Enclosure 1

SALP 11

FINAL SALP REPORT

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

Inspection Report No. 50-461/92001

Illinois Power Company

Clinton Power Station

February 1, 1991, through April 30, 1992

Enclosure 1

Clinton Power Station

A. Summary of Meeting with Illinois Power Company on July 23, 1992.

The findings and conclusions of the SALP Board are documented in Report No. 50-461/92001 and were discussed with the licensee on July 23, 1992, at the Clinton Power Station.

While the meeting was primarily a discussion between the licensee and NRC, it was open to members of the public as observers.

The following licensee and NRC personnel were in attendance, as well as the noted observers.

Illinois Power Company

L. D. Haab, Chairman, President, and Chief Executive Officer
J. S. Perry, Senior Vice President
J. G. Cook, Vice President and Manager of Clinton Power Station
J. A. Miller, Manager, Nuclear Station Engineering
R. E. Wyatt, Manager, Quality Assurance
F. A. Spangenberg, Manager, Licensing and Safety
R. W. Morgenstern, Manager, Nuclear Training
P. D. Yokum, Director, Plant Operations
L. E. Everman, Director, Plant Radiation Protection
R. F. Phares, Director, Licensing
W. M. Clark, Director, Plant Maintenance
C. E. Elsasser, Director, Planning and Scheduling
W. P. Bousquet, Director, Plant Support Services
D. E. Korneman, Director, Systems and Reliability Engineering
R. T. Kerestes, Director, Engineering Projects
D. W. Waddell, Director, Programs and Administration
A. E. Mueller, Jr., Director, Maintenance and Technical Training
D. L. Holtzscher, Director, Nuclear Safety
S. P. Hall, Director, Nuclear Program Assessment Group
M. W. Lyon, Director, Emergency Response
K. R. Graf, Director, Quality Assurance
E. R. Turner, Nuclear, Program Controller
D. W. Miller, Chief Radiological Scientist
J. M. Lewis, Principal Assistant to The V. P.
E. P. Bader, Supervisor, C&I Maintenance
T. R. Hill, Supervisor, Mechanical Maintenance
J. M. Niswander, Supervisor, Rad. Environmental
G. S. Kephart, Supervisor, Rad. Support
M. S. Dodds, Supervisor, Rad. Operations
J. K. Ramanuja, Supervisor, Rad. Engineering
D. L. Smith, Supervisor, Security
K. A. Baker, Supervisor, Engineering Assurance
R. R. Weedon, Assistant Director, Plant Radiation Protecion

J. A. Puzauskas, Assistant Director, Design & Analysis Eng.
J. A. Neuschwanger, Assistant Director, Plant Operations
J. H. Blanke, Supervisor, Programs & Support
J. S. Owens, Supervisor, Ops, Requalification Training
T. P. Roe, Supervisor, Maintenance Planning
M. A. Reandeau, Licensing Specialist
S. H. Daniel, Supervisor, Plant Chemistry
L. J. Reandeau, NRAG Administrative Assistant
S. I. Meador, Planner
J. V. Sipek, Supervisor, Regional Regulatory Interface

Soyland

S. Parr, Manager, Engineering and Operations

Nuclear Regulatory Commission

C. J. Paperiello, Deputy Administrator, RIII
J. A. Zwolinski, Assistant Director for Region III, Office of Nuclear Reactor Regulation (NRR)
H. J. Miller, Director, Division of Reactor Safety, RIII
W. L. Forney, Deputy Director, Division of Reactor Projects, RIII
R. D. Lanksbury, Chief, Reactor Projects, Section 3B, RIII
C. E. Carpenter, Project Manager, NRR
C. E. Skinner, Intern, NRR
W. Gleaves, Intern, RIII

Others

Paul Swiech, Bloomington Illinois Pantagraph
Mark Neukbaar, WSOY Radio, Decatur, Illinois
Gary Minnich, Decatur Hearld & Review
N. Howey, Illinois Department of Nuclear Safety

B. Comments Received from Licensee

Illinois Power Company's response to the Clinton Initial Salp 11 Report dated July 31, 1992, included several comments that have resulted in a minor revision to the Initial SALP Report. These changes are listed in Enclosure 2 and the revised pages are included as Enclosure 3.

