

SALP 7

SALP BOARD REPORT

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

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SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

50-461/87001  
Inspection Report No.

Illinois Power Company  
Name of Licensee

Clinton Power Station  
Name of Facility

September 1, 1986 - August 31, 1987  
Assessment Period

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## I. INTRODUCTION

The Systematic Assessment of Licensee Performance (SALP) program is an integrated NRC staff effort to collect available observations and data on a periodic basis and to evaluate licensee performance on the basis of this information. SALP is supplemental to normal regulatory processes used to ensure compliance with NRC rules and regulations. SALP is intended to be sufficiently diagnostic to provide a rational basis for allocating NRC resources and to provide meaningful guidance to the licensee's management to promote quality and safety of plant construction and operation.

An NRC SALP Board, composed of staff members listed below, met on October 22, 1987, to review performance observations and data in order to assess the licensee's performance in accordance with the guidance in NRC Manual Chapter 0516, "Systematic Assessment of Licensee Performance." A summary of the guidance and evaluation criteria is provided in Section II of this report.

This report is the SALP Board's assessment of the licensee's safety performance at Clinton Power Station for the period September 1, 1986 through August 31, 1987.

### SALP Board for Clinton Power Station SALP 7 Assessment

| <u>Name</u>     | <u>Title</u>   |
|-----------------|--|
| *J. A. Hind     | SALP Board Chairman, Director, Division of Radiation Safety and Safeguards |
| *H. J. Miller   | Director, Division of Reactor Safety                                       |
| *E. G. Greenman | Deputy Director, Division of Reactor Projects                              |
| *D. R. Muller   | Project Director, NRR  |
| *W. L. Forney   | Chief, Reactor Projects Branch 1   |
| R. C. Knop      | Chief, Reactor Projects Section 1B   |
| W. L. Axelson   | Chief, Technical Support Staff   |
| W. D. Shafer    | Chief, Emergency Preparedness and Radiological Protection Branch           |
| L. R. Greger    | Chief, Facilities Radiation Protection                                     |
| B. S. Mallett   | Chief, Nuclear Material Safety and Safeguards Branch                       |
| J. R. Creed     | Chief, Safeguards Section  |
| *P. L. Hiland   | Senior Resident Inspector  |
| *A. B. Wang     | Project Manager, NRR   |
| P. Shemanski    | Project Manager, NRR   |

\*SALP Board voting members

## II. CRITERIA

The licensee's performance is assessed in selected functional areas depending on whether the facility is in a construction, preoperational, or operating phase. The functional areas normally represent areas significant to nuclear safety and the environment and are normal programmatic areas. Some functional areas may not be assessed because of little or no licensee activities or lack of meaningful observations. Special areas may be added to highlight significant observations.

One or more of the following evaluation criteria were used to assess each functional area:

1. Management involvement in ensuring quality
2. Approach to resolution of technical issues from a safety standpoint
3. Responsiveness to NRC initiatives
4. Enforcement history
5. Operational and construction events (including response to, analysis of, and corrective actions for)
6. Staffing (including management)

The SALP Board, however, is not limited to these criteria, and others may be used where appropriate.

On the basis of the SALP Board assessment, each functional area evaluated is classified into one of three categories. The definition of these performance categories is:

Category 1: Reduced NRC attention may be appropriate. Licensee management attention and involvement are aggressive and oriented toward nuclear safety; licensee resources are ample and effectively used so that a high level of performance with respect to operational safety and/or construction quality is being achieved.

Category 2: NRC attention should be maintained at normal levels. Licensee management attention and involvement are evident and are concerned with nuclear safety; licensee resources are adequate and are reasonably effective so that satisfactory performance with respect to operational safety and/or construction quality is being achieved.

Category 3: Both NRC and licensee attention should be increased. Licensee management attention or involvement is acceptable and considers nuclear safety, but weaknesses are evident; licensee resources appear to be strained or not effectively used so that minimally satisfactory performance with respect to operational safety and/or construction quality is being achieved.

Trend: The SALP Board may determine to include an assessment of the performance trend of a functional area. Normally, this performance trend is only used where both a definite trend of performance is discernible to the Board and the Board believes that continuation of the trend may result in a change of performance level.

The trend, if used, is defined as:

a. Improving

Licensee performance was determined to be improving near the close of the assessment period.

b. Declining

Licensee performance was determined to be declining near the close of the assessment period.

### III. SUMMARY OF RESULTS

The licensee's performance was found acceptable. The performance in the areas of maintenance, quality programs and administrative controls affecting quality, and licensing activities improved from ratings received during the previous assessment period. Of the 12 functional areas evaluated during this assessment period, two functional areas received Category 1 ratings, nine areas received Category 2 ratings and no areas received Category 3 ratings. One functional area, outages, was not rated during this assessment period due to a lack of inspection information. Three functional areas, surveillance, outages, and training and qualification effectiveness, are new areas during this assessment period.

| <u>Functional Area</u>   | <u>Rating Last<br/>Period</u> | <u>Rating This<br/>Period</u> |
|--|-------------------------------|-------------------------------|
| A. Plant Operations  | 2*                            | 2                             |
| B. Radiological Controls   | 2                             | 2                             |
| C. Maintenance   | 3                             | 2                             |
| D. Surveillance  | **                            | 2                             |
| E. Preoperational and Startup Testing                                | 1                             | 1                             |
| F. Fire Protection   | 2                             | 2                             |
| G. Emergency Preparedness  | 2                             | 2                             |
| H. Security  | 2                             | 2                             |
| I. Outages   | **                            | NR                            |
| J. Quality Programs and Administrative<br>Controls Affecting Quality | 3                             | 2                             |
| K. Training and Qualification<br>Effectiveness                       | **                            | 2                             |
| L. Licensing Activities  | 2                             | 1                             |

\*During the previous assessment period, this functional area addressed operational readiness.

\*\*This functional area was not rated (it is a new functional area for SALP 7).

#### IV. Performance Analysis

##### A. Plant Operations

##### 1. Analysis

Evaluation of this functional area was based on the results of 14 routine inspections and 1 special inspection conducted by regional and resident inspectors.

Enforcement history in this area was poor; however, some improvement toward the end of the assessment period was evident. During this assessment period, 11 violations (10 Severity Level IV and 1 Severity Level V) were identified. The violations were not of major safety significance; however, 4 of the 11 violations were identified early in the assessment period during initial fuel loading, which was indicative of a programmatic weakness. Licensee corrective actions for the programmatic weaknesses included (1) the training of shift supervisors and test directors on their functional relationship; (2) the reporting of events to the appropriate management level within 1 hour of occurrence; (3) formal instructions on face-to-face communication; (4) strict adherence to overtime limits; (5) the training of quality assurance personnel on recognizing significant events; and (6) the review of startup test procedures by a licensed senior reactor operator. Subsequent performance during initial criticality and power ascension testing demonstrated that these corrective actions were effective. During the previous assessment period, the operations area was not evaluated; however, in the area of operational readiness, one violation (Severity Level IV) and one deviation were identified.

