

SALP BOARD REPORT

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

50-315/84-08; 50-316/84-09

American Electric Power

D. C. Cook Units 1 and 2

April 1, 1983 through March 31, 1984

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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 based upon this information. SALP is supplemental to normal regulatory processes used to ensure compliance to 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.

A NRC SALP Board, composed of staff members listed below, met on May 24, 1984, to review the collection of performance observations and data to assess the licensee 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 III of this report.

This report is the SALP Board's assessment of the licensee's safety performance at D. C. Cook for the period April 1, 1983 through March 31, 1984.

SALP Board for D. C. Cook:

<u>Name</u>	<u>Title</u>
J. A. Hind	Chairman, SALP Board
A. B. Davis	Deputy Regional Administrator
C. E. Norelius	Director, Division of Reactor Projects (DRP)
R. L. Spessard	Director, Division of Reactor Safety (DRS)
W. D. Shafer	Chief, Projects Branch 2, DRP
G. G. Light	Chief, Project Section 2A, DRP
D. L. Wigginton	Project Manager, O.R. Branch #1, Division of Licensing, NRR
S. A. Varga	Chief, O.R. Branch #1, Division of Licensing, NRR
E. R. Swanson	Senior Resident Inspector, D. C. Cook
J. K. Heller	Resident Inspector, D. C. Cook
R. J. Leemon	Resident Inspector, D. C. Cook
J. E. Foster	Compliance Inspector, Technical Support Staff, DRP
L. J. Hueter	Radiation Specialist, Facilities Radiation Protection Section
C. J. Paperiello	Chief, Emergency Preparedness and Radiological Protection Branch
L. R. Greger	Chief, Facilities Radiation Protection Section
J. R. Creeu	Chief, Safeguards Section
W. G. Snell	Emergency Preparedness Analyst, Emergency Preparedness and Radiological Protection Branch

## II. Criteria

The licensee performance is assessed in selected functional areas depending whether the facility is in a construction, pre-operational or operating phase. Each functional area normally represents 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 assuring quality
2. Approach to resolution of technical issues from a safety standpoint
3. Responsiveness to NRC initiatives
4. Enforcement history
5. Reporting and analysis of reportable events
6. Staffing (including management)
7. Training effectiveness and qualification.

However, the SALP Board is not limited to these criteria and others may have been used where appropriate.

Based upon the SALP Board assessment each functional area evaluated is classified into one of three performance 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 such that a high level of performance with respect to operational safety or construction 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 such that satisfactory performance with respect to operational safety or construction 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 such that minimally satisfactory performance with respect to operational safety or construction is being achieved.

### III. Summary of Results

Overall, during this period, the licensee's performance was found to be acceptable and generally showed an improving trend. Many past problems could be attributed to poor followup on identified deficiencies and failure to meet commitments. In most cases, the licensee's recent actions on resolution of past problems has been responsive and comprehensive.

<u>Functional Area</u>	<u>Rating Last Period</u>	<u>Rating This Period</u>	<u>Trend Within the Period</u>
Plant Operations	2	2	Improved
Radiological Controls	2	2	Improved
Maintenance & Modifications	3	2	Improved
Surveillance	2	2	Improved
Fire Protection	3	2	Same
Emergency Preparedness	2	2	Same
Security	2	2	Same
Refueling	2	1	Indeterminate
Quality Program and Administrative Controls	3	3	Improved
Licensing Activities	2	2	Improved

#### IV. Performance Analyses

##### A. Plant Operations

##### 1. Analysis

Evaluation of this functional area is based on the results of portions of routine inspections conducted by the resident inspectors which included direct observation of activities, review of logs and records, verification of selected equipment lineup and operability, and followup on significant operating events to evaluate conformance with the facility license, Technical Specifications and administrative controls. Five items of noncompliance were identified as follows:

- a. Severity Level V - Failure to report total loss of containment spray capability in one hour (Inspection Report 50-316/83-12).
- b. Severity Level IV - Action requirements were not met when Boron Injection heat trace was inoperable (Inspection Report 50-316/83-12).
- c. Severity Level IV - Action requirements were not met when an explosive gas mixture was contained in the waste gas holdup tank (Inspection Reports 50-315/83-19; 50-316/83-20).
- d. Severity Level IV - Operating mode change was made with an Engineered Safeguards Feature fan inoperable due to control switch position (Inspection Report 50-315/83-19).
- e. Severity Level V - The radiation monitor for the condenser evacuation system was inoperable without the action requirements being met (Inspection Report 50-316/83-20).

