 reactor trip, actions were taken to improve Emergency Operating Procedures and their usage as discussed in Attachment 1 of this letter.

The importance of self-verification and a questioning, self-critical attitude is part of the South Texas Project culture and is emphasized during periodic station-wide standdowns conducted to enhance human performance. Comprehensive assessments of the effectiveness of actions to correct significant conditions adverse to quality are routinely conducted. As a result of the lessons learned from the Unit 1 reactor trip of December 18, 1995, the Event Review Team process will be revised to ensure human performance related issues are addressed. This process has recently been enhanced to help identify significant human performance related issues and increase management awareness of these issues.

The Corrective Action Program with detailed root cause analysis remains the fundamental station process for identifying and addressing operator performance issues. The objectives to lower the threshold and to implement effective corrective actions to enhance human performance receive constant emphasis.