Two violations were identified during a special inspection of emergency operating procedures (EOPs). The EOPs were technically deficient and were not always written in accordance with the approved writer's guide. In addition, a problem identified by the licensee involving the failure to verify/validate EOP revisions was not corrected in a timely manner. The technical deficiencies identified in the EOPs would not have prevented the performance of the intended functions; however, the potential for safety-significant deficiencies in the EOPs existed because of the lack of adequate program control. Followup inspections before the close of this assessment period showed that implementation of corrective actions specified in the licensee's response was satisfactory. The remaining five violations were not of major safety significance and were not indicative of a generic or programmatic problem. The licensee's written responses to these violations indicated that the licensee had a clear understanding of root causes and had specified appropriate corrective action.

During this assessment period, the licensee issued 48 licensee event reports (LERs) pertaining to plant operations. Events related to the implementation of the surveillance and maintenance program are discussed in those functional areas. The licensee received a low-power license on September 29, 1986; therefore, LER reporting requirements were imposed 11 of the 12 months of the assessment period.

Twenty-five of the LERs were issued primarily as a result of equipment problems. Two reactor protection system (RPS) actuations with no control rod movement and four reactor scrams with control rod movement were caused by equipment failures. Ten of these 25 LERs dealt with the chlorine monitor system and the reactor water cleanup system. The remaining were isolated equipment problems in various plant systems. The number of LERs issued because of equipment failures was decreasing at the end of the assessment period. Licensee corrective actions for these equipment problems were based on technically sound investigative efforts to determine root causes and resulted in equipment modifications, setpoint changes, and/or procedural changes. Licensee actions for other equipment problems were both timely and adequate as was demonstrated by the reduction in the number of occurrences.

Fifteen of the LERs were issued because of personnel errors, which resulted in two RPS actuations with no rod movement, five inadvertent engineered safety feature actuations, and eight violations of plant technical specifications. The licensee evaluated the personnel errors to determine if they were the result of (1) inattention to detail or inadequate review; (2) inadequate communications; (3) failure to follow procedure; or (4) deficient knowledge, training, and experience. Corrective actions implemented by the licensee included enhanced operator training, development of additional operator aids, enhancement and clarification of administrative procedures, and strengthening of organizational interactions. Personnel errors (five) that resulted in inadvertent engineered safety feature actuations appeared to be isolated instances and were effectively reduced by the end of the assessment period as a result of the licensee's corrective actions. However, personnel errors (eight) resulting in violations of plant technical specifications were increasing at the end of the assessment period. The licensee recognized this trend and implemented corrective actions by providing training on technical specification requirements to radiation protection technicians and maintenance planners. In addition, site-wide training was provided on the general requirements of the technical specifications.

Eight LERs were issued as a result of procedural deficiencies including one reactor scram on a loss of condensor vacuum. Procedural changes instituted by the licensee corrected these deficiencies in a timely manner, thereby preventing other occurrences.

Management involvement in this functional area was good throughout the assessment period. Management required events be documented on condition reports and Management was required to be notified within 1 hour that a condition report was being initiated. In general, a formal critique of the event was conducted immediately following the shift during which the event occurred. The critiques were conducted by management with all appropriate personnel in attendance. The critiques were effective in gathering information on the event and establishing responsibility for corrective actions. The licensee has taken a conservative approach to the reporting of problems and events in accordance with NRC requirements.

The licensee was responsive to NRC initiatives during the assessment period. Monthly meetings of the licensee and NRC management have been held to review plant status and licensee operating performance. During these meetings, licensee management continued to exhibit an understanding of the high level of performance that must be achieved and maintained in this functional area. The licensee issued monthly performance reports that provided statistical data and trends for over 73 parameters covering all aspects of plant operation. The reports were a valuable management tool and served largely as the basis for discussions during these meetings.

Staffing in this functional area was adequate. Operating personnel exhibited a very cautious, thorough approach to plant operations and displayed a high degree of competence in the response to off-normal plant conditions and operating events. Licensed operators conducted themselves in a professional, businesslike manner; they were knowledgeable of plant activities and attentive to indications of plant conditions requiring operator action.

2. Conclusion

The licensee's performance is rated Category 2 in this area. The licensee's performance was rated Category 2 in a related area (Operational Readiness) during the previous SALP period.

3. Board Recommendations

None

## B. Radiological Controls

### 1. Analysis

Evaluation of this functional area was based on the results of five routine inspections performed during this assessment period by regional inspectors and routine observations by the resident inspectors. Two of the inspections primarily involved review of allegations concerning the radiation protection program.

Enforcement history in this area showed a decline in licensee performance since the previous assessment period. Three violations (two Severity Level IV and one V) were identified during this assessment period. These violations were not indicative of a programmatic weakness in licensee performance, nor did they have major safety significance. The corrective actions taken or planned for these violations were appropriate. No violations were identified during the previous assessment period.

Technician staffing levels and qualifications were adequate to implement the routine radiation protection and chemistry programs; however, the licensee continues to rely on contractor personnel to augment the technician staff for routine operations. This is generally undesirable if it becomes a long-term situation. Radiation protection staff turnover was relatively high early in the assessment period but stabilized late in the period. Several vacancies still existed in the permanent technical/professional support staff, including radiological engineers and radiological support supervisors. These vacancies represent about 40% of the permanent technical/professional health physics support for the Radiation Protection Department. Well-qualified professional personnel were added to the chemistry staff.

Licensee management involvement in ensuring quality in this functional area was evident and generally adequate. Labor management relations were strained early in the assessment period with resultant technician morale problems. Some improvement was evident late in the assessment period. Management was generally aggressive in resolving technical problems once recognized. Management, however, was slow to recognize problems associated with the calibration of liquid effluent monitors required by the technical specifications; these problems were initially identified by the station's engineering group. Management attention to and investigative followup of radiological improvement reports, including implementation of a progressive disciplinary action program for violations of radiation protection rules were good.

Responsiveness to NRC initiatives was generally good, including modifications to streamline and improve implementation of the radiation work permit (RWP) and radiological improvement report programs. The licensee demonstrated responsiveness to NRC concerns by providing additional confined-space training, clarifying the radiation protection technician qualification program, strengthening the program to maintain instrumentation, and revising procedures for RWP-related emergencies and release of material to unrestricted areas. The chemistry group had progressed in the development of a nonradiological quality assurance/quality control (QA/QC) program to ensure the adequacy of results for the chemistry analyses. This program includes periodic technician performance tests based on cross-check samples from vendors, performance checks on the instruments, and the use of control charts.

The licensee's approach to the resolution of radiological technical issues was generally good as exhibited by the assigning of priorities for completing critical preoperational and startup activities and for documenting necessary procedural and system alterations and calibrations. The licensee retained qualified consultants to assist the radiological engineering group. All previously deferred operability and testing matters were adequately completed before initial criticality/5% power was reached. Calibrations, functional tests, and operability of process effluent monitors were generally acceptable; however, some liquid effluent monitors were not calibrated initially in accordance with requirements in that they were calibrated at only one energy level rather than a range of energy levels.

There were no unplanned effluent releases or transportation problems during the assessment period. Operational experience was not sufficient to adequately evaluate control of personnel exposures and effluent releases. The licensee continued to implement the radiological housekeeping and contamination control program. The effectiveness of the contamination control program was evidenced by the relatively small total plant square footage requiring control as contaminated areas.

The licensee's water quality control program that involves the development of a program for the extensive trending of water chemistry parameters was good. The results of the nonradiological confirmatory measurements were good; of 27 licensee results only 1 disagreed with the NRC values. Although some problems occurred relating to various aspects of laboratory technique and quality control, the QA/QC program in its use of control charts and other QC techniques appeared to have been a substantial factor in contributing to the quality of the results.