The affected pages of the Initial SALP Report should be replaced with the corrected pages included in Enclosure 3.

C. Regional Administrator's Conclusions Based on Consideration of Licensee Comments

I have concluded that the overall ratings in the affected areas have not changed.

Enclosure 2

REVISION SHEET

PAGE	LINE	NOW READS	SHOULD READ
10	19	System engineers continued to...	Reliability engineers continued to...

Basis: To correctly identify the title.

10	21	...for 10 systems.	...for 11 systems.

Basis: To correctly identify the number of systems.

10	30-33	An example of this... ...to perform required actions.	An example of this failure was in recognizing that the slow opening time of the scram discharge volume vent and drain valves was a problem.

Basis: To delete incorrect example and insert correct example.

13	14-15	...was an emergency change...to resolve technical issues.	...was a change... to resolve technical issues regarding two-phase feedwater pipe blowdown analysis.

Basis: To clarify the technical issue.

F. Engineering/Technical Support

1. Analysis

Evaluation of this functional area was based on the results of 13 routine inspections and 2 operator licensing examinations.

Enforcement history was good. Two Severity Level IV violations were issued. These violations, identified at the beginning of the assessment period, involved the failure to properly perform containment leakage rate testing on certain mechanical joints. However, the failure to properly perform the containment leakage rate testing was due to original construction engineering errors. The failure to perform or include the individual containment penetration leakage rates had minor safety impact on the actual containment leakage rate.

Management effectiveness in ensuring quality continued to be mixed. On the positive side, management was aggressive in responding to the containment leakage rate violations and identified problems with other mechanical joints. Management effectiveness was also evident in the initiatives taken to reduce the backlog of engineering tasks, the program to address the "top 10" material deficiencies, the transition to an in-house design capability, and the revised design modification process. Other initiatives included weekly meetings between the Nuclear Station Engineering Department (NSED) and plant management to improve communications and the establishment of an NSED performance monitoring program. Reliability engineers continued to improve the reliability centered maintenance program, with a predictive maintenance program in place for 11 systems. In addition, the simulator console was voluntarily upgraded to facilitate the instructor's observation of trainees.

On the other hand, weaknesses in management effectiveness were evident in the failure to aggressively pursue root causes of problems which led to a lack of recognition that recurring equipment problems constituted conditions adverse to quality. An example of this was the continued replacement of fuel filters on the fire pump diesels over an extended period of time without determining the root cause. In addition, an occasional failure to recognize that problems with nonsafety-related equipment or functions could affect safety-related functions or equipment occurred. An example of this failure was in recognizing that the slow opening time of the scram discharge volume vent and drain valves was a problem. Management also failed to ensure that its expectations for review of vendor calculations were achieved. Management was not proactive in developing or implementing a program to address the requirements of NRC Generic Letter 89-10 (motor operated valves (MOVs)). As a result of the latter, little had been accomplished until concerns were raised by the NRC. Since then, management has assigned a number of engineers to the MOV project. Another weakness was the control of and the high number of temporary modifications. Management had recognized this problem and started to address it late in the assessment period.

Early in the assessment period, reference material provided to the NRC for initial operator licensing examinations was incomplete, improperly indexed, and mislabeled. The pre-examination review was also not fully successful as evidenced by the number of post-examination comments. This resulted in

identified, such as increasing resources to resolve the Generic Letter 89-10 (MOV) issue, improvements were needed to recognize that a problem existed in the first place.

The approach to the identification and resolution of technical issues from a safety standpoint has shown notable improvement in license related submittals. A comparison of submittals from the previous assessment period indicates that the newer submittals typically require less staff interaction to resolve technical issues and also typically contain more thorough references to updated safety analysis report (USAR), technical specifications, or other pertinent documentation than earlier submittals did. The submittals were generally complete and concise, but did not always document compensatory measures or commitments very well. While generally improved, there were some instances where licensing submittal technical content was inadequate. An example of this was a change to the technical specifications which required several conference calls to resolve technical issues regarding two-phase feedwater pipe blowdown analysis.

