

The Light company

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

August 15, 1996
ST-HL-AE-5447
File No.: G02.06

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

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498; STN 50-499
Engineering Self-Assessment

Nuclear Regulatory Commission Inspection Procedure (IP) 40501, "Licensee Self-Assessments Related to Safety Issues Inspections," provides guidance to evaluate a licensee's self-assessment effort as an alternative to an NRC full scope engineering inspection. In accordance with this program, South Texas Project (STP) proposes to conduct a self-assessment of the engineering activities and programs and related controls for identifying, resolving, and preventing problems at South Texas Project.

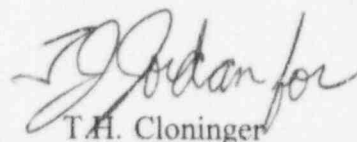
The objective of the assessment is to evaluate engineering activities using the guidance of IP 37550, "Engineering," to identify strengths, weaknesses, and areas for further improvement. Based on our discussions with the NRC Region IV staff, we understand the staff concurs with the self-assessment option as an alternative to a full scope engineering inspection.

Attachment 1 provides the objectives, approach and scope, general approach, list of team members for the self-assessment and references. Attachment 2 contains resumes of the assessment team members. Attachment 3 contains the Assessment Schedule. Details of the assessment plan will be provided by August 29, 1996.

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We appreciate the opportunity to participate in the self-assessment program. If you have any questions, or require additional information, please contact the Self-Assessment Team Leader, John M. Gruber at (512) 972-7626.



T.H. Cloninger
Vice President,
Nuclear Engineering

MKJ/lf

- Attachments:
1. Engineering Self-Assessment Plan
 2. Assessment Team Credentials
 3. Assessment Schedule

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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, Mail Code 13H3
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

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

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

M. T. Hardt/W. C. Gunst
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. Bertran Wolfe
15453 Via Vaquero
Monte Sereno, CA 95030

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, DC 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
Cohasset, MA 02025-1166

ATTACHMENT 1

Engineering Self-Assessment Plan

ATTACHMENT 1

ENGINEERING SELF-ASSESSMENT PLAN

1. OBJECTIVES

The purpose of this self-assessment is to evaluate engineering activities at the South Texas Project (STP) in accordance with the guidance provided in NRC Inspection Procedure 37550, "Engineering". The assessment will review engineering performance in the framework of specific processes and associated products (horizontal review), and a detailed review of three systems as supported by engineering (vertical review). The objectives of this self-assessment are to:

- Evaluate the effectiveness of engineering programs and activities;
- Identify strengths and areas for improvement;
- Develop corrective actions, as required;
- Enhance engineering self-assessment capabilities.

2. APPROACH AND SCOPE

STP will use NRC Inspection Procedure 37550, "Engineering", in accordance with the guidance provided in NRC Inspection Procedure 40501, "Licensee Self-Assessments Related to Team Inspections" to implement the self-assessment. To ensure a comprehensive self-assessment, both horizontal and vertical approaches will be used. The horizontal approach will evaluate engineering processes and programs such as resolution of operational issues, design changes, configuration management, calculations, safety evaluations, procedures, and work control. The vertical approach will evaluate the quality of selected engineering activities and products through an in-depth review of three systems.

The following is an overview of the assessment process, including descriptions of the horizontal and vertical approaches:

A. Overview of Process

1. Perform the horizontal and vertical reviews in accordance with the criteria and guidance contained in INPO 90-015 and NRC IP 37550, respectively.
2. Integrate the results of both reviews.
3. Identify strengths, deficiencies, and areas for improvement.
4. Document deficiencies and areas for improvement utilizing the station corrective action program, condition report process.
5. Develop corrective actions in accordance with the corrective action program.

B. Horizontal Review of Programs and Processes

The horizontal review will consist of evaluating engineering effectiveness in the following areas:

1. Operations Support

Three to five recent operations-related issues requiring engineering assistance or technical resolution will be reviewed. Engineering performance for each of the issues will consider activities such as operability assessments, safety evaluations, engineering evaluations, surveillance testing, engineering judgements, and the timeliness and frequency of communication with operations personnel.

2. Maintenance Support

Three to five recent maintenance-related activities or programs requiring engineering assistance or technical resolution will be reviewed. Engineering performance will consider activities such as maintenance testing and troubleshooting (including action plan development and support), nonconforming item dispositions, 10CFR50.59 evaluations, corrective maintenance, preventive maintenance, work schedule development, and the timeliness and frequency of communication with maintenance and work control personnel.