2. Conclusion

The licensee's performance is rated Category 2 in this area. The licensee was rated Category 2 in this area during the last SALP period.

3. Board Recommendations

None

C. Maintenance

1. Analysis

Evaluation of this functional area was based on the results of 18 routine and 2 special inspections conducted by regional and resident inspectors.

Enforcement history in this area showed an improvement in licensee performance since the previous assessment. During this assessment period, eight violations (Severity Level IV) were identified. During the previous assessment period, 13 violations (7 Severity Level IV, 2 Severity Level V, and 4 that had been identified during the previous assessment period and grouped as a Severity Level III violation during this assessment period) had been identified. Of the eight violations identified during this assessment period, one indicated a programmatic weakness in the identification and performance of post-maintenance tests; four violations identified during as-built panel inspections were (1) inadequate proofing of design change documents, (2) failure to ensure that as-built configurations of the plant conform to the latest electrical design drawings, (3) improper setting of time-dial protective relays, and (4) inadequate reinspection program; and one violation pertained to failure to maintain equipment in accordance with environmental qualification (EQ) requirements. The remaining two violations, which were not of major safety significance, were isolated cases of maintenance technicians' failure to follow procedures. Although escalated enforcement resulted in a Severity Level III violation, as mentioned above, and the imposition of a \$75,000 civil penalty, this was related to performance during the SALP 6 period. The inspection and evaluation of subsequent corrective actions implemented by the licensee during the current period indicated that management resources and involvement have been increased, a more conservative approach has been adopted in addressing technical issues, and previously identified technical concerns have been addressed. Substantive management initiatives resulted in these and other needed programmatic improvements.

In addition to the above violations cited during this assessment period, weaknesses were identified during a special operational readiness inspection. These weaknesses included large numbers

of past due preventive maintenance items, large backlog of corrective maintenance, and involved the starting of priority 1 maintenance activities before the required approval was granted. After the inspection, increased management attention was provided on the identified weaknesses. The backlog of corrective maintenance was reduced, starting of priority 1 maintenance activities before required approvals was eliminated, and the number of past due preventive maintenance items was significantly reduced.

During this assessment period, the licensee implemented corrective actions for its overall maintenance program in response to deficiencies identified during the previous assessment period. The licensee's maintenance improvement program included (1) expansion of the management of the maintenance department, (2) consolidated maintenance planning, (3) improved communications within the maintenance department, (4) improved quality of completed maintenance work packages (5) development of generic lists for expendable maintenance items, and (6) field engineering review of maintenance job steps.

Eleven LERs were issued during this assessment period as a result of problems and events attributable to this functional area, that is, one reactor scram from 70% power, seven engineered safety feature actuations, and three violations of plant technical specifications. All 11 LERs resulted from personnel error during the performance of maintenance activities. For the most part, the personnel errors were isolated cases for which the licensee took appropriate corrective action to prevent recurrence. One type of personnel error which dealt with the venting of instruments following maintenance occurred several times during surveillance testing. The licensee identified the personnel errors associated with the venting of instruments as a generic problem and provided additional training, enhanced procedures, and implemented hardware changes. The corrective actions were effective as evidenced by a decline, toward the end of the assessment period, in the number of personnel errors associated with instrument venting. Although none of the events were of major safety significance, they were indicative of a less than desirable performance in this area.

Management involvement to ensure quality in this functional area was improved as evidenced by action taken to establish the as-built program and assemble a dedicated team of engineers to inspect, evaluate, and resolve the deficiencies identified during the implementation of the as-built program and to ensure that design documents reflect the actual as built configuration of the installed components and systems. During an NRC inspection, improperly crimped wires and improperly calibrated protective relays were found. As a result, the licensee implemented a comprehensive inspection program to identify and

resolve as-built discrepancies in the panels that had not been reinspected previously by the licensee. Management was very responsive to NRC initiatives and concerns. In addition, management implemented a concerted effort to train personnel on the proper use and knowledge of electrical design drawings and change documents.

A notable example of management involvement to ensure quality encompassing both the maintenance and surveillance SALP functional areas was the corrective action taken to resolve recurring problems associated with the lifting of electrical leads and the use of electrical jumpers while personnel were performing routine maintenance and surveillances. The corrective actions included Plant Management Standing Order PMSO-30, which required the completion of a surveillance impact matrix before leads were lifted or jumpers were used, formation of a lifted leads task force, development of procedures to review and correlate industry and NRC lessons learned, development of an improved lifted leads program, and identification of long-term corrective actions. The long-term corrective actions included a plan to review control panels, cabinets, and electrical drawings associated with routine maintenance and surveillance to determine plant response to the given lifted leads or jumpers, and identification of hardware modifications that would significantly reduce the potential for inadvertent safety system actuations.

Maintenance records and reports reviewed were generally complete and thorough. Adequate implementing procedures were in place and, in most cases, properly implemented. However, a number of the preventive maintenance items appeared to have been deferred so that work associated with scheduler and other non safety-related considerations would be performed. Maintenance records reviewed during the EQ inspection were complete, well maintained, and available. EQ maintenance activities reviewed were being performed on schedule.

The licensee's approach to the resolution of technical issues from a safety standpoint appeared to be technically sound and became more conservative as the assessment period progressed. Licensee management involvement in ensuring quality was evidenced by the identification of program weaknesses by the licensee during the assessment period. The licensee identified areas requiring improvement through the evaluation of audit and surveillance reports, LERs, operational monitoring reports, and site trend analysis. Performance indicators also were effectively used to identify areas needing improvement.

Staffing in this functional area was adequate. Inspector observations of maintenance activities determined that personnel were knowledgeable in maintenance procedures and organizations. Work was performed in a professional, skilled

manner in accordance with technically adequate procedures and clearly specified quality requirements; the functions, responsibilities, and authorities at the management, supervisory, and nonsupervisory levels were clearly delineated in administrative procedures.

2. Conclusion

The licensee's performance is rated Category 2 in this area. The licensee's performance was rated Category 3 in this area during the previous SALP period.

3. Board Recommendations

None

D. Surveillance

1. Analysis

Evaluation of this functional area was based on the results of 12 routine inspections conducted by regional and resident inspectors, an evaluation of allegations made with respect to the inservice test program, and the containment integrated leak rate test (CILRT) inspection.

Four violations (three Severity Level IV and one Severity Level V) were identified during this assessment period. Two of the Severity Level IV violations resulted from the licensee's failure to perform required channel checks before initial entry into operational condition 2 because of inadequate procedures. The licensee took prompt corrective action, which included a comprehensive review of surveillances required by the technical specifications against existing surveillance procedures. Procedural deficiencies identified were corrected. Followup inspection by the NRC confirmed that corrective actions were adequate. The inspection and evaluation of allegations on inservice testing of pumps and valves indicated that problems with the program existed and resulted in a Severity Level IV and a Severity Level V violation. The licensee corrected the problems identified and has been performing an in-depth review to ensure that the quality of the program is acceptable in all respects. During the previous assessment period, one Severity Level IV violation and one deviation were identified during the conduct of a CILRT.