The 10 CFR 50.59 reviews performed in conjunction with design modifications were adequate in most cases. Decisions were usually conservative, sound, and demonstrated a good technical understanding of the safety issues.

During discussions with the licensee, it was apparent that communication between departments, while showing progress, still needed improvement. For example, better communications would have helped preclude both the instance where core thermal limits were exceeded and the poor radiation protection interdepartmental work coordination.

The caliber of quality assurance (QA) audits of operational events has continued to improve. Audits were performance based and effective at defining the scope of known problems and in follow-up of previously identified issues. However, audits were not as effective in identifying new problems or forcing resolution of long standing equipment problems. An example of this was the annual fire protection audits, which had recommended the same corrective actions for the fire pump diesels for 4 years, but did not aggressively track resolution of this issue. The licensee subsequently revised its audit program to formally track repeat audit recommendations under the condition report process and focus on ensuring that the proposed corrective actions will prevent recurrence of the adverse condition.

The number of licensee event reports (LERs) due to personnel error declined sharply. The quality of LERs was generally good and root cause and corrective evaluations were thorough. However, the threshold for performing root cause analyses of equipment-related problems was sometimes too high. Use of human performance enhancement system (HPES) evaluations has increased and improved. The HPES evaluations were used for all reactor scrams and engineered safety feature actuations, writing LERs, and frequently when the problems involved personnel actions.

Staffing levels remained good. The QA organization augmented its staff with experienced personnel from other organizations. This has resulted in improved surveillance and operations monitoring. The training program has been generally

F. Engineering/Technical Support

1. Analysis

Evaluation of this functional area was based on the results of 13 routine inspections and 2 operator licensing examinations.

Enforcement history was good. Two Severity Level IV violations were issued. These violations, identified at the beginning of the assessment period, involved the failure to properly perform containment leakage rate testing on certain mechanical joints. However, the failure to properly perform the containment leakage rate testing was due to original construction engineering errors. The failure to perform or include the individual containment penetration leakage rates had minor safety impact on the actual containment leakage rate.

Management effectiveness in ensuring quality continued to be mixed. On the positive side, management was aggressive in responding to the containment leakage rate violations and identified problems with other mechanical joints. Management effectiveness was also evident in the initiatives taken to reduce the backlog of engineering tasks, the program to address the "top 10" material deficiencies, the transition to an in-house design capability, and the revised design modification process. Other initiatives included weekly meetings between the Nuclear Station Engineering Department (NSED) and plant management to improve communications and the establishment of an NSED performance monitoring program. System engineers continued to improve the reliability centered maintenance program, with a predictive maintenance program in place for 10 systems. In addition, the simulator console was voluntarily upgraded to facilitate the instructor's observation of trainees.

On the other hand, weaknesses in management effectiveness were evident in the failure to aggressively pursue root causes of problems which led to a lack of recognition that recurring equipment problems constituted conditions adverse to quality. An example of this was the continued replacement of fuel filters on the fire pump diesels over an extended period of time without determining the root cause. In addition, an occasional failure to recognize that problems with nonsafety-related equipment or functions could affect safety-related functions or equipment occurred. An example of this was the proposal to shed lighting loads at 60 minutes into a station blackout event to conserve battery capacity. This proposal was made without addressing how reduced lighting would affect the operators ability to perform required actions. Management also failed to ensure that its expectations for review of vendor calculations were achieved. Management was not proactive in developing or implementing a program to address the requirements of NRC Generic Letter 89-10 (motor-operated valves (MOVs)). As a result of the latter, little had been accomplished until concerns were raised by the NRC. Since then, management has assigned a number of engineers to the MOV project. Another weakness was the control of and the high number of temporary modifications. Management had recognized this problem and started to address it late in the assessment period.