3. System Engineering

The health and performance of three to five systems (safety-related and balance-of-plant) will be reviewed. Engineering performance will consider activities such as maintaining and improving system material condition, trending system and component performance, implementation of the maintenance rule, use of operating experience, workload management, and the timeliness and frequency of communication with operations and maintenance personnel.

4. Design Engineering

Several design changes, minor modifications, temporary modifications, replacement component evaluations, drawing change notices, setpoint changes, and component dedications will be reviewed. Engineering performance will consider activities such as management of resources, planning and management of the work, process effectiveness and procedural adequacy, technical adequacy of the results, configuration and design control, workload management, and the timeliness and frequency of communication with operations, maintenance, and systems engineering personnel.

5. Programs

Selected engineering-sponsored programs such flow accelerated corrosion, inservice testing, inservice inspection, check valve, snubber monitoring, preventive maintenance and optimization, operating experience, vendor information, and the application of probabilistic safety assessment techniques will be reviewed. Engineering performance will consider activities such as management of resources, planning and management of the work, process effectiveness and procedural adequacy, technical adequacy of the results, configuration and design control, and the timeliness and frequency of communication with operations, maintenance, and design and systems engineering personnel.

C. Vertical Review of Selected Systems

The vertical review will be conducted on the following systems:

Class IE 125 VDC Power System
Essential Chilled Water System
Condensate System (including condensate polishing)

The systems were selected based on a combination of their significance to probabilistic safety assessment, having undergone recent modification, or having required recent engineering attention and input from plant operations personnel.

Engineering performance for each of these systems will include an in-depth review of the Updated Final Safety Analysis Report, design criteria, design changes, system material condition, system performance, operability assessments, safety evaluations, engineering evaluations, maintenance and surveillance testing, corrective and preventive maintenance, use of operating experience, and the timeliness and frequency of communication with operations and maintenance personnel.

3. TEAM MEMBERS

To perform an effective self-assessment, an assessment team made up of highly qualified individuals has been established. The participants will consist of STP employees, and other industry personnel who have taken part in self-assessment projects of a similar nature. Collectively, these individuals possess significant engineering experience, knowledge of the self-assessment process, and an integral knowledge of the systems and processes at STP.

The following is a listing of the assessment team members. Additional information regarding the individual team members and their qualifications are provided in Attachment 2 to this plan.

John M. Gruber	Team Leader
Mark E. Kanavos	Assistant Team Leader
Kenneth R. Cope	
William M. Dowdy, Jr.	
Stanley J. Eldridge	
Duane E. Gore	
Albon W. Harrison, Jr.	
Gary A. Hunt, Sr.	
Craig A. Murry	
Anil P. Pathak	
Richard L. Prater	
Lee B. Taylor	
William G. Wellborn	
Industry Peers	(To be determined)

4. SCHEDULE

The self-assessment is tentatively scheduled to begin October 14, 1996, and will last for two weeks. The final report will be provided to the NRC in December of 1996. The schedule for activities required to support the self-assessment is provided in Attachment 3.

5. REFERENCES

- a. NRC Inspection Manual / IP 37550, 3/95
- b. NRC Inspection Manual / IP 40501, 4/95
- c. INPO 90-015, *Performance Objectives and Criteria for Operating and Near Term Operating License Plants*
- d. INPO 85-031 (Revision 2), *Guidelines for the Conduct of Technical Support Activities at Nuclear Power Stations*

ATTACHMENT 2

Assessment Team Credentials

ATTACHMENT 2

ASSESSMENT TEAM CREDENTIALS

JOHN M. GRUBER Team Leader

- Manager, Project Engineering, Houston Lighting & Power (HL&P), South Texas Project (STP)
- B. S. Welding Engineering, Ohio State University
- 14 years nuclear experience
- Registered Professional Engineer
- Sr. Technical Consultant, Reverse Loanee to the Institute of Nuclear Power Operations Outage Department, HL&P
- Unit 1 Work Control Manager, HL&P, STP
- Program Manager for Work Process Improvement, HL&P, STP
- Director, Independent Safety Engineering Group, HL&P, STP
- Division Manager, Material Technical Services (Nuclear), HL&P, STP
- Principal Engineer, Design Engineering Department, HL&P, STP
- Director, Outage Planning & Scheduling, Illinois Power Company, Clinton Power Station
- Supervisor, Maintenance Planning, Illinois Power Company, Clinton Power Station
- Project Engineer, Nuclear Station Engineering Department, Illinois Power Company, Clinton Power Station
- Program Manager for Clinton Power Station, Stone & Webster Engineering Corporation
- Engineer, Boston Office, Stone & Webster Engineering Corporation