The licensee issued 17 LERs related to surveillance program implementation. Of these, 10 LERs were due to personnel error during the performance of surveillance testing including one manual scram with control rod movement. Seven LERs were due to procedural deficiencies. Personnel errors appeared to be

isolated events with no major safety significance. Procedural deficiencies were corrected in a timely manner, thereby preventing other occurrences.

The licensee responded adequately to technical issues and NRC initiatives. When weaknesses in the procedure or sensor performance were identified during the CILRT, the licensee usually took timely and effective corrective action.

Because of increased management involvement and in-depth initiatives to address problems identified in the inservice test program, the licensee's performance in this area showed improvement and was considered acceptable during this assessment.

Management involvement in ensuring quality was evident throughout the assessment period. Identified deficiencies in implementing the surveillance program were promptly acted on by management to identify the root cause and generic corrective action. An example of management involvement to ensure quality pertaining to the lifting of electrical leads and the use of electrical jumpers, which encompassed surveillance as well as maintenance activities, was discussed in Section IV.C.

Staffing in this area was adequate. None of the operating events, including missed surveillances, were the result of inadequate staffing. Personnel functions, responsibilities, and authorities for surveillance test program implementation were clearly specified in the licensee's administrative procedures; however, the operating staff's knowledge of the CILRT valve lineup was weak as demonstrated by the extra week required to complete the systems lineup and the several instances the operators required assistance from a subcontractor to locate valves. An improvement in operator knowledge of CILRT valve locations, could decrease the cumulative radiation dose received by operations' personnel. The operating staff's knowledge of the plant was generally considered adequate with respect to the performance of other surveillances.

2. Conclusion

The licensee's performance is rated Category 2 in this area. This area was not rated during the previous SALP period.

3. Board Recommendation

E. Preoperational and Startup Testing

1. Analysis

Evaluation of this functional area was based on the results of 2 inspections conducted by regional inspectors and 11 inspections conducted by resident inspectors.

The enforcement history in this area was excellent in that no violations or deviations were identified.

Direct observations of major startup testing performed after fuel loading during the assessment period indicated an excellent integration of startup test activities into plant operations. In addition, no LERs were issued as a result of the performance of startup testing. Each operating shift was thoroughly briefed before the conduct of significant evolutions. Major startup tests were performed on the licensee's plant-specific simulator by the operations and startup personnel who were actually going to conduct the test activity.

Management involvement to ensure quality was adequate and generally improving during this period. Following initial fuel loading, licensed senior reactor operators reviewed startup test procedures to ensure compatibility with plant operations in progress. Responsibilities for test performance were clearly defined so as not to interfere with the shift supervisor's responsibility to continuously maintain safe operation of the plant. The integrated system turnover program appeared to be adequately implemented during this period after several months of revision, evaluation, and implementation; however, during an operational readiness inspection, several weaknesses were identified in the maintenance and surveillance programs that were attributed to the turnover program. Also, the startup test procedures were revised on several occasions before and after their implementation. Generally, the licensee showed adequate responsiveness to NRC initiatives.

Startup test group staffing was more than adequate, and the positions, authorities, and responsibilities were identified and well defined. Vacancies that occurred were filled on a priority basis. Test crews were well staffed and knowledgeable in all aspects of testing.

2. Conclusion

The licensee's performance is rated Category 1 in this area. The licensee's performance was rated Category 1 in this area during the previous SALP period.

3. Board Recommendations

None

F. Fire Protection

1. Analysis

Evaluation of this functional area was based on the results of one routine inspection by a regional inspector and routine observations by the resident inspectors.

No violations or reportable events occurred during the assessment period, which is an improvement from the previous assessment period during which two Severity Level IV violations were identified.

The one routine inspection by a regional inspector was performed to determine readiness of the licensee's fire protection program in preparation to load fuel. That inspection also included a continuing review of the fire protection construction and of the preoperational test program. As a result of this and previous inspection visits in coordination with NRR, it was determined that, with respect to this functional area, the plant was ready to load fuel.

The licensee's approach to the resolution of technical issues from a safety standpoint was viable and generally sound and thorough. The licensee's training program for plant personnel regarding safe shutdown procedures was considered adequate.

The licensee's responsiveness to NRC initiatives was timely, resulting in generally acceptable resolution of closure packages and other issues during initial discussions.

Management involvement in ensuring quality was demonstrated in that decisionmaking was usually at a level that ensured adequate management review. Scheduled management tours were helpful in maintaining housekeeping at a good level and thus reduced the potential for the collection of combustible materials. The inspector's observations of regularly scheduled fire drills indicated a professional and serious attitude by fire brigade members. Management was involved in assessing the adequacy of the performance of fire drills.

Fire brigade staffing met the requirements of plant technical specifications, and the responsibilities were clearly defined.

2. Conclusion

The licensee's performance is rated Category 2 in this area. The licensee's performance was rated Category 2 in this area during the previous SALP period.

3. Board Recommendations

None

G. Emergency Preparedness

1. Analysis

Evaluation of this functional area was based on four inspections conducted by regional inspectors during this assessment period,

including observation of the 1987 annual emergency preparedness exercise. A management meeting also was held to discuss emergency preparedness issues.

Enforcement history in this area indicated that there was a decline in licensee performance during this assessment period, in that two Severity Level IV violations were identified whereas no violations were identified during the previous assessment period. The violations involved failure to correct two exercise weaknesses identified during the previous annual exercise. No additional concerns were identified during the routine inspections.

The 1987 emergency exercise was considered challenging, and adequately exercised all aspects of the emergency plan. Although two repeat exercise weaknesses (violations) were identified during this exercise, this was not considered indicative of major programmatic problems, and overall performance of the exercise was adequate.

Management involvement in ensuring quality in this area was good, as evidenced by senior management's participation in exit meetings following each inspection and its response to identified NRC concerns.

The licensee was generally responsive to NRC concerns by providing viable and thorough responses. However, the licensee did not fully understand the basis for the exercise weakness delineated in Inspection Report 461/85040. When the same issue became a violation in Inspection Report 461/87003, the licensee took immediate and long-term corrective action that was satisfactory. Once problems were clearly identified, the licensee expended efforts to adequately close out identified items.

The staffing of the emergency response organization was adequate, and the authorities and responsibilities of personnel were well identified. Knowledge and capability of personnel to carry out their emergency response duties and responsibilities were demonstrated during the annual emergency preparedness exercise, as well as in walkthroughs during a routine inspection. This indicated that the licensee's training program had adequately prepared personnel for their assignments.

2. Conclusion

The licensee's performance is rated Category 2 in this area. The licensee's performance was rated Category 2 in this area during the previous SALP period.

3. Board Recommendations

None

## H. Security

### 1. Analysis

Evaluation of this functional area was based on the results of two routine and four special security inspections by regional security specialists. The resident inspectors also routinely observed security activities. Two of the four special inspections pertained to allegations received by NRC Region III.

Enforcement history improved during the assessment period. Two Severity Level IV violations were identified; one pertained to a programmatic weakness in the vital area access control program, and the other pertained to a failure to implement a required compensatory measure. Both violations were resolved by the close of the assessment period. During the previous assessment period four Severity Level IV violations were identified.

The most significant inspection finding that required resolution at the close of this assessment period pertains to the reduction of the spurious alarms caused by the intrusion detection system. Although considerable effort and resources have been expended to rectify this problem, the results have not been satisfactory. This issue warrants continued management support until it is resolved.