Early in the assessment period, reference material provided to the NRC for initial operator licensing examinations was incomplete, improperly indexed, and mislabeled. The pre-examination review was also not fully successful as evidenced by the number of post-examination comments. This resulted in

identified, such as increasing resources to resolve the Generic Letter 89-10 (MOV) issue, improvements were needed to recognize that a problem existed in the first place.

The approach to the identification and resolution of technical issues from a safety standpoint has shown notable improvement in license related submittals. A comparison of submittals from the previous assessment period indicates that the newer submittals typically require less staff interaction to resolve technical issues and also typically contain more thorough references to updated safety analysis report (USAR), technical specifications, or other pertinent documentation than earlier submittals did. The submittals were generally complete and concise, but did not always document compensatory measures or commitments very well. While generally improved, there were some instances where licensing submittal technical content was inadequate. An example of this was an emergency change to the technical specifications which required several conference calls to resolve technical issues.

The 10 CFR 50.59 reviews performed in conjunction with design modifications were adequate in most cases. Decisions were usually conservative, sound, and demonstrated a good technical understanding of the safety issues.

During discussions with the licensee it was apparent that communication between departments, while showing progress, still needed improvement. For example, better communications would have helped preclude both the instance where core thermal limits were exceeded and the poor radiation protection interdepartmental work coordination.

The caliber of quality assurance (QA) audits of operational events has continued to improve. Audits were performance based and effective at defining the scope of known problems and in follow-up of previously identified issues. However, audits were not as effective in identifying new problems or forcing resolution of long standing equipment problems. An example of this was the annual fire protection audits, which had recommended the same corrective actions for the fire pump diesels for 4 years, but did not aggressively track resolution of this issue. The licensee subsequently revised its audit program to formally track repeat audit recommendations under the condition report process and focus on ensuring that the proposed corrective actions will prevent recurrence of the adverse condition.

The number of licensee event reports (LERs) due to personnel error declined sharply. The quality of LERs was generally good and root cause and corrective evaluations were thorough. However, the threshold for performing root cause analyses of equipment-related problems was sometimes too high. Use of human performance enhancement system (HPES) evaluations has increased and improved. The HPES evaluations were used for all reactor scrams and engineered safety feature actuations, writing LERs, and frequently when the problems involved personnel actions.

Staffing levels remained good. The QA organization augmented its staff with experienced personnel from other organizations. This has resulted in improved surveillance and operations monitoring. The training program has been generally

Illinois Power Company
Clinton Power Station
P.O. Box 678
Clinton, IL 61727
Tel 217 935-6226
Fax 217 935-4632

J. Stephen Perry
Senior Vice President

Enclosure 4

ILLINOIS POWER

U-602017
L42-92
4F.190

JSP-0377-92
July 31, 1992

Docket No. 50-461

Mr. A. B. Davis
Regional Administrator, Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Subject: Response to the Systematic Assessment of Licensee Performance

Dear Mr. Davis:

This letter provides the Illinois Power Company (IP) response to the U. S. Nuclear Regulatory Commission's (NRC's) eleventh Systematic Assessment of Licensee Performance (SALP 11) for the Clinton Power Station (CPS). SALP 11 covered the period from February 1, 1991 through April 30, 1992.

The SALP 11 report concluded that, overall, CPS performance was good and demonstrated a strong commitment to safety and a conservative operating philosophy. The report also indicated that CPS performance has improved as evidenced by improved ratings in Operations, improving trends in Maintenance/Surveillance and Security, and the reversal of the declining trend in Emergency Preparedness. I am pleased that the NRC has recognized the CPS commitment to safety, conservative operating philosophy, and other identified strengths.

The report also identified areas where management attention would appear to be warranted. These areas include the pursuit of root causes, a broader focus in problem resolution, stronger trending programs, the encouragement of a questioning attitude to ensure recognition of problems, and improvement in communications within and between departments. Illinois Power agrees that management attention is warranted in these areas.

IP's review of the SALP 11 report did identify some areas where additional clarification is necessary. These items are summarized in the attachment to this letter.