Most of the above items of noncompliance were of minor safety significance and reflect what appear to be isolated occurrences of communication breakdowns, operator errors and oversights. All of the items were due in part to a lack of alertness on the part of plant operators. The requirements were known but not carried out for various reasons. In all but the first case part of the corrective actions involved improving the method of operation through revised administrative controls.

In general improvements were noted in independent verification. For example, although a valve was misaligned in the containment spray system, the error was picked up a short time later through the verification process. This self identification process is noted as a specific improvement from the previous SALP period. Independent verification methods have further been applied to the Instrument, Chemical, and Performance Groups as necessary.

Licensee event reports do not appear to indicate any trends of either improvement or decline in the number of operator related personnel errors. Review of the licensee's corrective action system (Condition Reports) reveals a significant number of errors (thirteen) made in the performance of tagging and isolating equipment. Although none of the errors were serious from a public health and safety standpoint, they do point out a need for better training and/or operator vigilance during tagging and equipment alignment. A noticeable decline in the number of significant operating events during the last half of the period was recognized as a positive indicator of improvement in plant operations.

A program is now underway as part of the Regulatory Performance Improvement Program (RPIP) which will bring systems, labels, and plant drawings into conformance. A detailed verification of the containment system was conducted during this evaluation period and resulted in numerous improvements and corrections to the containment line up procedures.

Results of new licensed operator examinations was slightly below the average success rate. Forty-five operators (32 RO, 13 SRO) were examined with 59% passing the Reactor Operator exam and 76% passing the Senior Reactor Operator exam. Staffing in operations continues to be at adequate levels with at least 18 operators for each of five shifts.

The licensee has taken prudent action on NRC Bulletins, Information Notices, and industry identified issues to improve equipment reliability and enhance safe, efficient operation. The licensee has implemented stricter steam generator chemistry controls and is making a considerable effort to improve makeup plant water quality and condenser integrity. During the 1984 Unit-2 refueling outage, all main condenser tubes were replaced. These efforts should reduce the incidence of steam generator tube degradation due to the effect that condenser in-leakage has on secondary water chemistry. The licensee has also taken aggressive action to develop improved ice condenser maintenance methods for replenishing ice inventory.

## 2. Conclusion

The licensee is rated Category 2 in this area. While this is the same category as last year, performance in this area has continued to improve due to additional management efforts.

## 3. Board Recommendations

None

## B. Radiological Controls

### 1. Analysis

Three inspections were performed during the assessment period by region based inspectors. These inspections included operational radiation protection, TMI Action Plan Items, radioactive waste management, and transportation activities, refueling radiation protection activities, and confirmatory measurements. The resident inspectors also reviewed this area during routine inspections. Two violations and one deviation were identified as follows:

- a. Severity Level IV - Failure to adequately evaluate airborne exposure for a worker (Inspection Report Nos. 50-315/83-08; 50-316/83-09)
- b. Severity Level V - Failure to perform reactor coolant dissolved oxygen analysis every 72 hours (two occasions in 1983 - Inspection Report 50-316/83-23).
- c. Deviation - Failure to provide a timely response regarding the facial hair aspect of the plant access policy (Inspection Report Nos. 50-315/83-15; 50-316/83-16).

These enforcement items were indicative of only minor programmatic breakdowns; corrective actions appear to have been effective.

The following radiation protection program weaknesses were also identified during this assessment period: delays in implementing a formal ALARA program (currently planned for the Unit 2 outage in spring of 1984); lack of an alpha contamination surveillance program (considering past experience with leaking reactor fuel in Unit 2); and lack of documentation to demonstrate conformance to the clarifications for the post-TMI items specified in NUREG-0737.

Improvements during this assessment period were made in low level survey instrumentation and external radiation exposure program quality assurance controls. The licensee has also initiated program improvements for internal radiation exposure (random whole body counting) and has reduced overtime hours for workers in the interest of improving work efficiency and thereby reducing exposures while working in radiation areas.

Personal exposures during this assessment period, about 300 person-rem per reactor, remained below average for pressurized water reactors. Both liquid and gaseous radioactive releases were well within Technical Specification limits.

No problems were identified with the radwaste transportation program during this assessment period. The licensee has continued to reduce the volume of radwaste since 1980. Thirty-

three percent reductions were achieved in 1981 and again in 1982, with an additional ten percent reduction in 1983. System leakage reduction and drywaste segregation programs were largely responsible for these improvements.