Fifteen security event reports (SERs) were initially submitted during this assessment period. The events in three of the SERs were subsequently changed to loggable events. Of the 12 remaining SERs, 5 were equipment related, 1 pertained to personnel error, 1 pertained to equipment tampering, and the remaining 4 were informational in nature and did not involve issues of compliance. Formal 10 CFR 73.71(c) reporting requirements were not applicable to the licensee during the previous assessment period. Although the total number of SERs is not excessive, the number of equipment-related SERs is indicative of the security computer-related problems that still need to be resolved. The SERs were detailed in nature and technically sound in analysis.

The previous SALP report identified the security section's inattention to detail as a concern that warranted licensee management attention. This concern has been resolved. Adequate attention to detail, monitoring of actions in response to inspection findings, and fewer administrative requirements for supervisors were noted during the most recent security inspection.

The licensee was responsive to NRC concerns during this assessment period, particularly in reference to issues that required investigations to be conducted. Offsite investigative assistance was used on several occasions, and the investigations

were thorough and well documented. The licensee's investigation efforts resulted in the identification of an individual who had tampered with plant equipment in June 1987. Allegations referred to the licensee were generally thoroughly investigated, and the conclusions were supported by the facts obtained.

Management involvement in ensuring the quality of the security program is evident. Security exit meetings were still attended by the Vice President. The plant manager supported personnel compliance with security procedures, and QA audits of the security program were generally adequate in scope and depth. The liaison between the plant licensing staff and security management was excellent. Effective communications between the licensing staff, site security management, and NRC Region III had been established. Management's involvement was most evident during the response to a bomb threat and the attendant declaration of an Unusual Event in August 1987. Senior management, up to the Vice President, was present and actively involved in supporting the security organization's response to the threat. The excellent and appropriate actions taken by Federal, State, and local law enforcement authorities resulted from the coordination efforts of the licensee's staff as directed by senior management. Continued support and the proactive approach to contingency planning demonstrated during that event is commendable.

Staffing in this area appeared adequate. Licensee security personnel provided liaison for each shift, and contractor security supervisors provided strong day-to-day supervision of the security operations. The position of Supervisor, Plant Protection, was recently assumed by the Assistant Supervisor. The individual has the experience to maintain continuity in security operations.

The training program continued to be a strength of the security operation. Adequate procedures had been developed to implement security requirements and define appropriate responsibilities.

A high level of awareness of security responsibilities existed within the plant workforce.

Technical support in resolving security issues was adequate, and close liaison between the maintenance, instrumentation and calibration, and computer support groups was evident. Vendor support was requested when appropriate. The reliability of security equipment, except for false alarms, was adequate, and maintenance support was closely monitored by the security department.

2. Conclusion

The licensee's performance is rated Category 2 in this area. The licensee's performance was rated Category 2 in this area during the previous SALP period.

3. Board Comments

None

I. Outages

1. Analysis

For the duration of this assessment period, the facility remained in the startup test phase. There were no refueling outages during the assessment period.

After initial operation, the facility was shut down for short periods so that startup milestone-related work activities, as well as equipment modification and repair activities, could be performed. Routine inspections by resident inspection personnel during these periods continued to focus on operational readiness and safety and implementation of the startup test program.

Because of the limited facility operating history acquired during the assessment period and the nature of the work performed during the shutdown, inspections were not conducted to assess licensee performance in this functional area.

2. Conclusion

Because of the facility's startup test status and the focus of the NRC inspections conducted during the assessment period, the licensee was not rated. The licensee was not assessed in this area during the previous SALP period.

3. Board Recommendations

None

J. Quality Programs and Administrative Controls Affecting Quality

1. Analysis

Evaluation of this functional area was based on the results of 16 routine inspections by regional and resident inspectors, two special team inspections, and one special EQ inspection.

Enforcement history in this area showed an improvement in licensee performance. Four Severity Level IV and one Severity Level V violations were identified during this assessment

period. During the previous assessment period, one Severity Level III, five Severity Level IV, and two Severity Level V violations and one deviation were identified. The Severity Level III violation identified during the previous assessment period was issued during this assessment period. One violation identified early in the assessment period concerned the inadequate control of condition reports. The licensee's corrective action in response to that violation was timely and effective in preventing recurrence. The four remaining violations were not of major safety significance and did not indicate a programmatic weakness. The licensee's corrective actions appeared adequate to prevent recurrence.

In addition to the above, the EQ inspection identified two significant deficiencies in regard to 10 CFR 50.49 requirements. These items concerned the failure to demonstrate the environmental qualification of nylon wire nuts used in Limitorque motors and Amp Kynar splices used in various applications. The licensee committed to take immediate corrective action in the form of submitting a justification for continued operation, replacing nylon wire nuts on six Limitorque motors, and performing testing in accordance with 10 CFR 50.49 to demonstrate qualification of the nylon wire nuts and Amp Kynar splices for use at the Clinton station. These items are currently being reviewed by the regional inspectors.

The licensee implemented several program enhancements during the assessment period in order to improve performance in this functional area. For example, the licensee's condition report procedure was revised to require notification of appropriate management-level personnel within 1 hour of the identification of the condition. During the assessment period, the number of open condition reports was reduced from about 550 early in the assessment period to 183 at the end of the assessment period. Of the open condition reports at the end of the assessment period, 15% had been open for more than 120 days.

Event critiques were required to be held immediately following an operating event or identification of significant problems. The conduct of these critiques was formal with root cause identification and corrective actions assigned. The Quality Assurance Department has routinely audited corrective action assignments. Weaknesses identified by these audits were acted on in a timely manner. Appropriate plant personnel received LER briefings that emphasized the root cause and lessons learned.

To further improve performance, the licensee also implemented a quarterly integrated quality assurance program evaluation during this assessment period. The purpose of the evaluation was to determine the effectiveness of the IP Nuclear Power Operation Quality Assurance Program. The performance indicators

evaluated included procedural compliance, effectiveness of controls, prompt and effective corrective action, departmental interface, and communication. Deficiencies identified through QA audits, QA surveillances, operations monitoring reports, site trend analysis, LERs, and NRC inspection results were evaluated. The evaluations were intended to identify weaknesses in functional areas (functional areas consistent with the SALP format) and to focus management attention on those areas. This evaluation effort appeared to identify weak areas, and recommendations made to improve performance in those areas were appropriate.

Management involvement in ensuring quality had improved markedly. Weaknesses in management controls identified during SALP 6 and in the first half of SALP 7 were aggressively addressed by the licensee. During the performance of the oversight team inspection, regional and headquarters personnel reviewed several recently developed programs that were designed to identify and address administrative, personnel, and material related plant problems. These programs were found to be comprehensive with adequate action item tracking systems to ensure appropriate followup actions are taken.

During the special EQ inspection performed late in the assessment period, management involvement in ensuring quality was also evident and indicated a concern for nuclear safety. The licensee had adequate written programs relative to procurement and QA/QC activities.

The licensee's approach to the resolution of technical issues from a safety standpoint was found to be generally conservative and adequate. Inspector review of selected LERs and licensee identified adverse trends indicated a generally conservative approach to the resolution of these issues. The licensee's extensive short-term and long-term programs to address lifted leads and jumper problems was an example of its commitment to adequately resolve technical issues. Several issues including failures of the feedwater control valve, which caused two scrams, and several reactor water cleanup isolation events caused by high differential flow signals indicated areas where improvements in the licensee's approach to the resolution of technical issues could be made, even though these are the types of problems that initially have plagued nearly all new BWR plants.