IE01
1991

CPS management and staff have a mission to operate Clinton Power Station efficiently and with a strong commitment to safety, reliability, and professionalism. All personnel at CPS are striving for improvement and are encouraged that the NRC recognizes their efforts. IP is committed to making improvements in problem solving, trending capabilities, and communications among and between all areas of the Nuclear Program's activities.

If you have any questions, please contact me.

Sincerely yours,

J. S. Perry
Senior Vice President

MAR/mfm

Attachment

cc: NRC Clinton Licensing Project Manager
NRC Resident Office
Illinois Department of Nuclear Safety

Areas of Clarification Based on Illinois Power's

(IP) Review of SALP 11 Report

In the functional area of Engineering/Technical Support, the report states, "System engineers continued to improve the reliability centered maintenance program, with a predictive maintenance program in place for 10 systems." IP would like to clarify that Reliability Engineering has implemented the reliability centered maintenance program on eleven systems.

Additionally, two examples provided in the report to support NRC positions are incorrect. The positions and the examples provided in the SALP 11 report are stated below:

- Functional Area: Engineering/Technical Support, page 10

  "In addition, an occasional failure to recognize that problems with nonsafety-related equipment or functions could affect safety-related functions or equipment occurred.

  An example of this was the proposal to shed lighting loads at 60 minutes into a station blackout event to conserve battery capacity."

- Functional Area: Safety Assessment/Quality Verification, page 13

  "While generally improved, there were some instances where licensing submittal technical content was inadequate. An example of this was an emergency change to the technical specifications which required several conference calls to resolve technical issues."

As discussed with Messrs. R. Lanksbury and C. Carpenter, these examples should be revised to appropriately describe CPS performance.

Enclosure 5

U.S. NRC
REGION III

CLINTON POWER STATION

* * *

SALP 11
PRESENTATION

July 23, 1992

Clinton Site
Clinton, IL

CLINTON SALP 11 AGENDA
July 23, 1992

AGENDA

Opening Remarks
C. J. Paperiello, Deputy Regional Administrator

SALP Process:
R. D. Lanksbury, Chief, Section 3B, DRP

SALP Presentation:
P. G. Brochman, SRI, (M/S, EP,SEC,E/TS)
F. L. Brush, RI, (OPS, RAD. CONTROLS)
C. E. Carpenter, PM, (SA/QV)

Summary:
H. J. Miller, Director, DRS

Licensee Comments:
J. S. Perry, Senior Vice President,
Clinton Power Station

Closing Remarks:
C. J. Paperiello

Inquiries:
Public and Media

SALP FUNCTIONAL AREAS EXAMINED

- PLANT OPERATIONS
- RADIOLOGICAL CONTROLS
- MAINTENANCE/SURVEILLANCE
- EMERGENCY PREPAREDNESS
- SECURITY
- ENGINEERING/TECHNICAL SUPPORT
- SAFETY ASSESSMENT/QUALITY VERIFICATION

SALP EVALUATION CRITERIA

- Management Effectiveness in Assuring Quality
- Approach to Resolution of Technical Issues From a Safety Standpoint
- Enforcement History
- Operational Events
- Staffing (Including Management)
- Training and Qualification Effectiveness

SALP

- Evaluations of Licensee Performance
  - Normally Performed Every 12-24 Months
- Four Performance Ratings are used by NRC:
  - Category 1 = Superior Level
  - Category 2 = Good Level
  - Category 3 = Acceptable Level
  - Category N = Not Rated
- Trending (When Used)
  - Improving ↑
  - Declining ↓

SALP BOARD

- Typical Voting Members of the Board Include:
  - Director, Division of Reactor Projects
  - Director, Division of Reactor Safety
  - Director, Division of Radiation Safety and Safeguards
  - Branch Chief, Division of Reactor Projects
  - Senior Resident Inspector
  - Director, NRR Projects Directorate
  - NRR Project Manager
- The Board Evaluates the Functional Areas
  - A Rating is Assigned to Each Functional Area
  - Rating Assignments are Based on Majority Vote
  - Conclusions Based on Fact & Subjective Judgement
- The Regional Administrator has Final Approval of the SALP Ratings and Report

CLINTON SALP 11
PLANT OPERATIONS
Category 1

Performance continued to improve during the assessment period. Management was effective in implementing a conservative operating philosophy.