MARK E. KANAVOS Assistant Team Leader

- Mechanical Fluid Systems Division Manager, HL&P, STP
- B. S. Mechanical Engineering, University of Virginia
- Registered Professional Engineer
- STP Senior Reactor Operator Management Certification
- 15 years nuclear experience
- Mechanical/Civil Design Engineering Division Manager, HL&P, STP
- Mechanical/NSSS Design Supervisor, HL&P, STP
- Modifications/Outage Coordinator, HL&P, STP
- Lead Mechanical Maintenance Engineer, HL&P, STP
- Senior Mechanical Engineer, Tennessee Valley Authority
- Mechanical Design Engineer, Stone and Webster Engineering Corp., Beaver Valley Nuclear Power Station

KENNETH R. COPE

- Sr. Consultant, Geotechnical and Supervisor, Nuclear Engineering Department, HL&P, STP
- M. S. Civil Engineering, University of Illinois
- B. S. Geology, San Diego State University
- 9 years nuclear experience
- Consultant and Principal, Geocore, Inc., Houston, Texas
- Operations Manager, Woodward-Clyde Oceanengineering, Houston, Texas
- Operations Manager, Woodward-Clyde Consultants, Houston, Texas
- Operations Manager, McClelland Engineers, Inc., Houston, Texas
- Staff Geotechnical Engineer/Geologist, McClelland Engineers, Inc., Houston, Texas
- Project Engineer, Harza Engineering Company, Chicago, Illinois

WILLIAM M. DOWDY, JR.

- Coordinator of Site Continous Improvement Efforts, HL&P, STP
- 19 years nuclear experience
- Unit 2 Operations Manager, HL&P, STP
- Shift Supervisor, Unit Supervisor, HL&P, STP
- Head Operator, Operator, HL&P, STP

STANLEY J. ELDRIDGE

- Senior Consultant Specialist, Nuclear Assurance Department, HL&P, STP
- U. S. Navy Nuclear Power School, Vallejo, California
- 30 years of nuclear experience including 7 years in the U. S. Navy
- Presently performing technical and management assessments, including Safety System Functional Inspections
- Coordinated all aspects of the Control Room Design Review for the Plant Operations Department
- Manager, Operations Support, HL&P, STP
- Unit 2 Operations Manager, HL&P, STP
- Reactor Operations Supervisor, HL&P, STP

DUANE E. GORE

- Supervising/Senior Consulting Engineer, Reload Engineering, HL&P, STP
- B. S. Nuclear Engineering, Texas A&M University
- M. S. Computer Science, University of Houston - Clear Lake
- STP Senior Reactor Operator Management Certification
- 20 years nuclear and engineering experience
- Health Physicist, HL&P
- Engineer, Bechtel Power Corporation, Norwalk, California

ALBON W. HARRISON, JR.

- Licensing Supervisor, HL&P, STP
- M. S. Nuclear Engineering, Texas A&M University
- B. S. Nuclear Engineering, Texas A&M University
- Registered Professional Engineer
- STP Senior Reactor Operator Management Certification
- 21 years of nuclear experience
- Managed the processes for maintaining the South Texas Project licensing and design basis in accordance with regulatory requirements.
- Daniel Construction Company, Farley Nuclear Plant, Alabama
Performed on-site engineering support for piping installation

GARY A. HUNT, SR.

- Consulting Engineer, Systems Engineering Department, HL&P, STP
- B. S. Mechanical Engineering Technology, University of Toledo
- 20 years nuclear experience
- Project Manager, D. C. Cook Plant
Supervised performance of the Reliability Centered Maintenance Independent Review Project for the D. C. Cook Plant
- Area Engineer, Haliburton NUS, Enrico Fermi II Power Plant
Provided area engineering for the start-up of the Residual Heat Removal (RHR) and Emergency Diesel Generator Complex systems at Enrico Fermi II Power Plant
- Lead Maintenance Technical Coordinator, Haliburton NUS,
Enrico Fermi II Power Plant
- Maintenance Planner/Technical Coordinator, Haliburton NUS,
Enrico Fermi II Power Plant
- Assistant Project Manager, Siemens Nuclear Power Services, Perry Plant
Managed completion of ASME Section XI piping ISI/NDE and snubber testing requirements
- Senior Engineer, Detroit Edison, Fermi II Power Plant
- Engineering Watch Supervisor, U. S. Navy