The licensee's responsiveness to NRC initiatives was evident. Its actions to address NRC-identified quality control weaknesses were both aggressive and comprehensive. Improved performance and the comprehensive programs listed above to identify and resolve administrative, personnel, and material problems at the plant were evidences of these actions. The licensee has devoted extensive resources to improve plant performance utilizing both internal and external information sources, such as other plants'

LERs and information from the Institute of Power Operations (INPO) to identify and resolve both plant-specific and generic BWR 6 problems. In addition, the licensee's responsiveness to NRC initiatives was demonstrated by the licensee's proposed and accepted resolutions of EQ issues. A number of concerns raised by the NRC inspectors during the EQ inspection were promptly resolved by the licensee.

The licensee's quality assurance organization made significant contributions to the licensee's overall performance through the timely conduct of audits and surveillances covering activities in virtually all SALP functional areas. Over 65 audits and 790 surveillances of Clinton project activities were conducted during the assessment period. These activities resulted in 179 findings, of which only 39 remained open at the close of the assessment period. In addition to the foregoing, licensee quality assurance personnel performed approximately 58 vendor audits during this assessment period.

Staffing in the Quality Assurance organization was found to be adequate. The staffing for carrying out key programs developed to identify adverse trends and track resolution of problems consisted of knowledgeable personnel. Management with direct responsibility for the implementation of these programs was staffed at levels that would ensure prompt action and adequate resolution of identified adverse trends. Positions vacated during the assessment period were filled by qualified personnel.

2. Conclusion

The licensee's performance is rated Category 2 in this area. The licensee's performance was rated Category 3 in this area during the previous SALP period.

3. Board Recommendations

None

K. Training and Qualification Effectiveness

1. Analysis

Resident and regional inspectors evaluated the effectiveness of training and qualification during inspections of specific program areas. In addition, an inspection was conducted to evaluate the licensee's licensed and nonlicensed personnel training programs and the status of programs to acquire INPO accreditation.

Enforcement history in this area was acceptable. No violations of training program requirements were identified during this SALP period.

Management involvement in ensuring the quality of the training program appeared adequate. This conclusion is supported by; the licensee's adherence to the schedule for obtaining INPO accreditation; observations and interviews conducted by the resident inspection staff during routine and nonroutine events which indicated a good level of knowledge of system interactions and adherence to procedures by both licensed and nonlicensed operators; training on lessons learned from LERs which was widely provided to all site organizations that could potentially benefit from these lessons; pass rates for licensee administered examinations of licensed personnel which were comparable to the industry average (about 80%); and the routing of all LERs and corrective action documents (condition reports) to the Nuclear Training Department for assessment of training program adequacy.

An inspection of the licensee's training program for licensed and nonlicensed personnel indicated no generic program inadequacies; however, specific weaknesses such as those pertaining to the knowledge and use of technical specifications, conduct of 10 CFR 50.59 safety evaluations, post-modification testing, and modification impact assessments, were identified during inspections in specific functional areas. Although the licensee was aggressive in correcting these deficiencies, the deficiencies themselves were identified by the NRC.

2. Conclusion

The licensee's performance is rated Category 2 in this area. The licensee's performance was not assessed in this area during the previous SALP period.

3. Board Recommendations

None

L. Licensing Activities

1. Analysis

During this assessment period, the licensee's management experienced a transition from a construction/licensing mode to an operational mode. Licensing activities included one or more of the following: (1) the closure of licensing issues, (2) the closure of license conditions and exemptions, (3) technical specification revisions for full-power license, (4) familiarization and interpretation of technical specifications, (5) familiarization and interpretation of 10 CFR 50.72 and 50.73 reporting requirements, and (6) preparation and issuance of LERs.

During the previous assessment period, the NRC staff was critical of the time required to obtain approvals and to process correspondence between the licensee and the NRC staff. In particular, the staff noted it took an excessively long time for the licensee's management to concur on correspondence that was required for the NRC staff review to close issues. The licensee appears to have improved its performance in this area; however, because there were no major licensing issues and few instances that necessitated a fast turnaround during this rating period, it is not possible to assess if the licensee has totally resolved this problem.

Because the licensee's Vice President in charge of the nuclear program and all the plant operating and technical support organizations are on site, the licensee's technical support management is closely involved in plant activities. On the basis of attendance at some of the licensee's operations meetings and weekly management meetings, it appears that the performance of the licensee's management has steadily improved as management has gained operational experience. In addition, there have been instances related to plant operational problems and review in which NRR participated (e.g., load driver issue, lifted leads issue, and assessment of Clinton's performance through test condition 2) that demonstrated the licensee's management effectiveness and involvement.

The greatest licensing effort involved the NRC staff's review of over 50 technical specification changes requested by the licensee to be effective on issuance of the full-power operating license. The licensee submittals for most of the changes were adequate so a minimal amount of additional information was required.

The licensee's staff has been effective in anticipating and identifying potential problems related to technical specifications and regulatory requirements that may require licensing actions by the NRC, and in notifying the NRC promptly so that problems could be resolved on other than an emergency basis. The licensee has diligently sought NRC guidance on the interpretation of the technical specifications (TS) whenever it was unsure of the applicability of the TS. Because of its efforts in this area, the licensee has been able to avoid the need for any emergency TS changes and has submitted a relatively low number of LERs during this assessment period.

On the basis of the above, the evaluations obtained from the NRC technical reviewers, and interactions with the NRC project manager, the licensee's management and staff have continued to demonstrate an adequate understanding of the technical issues. Responses to NRC inquiries have been generally technically sound and conservative. The licensee has performed additional studies as necessary to resolve technical issues.

The licensee has been very responsive to NRC initiatives. This has been demonstrated by (1) almost daily telephone contact; (2) advance copies of submittals by overnight express mail and, when urgent matters were involved, the telecopying of the submittals; and (3) willingness to meet with the staff whenever necessary to resolve issues or to brief the NRC staff on new significant issues that require NRC staff review. This open and what we believe to be effective communication between the staffs has resulted in prompt and technically sound responses to NRC initiatives.

The licensee has usually met established commitment dates or has provided written or verbal responses explaining the circumstances associated with delays and, in most instances, has established new firm dates. Conference calls and meetings with the staff were promptly established and included appropriate engineering, plant, and/or contractor personnel. During these calls and meetings, the licensee has demonstrated a thorough understanding of the technical issues.

The licensing and engineering staffing was adequate in size and vacancies had been filled with qualified individuals. Because some key managers had left, the licensee replaced or shifted others to fill the gaps to achieve the desired management performance. In general, the licensing and engineering staffs were competent and usually provided technically sound and timely responses to NRC requests. The licensee used outside assistance such as General Electric and Sargent and Lundy to provide technical support in areas where the expertise was lacking, the staffing was not adequate, or additional staffing was needed for one-time efforts. The effectiveness of the staff was demonstrated by the fact that there was no backlog of overdue licensing actions.

Because the plant was in a startup mode, no conclusions were drawn from various operating parameters such as trips, plant availability and capacity factors, and forced outage rate.

2. Conclusion

The licensee's performance is rated Category 1 in this area. The licensee's performance was rated Category 2 in this area during the previous SALP period.