STRENGTHS

- Conservative Operating Philosophy
- Operator Response to Transients
- Management Oversight of Day-to-Day Activities
- Management of Outages

CHALLENGES

- None

OTHER

- Questioning Attitude

CLINTON SALP 11
RADIOLOGICAL CONTROLS
Category 2

High source term continues to be a problem, although it may be decreasing. While source term reduction efforts have been deliberate, staff and shielding strengths have been sufficient to control exposures and personnel contaminations.

STRENGTHS

- Training and Qualifications of the Radiation Protection Staff
- Temporary Shielding Program
- Confirmatory Measurements Program

CHALLENGES

- Staffing
- Communications

OTHER

- Housekeeping

CLINTON SALP 11
MAINTENANCE/SURVEILLANCE

CATEGORY 2 ↑

Overall equipment performance continued to improve. Several plant initiatives were very successful. Instances of weakness occurred at the individual worker level.

STRENGTHS

- Management Involvement/Oversight of Day-to-Day Activities
- Quality of the Surveillance Program
- Low Backlog of Overdue PMs
- Highly Skilled and Qualified Staff

CHALLENGES

- Recognition of Problems
- Establishment of an Appropriate Periodicity of PMs

OTHER

- Attention to Detail

CLINTON SALP 11
EMERGENCY PREPAREDNESS

CATEGORY 1

Management effectiveness in ensuring the quality of the EP program was excellent with strong support being demonstrated by all levels of management.

STRENGTHS

- Management Support
- Resolution of Technical Issues
- Exercise Performance
- ERO Training

CHALLENGES

- None

CLINTON SALP 11
SECURITY

CATEGORY 2 ↑

Demonstrated proactive security management identified system weaknesses through an aggressive tracking and trending program and then committed to a major perimeter system upgrade.

STRENGTHS

- Effective Training and Qualification Program
- Staffing and Turnover Rate

CHALLENGES

- Security Hardware and Computer Software

OTHER

- Implementation of New Security Upgrade Program

CLINTON SALP 11
ENGINEERING/TECHNICAL SUPPORT
CATEGORY 2

Positive steps have been taken to reduce the engineering backlog and develop an in-house design capability. Improvements are needed in control of temporary modifications, in documentation and trending of equipment problems, and in initial operator reference material and pre-exam reviews.

STRENGTHS

- Highlight and Track Resolution of "Top 10" Material Concerns

CHALLENGES

- Temporary Modification Program
- Identification and Trending of Problems
- GL 89-10 Program
- Root Cause Analysis and Questioning Attitude

OTHER

- Initial Operator Reference Material and Pre-Exam Reviews
- In-house Design Capability

CLINTON SALP 11
SAFETY ASSESSMENT/ QUALITY VERIFICATION
CATEGORY 2

Performance continued to improve overall during the assessment period.

STRENGTHS

- Management Involvement
- Self-Assessment and Trending Programs

CHALLENGES

- Problem Identification and Root Cause Analysis
- Internal Communications

OTHER

- Effectiveness of Corrective Actions Improvement Program
- Quality of Licensing Communications/ Submittals

CLINTON SALP 11
SALP RATING COMPARISONS

FUNCTIONAL AREAS	SALP 10	SALP 11
PLANT OPS	2	1
RAD. CNTRLS	2	2
MAINT/SRVL	2	2 ↑
EP	1 ↓	1
SECURITY	2	2 ↑
E/TS	2	2
SA/QV	2	2

CLINTON SALP 11
PERFORMANCE BY EVALUATION CRITERIA

FUNCTIONAL AREAS	MGMT. INVOLV.	RESOLUTION OF TECH. ISSUES	ENFOR.	EVENTS	STAFF	TRAIN.
PLANT OPS			+	+	+	
RAD. CNTRLS					-	+
MAINT/SRVL	+		+		+	
EP	+	+	+		+	+
SECURITY-			+		+	+
E/TS						
SA/QV						

+ Strength - Weakness