CRAIG A. MURRY

- Technical support Engineer, HL&P, STP
- B. S. Nuclear Technology, University of Maryland, Maryland, WA
- 13 years nuclear experience
- Maintenance Welding Specialist, Senior Quality Control Specialist, HL&P, STP
- Quality Control Specialist, Ebasco Services Incorp., STP
- Quality Control Engineer, Bechtel Power Corp., Wolf Creek Nuclear Power Station
- Welding Engineer, Bechtel Power Corp., Washington Nuclear Unit #1 (Hanford)

ANIL P. PATHAK

- Consulting Engineer ASME Section XI Repairs and Replacements Program, HL&P, STP
- Diploma in Mechanical and Electrical Engineering, M. S. University, Baroda, India
- 19 years nuclear and engineering experience
- Participated in audits performed by State of Texas and the NRC
- ANI and Inspection Specialist, LaSalle Nuclear Station, Commonwealth Edison
- Regional Loss Control Consultant, Authorized Inspector Supervisor (AIS), Authorized Inspector/Supervisor (ANI/ANIS), Continental Insurance Companies, Chicago, IL

RICHARD L. PRATER

- Consulting QA Specialist Engineering Assurance, HL&P, STP
- 20 years nuclear power experience
- Senior Quality Control Specialist, HL&P, STP
- Team Leader/Member on several assessment teams at STP
 - Corrective Action Program
 - Radiation Monitoring Program
 - Instrument Calibration and Performance
 - Surveillance Enhancement Program
 - Engineering Assurance Assessment of Modification Program
 - Safety Injection System Safety System Functional Assessment
 - Technical Specialist for Engineering Assurance Setpoint Assessment
- Participated on Event Review Team for Configuration management Issues and in the Formatting and Development of a Printed Circuit Card Configuration Management Program, HL&P, STP
- Task Force Leader to Reactor Trip and Engineered Safeguards System Surveillance Procedure Review, HL&P, STP
- General Superintendent (Technical Supervisor) Instrumentation, Ebasco, STP
- Instrumentation/Electrical Division Manager, Process Technical Services, Houston, TX
- Instrumentation and Controls Procedure Coordinator, Startup Instrumentation Supervisor, Westinghouse Instrument Service Company, STP
- WISCO Technical Supervisor/Project Supervisor/Projects Manager, Westinghouse Instrument Service Company, Waterford III Nuclear Power Station, Byron/Braidwood Nuclear Projects
- Instrumentation and Controls (I&C) Technician/Procedure Writer, American Technical Services, Fermi II Nuclear Power Plant
- Instrument Supervisor, Alabama Power Company, Farley Nuclear Plant

LEE B. TAYLOR

- Senior Consulting Engineer, Maintenance Project Management, HL&P, STP
- BE Engineering Science (Mechanical Engineering/Radiation Physics),
Vanderbilt University
- 29 years U. S. Navy nuclear and 5 years of commercial nuclear experience
- Division Manager, Maintenance Planning, HL&P, STP
- Consulting Engineer, Planning Assessment Department, HL&P, STP

WILLIAM G. WELLBORN

- Supervisor, Instrumentation & Controls Design, HL&P, STP
- B. S. Mechanical Engineering, University of South Florida
- 20 years nuclear experience
- Senior Consulting Engineer Special Projects, Manager Material Technical Services,
HL&P, STP
- Supervising Project Engineer, Staff Engineer, HL&P, STP
- Pipe Support Field Engineer, Instrumentation Field Engineer,
Sargent & Lundy Engineers, Byron Nuclear Station
- Startup and Test Engineer, LPL Technical Services, Salem Nuclear
Generating Station
- Startup and Test Engineer, Plant Engineer, Florida Power Corp.,
Crystal River Nuclear Plant

ATTACHMENT 3

Assessment Schedule

Run Date: 15AUG96

Data Date: 15AUG96

NUCLEAR ENGINEERING DEPARTMENT

SELF-ASSESSMENT - 1996

ST-HL-AE-5447

Attachment 3

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