3. Board Recommendations

None

V. SUPPORTING DATA AND SUMMARIES

A. Licensee Activities

Clinton Nuclear Power Station began its SALP 7 period in preparation for initial operation. During this time the licensee performed routine activities such as fuel loading, integrated leak rate testing, core verification, and valve lineups. Startup testing up to power levels of 75% occurred during this assessment period.

The major events, outages, and shutdowns that occurred during this assessment period are summarized below:

1. September 29, 1986 - Illinois Power received a low-power license for Clinton Power Station.
2. February 27, 1987 - After the open vessel testing phase of the power ascension program, was completed Clinton Unit 1, achieved initial criticality.
3. March 22, 1987 - Following a reactor scram from less than 1% an Unusual Event was declared. The plant was shut down for a brief maintenance outage, and an investigation of spurious valve closures was performed.
4. April 17, 1987 - A full-power operating license was issued for Clinton Power Station.
5. April 24, 1987 - The turbine generator was synchronized to the power grid, and the licensee commenced power operation.
6. May 6, 1987 - A manual scram was initiated because of feedwater regulator valve failure.
7. May 24, 1987 - An automatic reactor scram occurred because of feedwater regulator valve failure. During the shutdown the licensee conducted an investigation of valve failure causes and performed scheduled maintenance activities.
8. June 10-11, 1987 - An unusual event was declared in response to the June 10 earthquake in southern Illinois. Throughout the licensee's inspection of plant equipment and structures, the reactor plant was maintained stable and planned test activities were suspended.
9. July 13-15, 1987 - A reactor scram occurred when the reactor recirculation flow control valves rapidly opened. The plant remained shut down so that repairs could be made to the flow control valve.

10. July 24-26, 1987 - A reactor scram occurred as a result of a main turbine vibration. The plant remained shut down while repairs were made to the turbine vibration instrumentation.
11. August 12-17, 1987 - An automatic scram occurred when a circuit card was removed in the reactor recirculation flow control circuit. The plant remained shut down while the licensee performed work on various steam leaks and on the nuclear safety protection system's B inverter.
12. August 24-26, 1987 - An automatic scram occurred because of the loss of the main condenser vacuum. The plant remained shut down so that the licensee could repair and test the offgas system and realign valves.

### Conclusion

Clinton's average unit availability during the assessment period was approximately 19%. The unit experienced 42 engineered safety feature (ESF) actuations and 11 unplanned reactor trips; 4 of these trips had no rod movement, 1 occurred at less than 15% power, and 6 occurred at greater than or equal to 15% power. Five of the reactor trips were due to procedural inadequacies or personnel errors, and six were due to mechanical/component problems.

### B. Inspection Activities

There were 52 inspection reports issued during this assessment period, September 1, 1986 through August 31, 1987. Major or significant inspection activities are listed in Paragraph 2, "Special Inspection Summary," of this section.

### Inspection Data

1. Facility Name: Clinton  
Docket Number: 50-461  
Inspection Reports 86015, 86053\*, 86054  
86057 through 86069,  
86071 through 86078,  
87002 through 87009,  
87011 through 87026,  
87028 through 87031.

\* Inspection Report 50-461/86053 was started during the previous SAL<sup>P</sup> period.

Table 1

Number of Violations in Each Severity Level

| <u>Functional Areas</u>  | <u>I</u> | <u>II</u> | <u>III</u> | <u>IV</u> | <u>V</u> |
|--|----------|-----------|------------|-----------|----------|
| A. Plant Operations  |          |           |            | 10        | 1        |
| B. Radiological Controls   |          |           |            | 2         | 1        |
| C. Maintenance   |          |           | 0.5*       | 8         |          |
| D. Surveillance  |          |           |            | 3         | 1        |
| E. Preoperational and Startup Testing                                |          |           |            |           |          |
| F. Fire Protection   |          |           |            |           |          |
| G. Emergency Preparedness  |          |           |            | 2         |          |
| H. Security  |          |           |            | 2         |          |
| I. Outages   |          |           |            |           |          |
| J. Quality Programs and<br>Administrative Controls Affecting Quality |          |           | 0.5*       | 4         | 1        |
| K. Training and Qualification<br>Effectiveness                       |          |           |            |           |          |
| L. Licensing Activities  |          |           |            |           |          |
|  | <u>I</u> | <u>II</u> | <u>III</u> | <u>IV</u> | <u>V</u> |
| <u>TOTALS</u>  |          |           | 1*         | 31        | 4        |

\*Violations that were identified during the previous SALP period in Inspection Reports 50-461/86048, 50-461/86053, and 50-461/86054 were collectively categorized as one Severity Level III problem and issued during this SALP period.

## 2. Special Inspection Summary

- (a) December 1-5, 1986 - An operational readiness team inspection was conducted to assess the implementation of the operational administrative program; this included surveillances, maintenance training, nonlicensed operator performance, and plant operations. Observations of the control room and other related activities were conducted over several shifts (50-461/86074).
- (b) January 15, 1987 - The annual emergency preparedness exercise was conducted at Clinton (50-461/87003).
- (c) January 26 - February 3, 1987 - Inspection of Emergency Operating Procedures for Clinton Power Station (50-461/87006).
- (d) March 2-6, and March 30 through April 3, 1987 - An operational readiness team inspection was performed to assess the licensees readiness to exceed 5% power. The inspection focussed on operations, surveillance, maintenance and other areas related to plant readiness to conduct full power testing and operations (50-461/87010).
- (e) June 15-19, 1987 - An oversight team inspection was conducted by regional and headquarters personnel to assess Clinton's corrective action program. Activities included inspection of personnel performance, review of the material condition program and condition reports, LER analysis, review of other support programs, and meetings (50-461/87019).
- (f) August 17-21, 1987 - An EQ team inspection was conducted to verify compliance with the environmental qualification requirements of 10 CFR 50.49 (50-461/87026).

## C. Investigations or Allegations Review

During this assessment period, 18 allegations files were opened, 33 were closed, and 10 remained open. Allegation review resulted in findings regarding failure to require quarterly valve stroking for the process sampling and containment monitoring containment isolation valves (Severity Level V violation) and failure to properly verify remote position indications in the control room for containment monitoring system isolation valves (Severity Level IV violation). These findings are discussed in Section IV.D. Some of the allegations pertained to nonfunctional areas. Those areas included intimidation, discrimination, and illicit drug use. One discrimination matter that resulted in a Severity Level III violation was discussed in the previous SALP report; however, the violation was issued and the civil penalty was imposed during this SALP period on December 17, 1986. Refer to Section V.D.1 for additional details.

D. Escalated Enforcement Actions

Two civil penalties were imposed during this assessment period.

1. December 17, 1986 - The NRC cited a Severity Level III violation with a proposed imposition of civil penalties in the amount of \$50,000. This action was based on the results of a legal proceeding regarding discrimination against an electrical foreman in which the Department of Labor ruled in favor of the electrical foreman. The NRC suspended civil penalty proceedings in this matter pending further resolution of this case before the Department of Labor and any subsequent judicial review.
2. March 3, 1987 - The NRC issued a Severity Level III violation with a proposed imposition of civil penalties in the amount of \$75,000. This action was based on violations indicative of a quality breakdown in the maintenance and modification programs and lack of flood protection for certain shutdown service water components (Inspection Reports 86048, 86053 and 86054). These violations collectively constituted a Severity Level III violation. The violations were identified during the previous SALP period and were discussed in the SALP 6 report. The Severity Level III violation was issued during this SALP period and is listed in Section V.B, Table 1.

E. Licensee Conferences Held During Assessment Period

1. September 9, 1986 - regional offices: Management meeting with licensee representatives to discuss the corrective actions taken regarding the checks and balances of Clinton's quality assurance programs.
2. October 17, 1986 - regional offices: Management meeting with licensee representatives to discuss containment leak rate testing and other test programs at the Clinton Power Station.
3. October 22, 1986 - regional offices: Management meeting with licensee representatives to discuss NRC concerns related to Clinton fuel loading procedural violations.
4. December 1, 1986 - site: Management meeting to discuss plant performance and progress in achieving improvement goals.
5. December 18, 1986 - site: Enforcement conference with licensee representatives to review and discuss the issues regarding the violation identified during an inspection of the licensee's maintenance and modification programs.
6. January 16, 1987 - site: Management meeting to discuss the readiness of Clinton Power Station to commence reactor operation and to discuss actions taken by the licensee to enhance performance.

7. January 30, 1987 - regional offices: Management meeting to discuss plant operations in mode 4 and to discuss configuration control of electrical panels.
8. February 13, 1987 - site: Management meeting to discuss status of facility, plant performance, and the licensee actions to enhance performance.
9. February 25, 1987 - site: A public meeting with licensee representatives conducted by FEMA to review State emergency plans.
10. March 13, 1987 - regional office: Management meeting to discuss concerns identified by an operational readiness assessment team during an inspection conducted March 2-6, 1987.
11. March 13, 1987 - regional office: Enforcement conference with licensee representatives to discuss findings from the Emergency Operating Procedures inspection conducted during the period January 26 - February 23, 1987.
12. March 19, 1987 - headquarters: Management meeting with licensee representatives to discuss the status of Clinton's full-power operating license.
13. April 2, 1987 - site: Management meeting to discuss the results of an operational readiness team inspection conducted March 30 through April 2, 1987.
14. May 15, 1987 - site: Management meeting to discuss the status of the facility, licensee performance, and the licensee's actions to enhance performance.
15. June 17, 1987 - site: Management meeting to discuss the status of the facility, licensee performance, and the licensee's actions to enhance performance.
16. July 13, 1987 - regional office: Management meeting with licensee representatives to discuss recent performance evaluations of operations, maintenance, and health physics. The licensee was authorized to proceed to test condition 3.
17. August 27, 1987 - site: Management meeting to discuss the status of the facility, licensee performance, and the licensee's actions to improve performance.

#### Confirmatory Action Letters

No confirmatory action letters were issued during this assessment period.

G. A Review of Licensee Event Reports and 10 CFR 21 Reports Submitted by the Licensee

1. Licensee Event Reports (LERs)

Facility Name: Clinton

Docket Number: 50-461

LER Numbers: 86001 through 86025  
87001 through 87051

During this assessment period, 76 LERs were issued; of these 36 LERs were the result of personnel errors; 15 LERs were the result of procedural inadequacies; 25 LERs were the result of component/equipment failures.

Nearly half of the LERs (47%) were related to personnel errors. Of these personnel errors 12% resulted in reactor trips, and 50% resulted in engineered safety feature actuations.

The above information was derived from review of LER's performed by NRC Staff and may not completely coincide with the licensee's cause assignments. In addition, this data is based on assigning one cause code for each LER and does not necessarily correspond to the identification of LERs addressed in the Performance Analysis Section (Section IV) where multiple cause codes may be assigned to each event.

During the SALP 6 period, Clinton was in the construction phase, and the licensee was not required to submit LERs.

2. 10 CFR 21 Reports

One 10 CFR 21 report concerning damaged diesel generator exciter leads was submitted by the licensee at the conclusion of the SALP period. The number of vendor defect reports during this period decreased by six from the number during the previous assessment period.

3. Analysis and Evaluation of Operational Data (AEOD)

This was the first time Clinton Power Station was evaluated by the Office of Analysis and Evaluation of Operational Data (AEOD). The AEOD review of LERs for this assessment period indicated that Clinton had prepared and issued quality LERs.

ALJD gave Clinton an overall average score of 9.2 points out of a possible 10 points; thus, Clinton is above the current industry average of 8.5 points for these units/stations that have been evaluated to date. However, Clinton's LERs were also considered deficient in two important areas: the identification of all components with manufacturer and model numbers and the summarization of cause and corrective action information in the abstract portion of the LERs. These weak areas warrant improvement.

#### H. LICENSING ACTIVITIES

- | <u>1. NRR/LICENSEE/REGION MEETINGS</u>   | <u>DATE</u>                       |
|--|-----------------------------------|
| Fuel loading errors  | November 10, 1986                 |
| Inservice testing  | December 9-10, 1986               |
| SALP   | December 17, 1986                 |
| Readiness for full-power license   | March 13, 1987                    |
| Results of planned evolutions<br>between test conditions 2 and 3                                   | July 13, 1987                     |
| <br><u>2. NRR SITE VISITS/MEETINGS</u>   |                                   |
| Observed EOP training and fuel<br>loading, discuss licensing issues                                | October 1-3, 1986                 |
| Discussed licensing issues and test<br>for unescorted access                                       | December 15-16, 1986              |
| Participated in operational<br>readiness IE inspection   | March 30 through<br>April 2, 1987 |
| Participated in augmented startup<br>inspection program  | April 27 through<br>May 1, 1987   |
| Participated in oversite inspection  | June 15-19, 1987                  |
| Participated in unescorted access<br>training, observed EQ audit, met<br>plant and licensing staff | August 20-21, 1987                |
| <br><u>3. COMMISSIONERS SITE VISITS</u>  |                                   |
| Commissioner Asselstine  | September 8, 1986                 |
| Commissioner Bernthal  | September 29, 1986                |
| <br><u>4. COMMISSION MEETINGS</u>  |                                   |
| Briefing on full-power license   | April 10, 1987                    |
| <br><u>5. ACRS MEETINGS</u>  |                                   |
| Briefing on issues pertaining to<br>the ACRS review of the application<br>for an operating license | October 9, 1986                   |

6. EVENTS BRIEFING

Fuel-loading errors  
Control rod drift

October 20, 1986  
March 27, 1987

7. EXTENSIONS GRANTED

One preoperational test scheduler  
exemption

September 29, 1986

8. RELIEFS GRANTED

None

9. SUPPLEMENTAL SAFETY EVALUATIONS

SSER 7  
SSER 8  
Safety Evaluation by NRR in Support  
of Issuance of the Full Power  
Operating License  
(NPF-62)

September 17, 1986  
March 1987  
April 17, 1987

10. LICENSES ISSUED

Low power license  
Full power license

September 29, 1986  
April 17, 1987

11. LICENSE AMENDMENTS ISSUED

Amendment  
Number

Title

Date

1

Changes to Technical Specifica-  
tions To Permit Control Room HVAC  
Air Flow Rate To Be Increased

February 20, 1987

12. EMERGENCY TECHNICAL SPECIFICATIONS ISSUED

None

13. ORDERS ISSUED

None

14. NRR/LICENSEE MANAGEMENT CONFERENCE

None