The licensee management's resolution of technical issues, and responsiveness to NRC issues in the radiological controls areas continued to be satisfactory during this assessment period.

In confirmatory measurements, the licensee had 18 agreements or possible agreements in 19 comparisons. The sole disagreement (xenon-133 in a gas decay tank sample) was conservative and may have been caused by excessive delay between preparation and use of the licensee's gas standard. This represents considerable improvement over the previous period when 9 of 32 comparisons were in disagreement.

The inspector did observe some weaknesses in laboratory practice relating in reagent storage, sample handling, and general housekeeping. The licensee satisfactorily addressed these matters in its written response of February 10, 1984.

No environmental protection inspections were conducted during this assessment period.

2. Conclusion

The licensee is rated Category 2 in this area. The licensee's performance in this area has shown improvement over this assessment period.

3. Board Recommendations

None

C. Maintenance and Modification

1. Analysis

Examination of this functional area consisted of two inspections by regional based inspectors and parts of the routine inspection program by the resident inspector to ascertain compliance to Technical Specification and administrative controls.

No items of noncompliance were identified; however, Inspection Report 315/83-07(DE); 316/83-08(DE) identified several weaknesses regarding elements of the maintenance records program that needed attention. The licensee was responsive when they reviewed the above weaknesses and many of these issues have been addressed in recent procedure changes.



In addition, a potentially significant matter was noted in the scheduling and handling of job orders for the Maintenance and Control and Instrument (I&C) Department. Early in the SALP period an inspector determined that approximately 400 of the 918 outstanding non-outage related job orders in the I&C Department had been completed but not closed out due to inadequate records management. Management attention in this area was considered less than desirable.

An indication of good management involvement was apparent when the licensee expanded the scope of the outage planning group with the expectation that the administrative burden of job orders will be removed from other departments. Licensee management expects this change to improve coordination of related activities, reduce overdue maintenance, provide better control of corrective maintenance and better management of design changes. While this change was implemented to address findings discussed in the previous SALP period, it has not been in place long enough to evaluate its effect. Further revision of the administrative controls is planned.

One inspection was performed to review the base mounting of certain essential safety related motor control centers and valve control centers that appeared to require modifications. The licensee's seismic analysis indicated that the base mounting of this equipment was seismically adequate as installed. Region III reviewed this analysis and concurred with the findings. In addition, a walkdown of the equipment verified the mounting attachments met requirements. The activities observed, the management controls used, and the records and record control systems in place met requirements.

Two LERs (315/83-34, 316/83-97) caused by personnel error were identified relating to this functional area. During these two events the licensee inadvertently entered the LCO Action statement and complied with its requirements.

A positive indication of management involvement was observed in the area of independent inspection activities which have become more formalized since the previous SALP period. Inspectors from the newly formed Quality Control Department perform NDE and maintenance hold point inspections. Further discussion of changes in QA/QC organization is contained in Paragraph IV.I. Trending of equipment problems for evaluation of maintenance deficiencies continued to be on an informal basis. Good progress has been made under the RPIP to reduce the number of temporary procedure changes. In summary, licensee management attention and involvement are evident in most cases and a good effort is being directed towards revision and management of the work control and design change process.

2. Conclusion

The licensee is rated Category 2 in this area. The licensee was previously rated Category 3. The licensee performance has generally improved over the SALP period.

3. Board Recommendations

None

D. Surveillance and Inservice Testing

1. Analysis

Examination of this area consisted of portions of the routine inspections carried out by the resident inspectors and one by a regional specialist. Five items of noncompliance were identified:

- a. Severity Level V - Main Steam Stop Valves were not tested during shutdown as required (Inspection Report 315/83-11).
- b. Severity Level IV - Containment Spray inoperable during surveillance testing due to valving error (Inspection Report 316/83-12).
- c. Severity Level IV - Procedure for sampling the Boron Injection Tank was inaccurate and was not followed resulting in a sample valve being left open (Inspection Report 316/83-17).
- d. Severity Level IV - Diesel Generator Day tank level column was not returned to service following calibration of magnatrols (Inspection Report 315/83-19).
- e. Severity Level V - Incorrect test equipment used during surveillance test (Inspection Report 316/84-02).

Items b, c, and d were a result of valving errors. In response to these and other concerns, the licensee revised their independent verification program near the end of 1983 to provide controls to assure correct valve and equipment alignment in all important activities. As a result of the independent verification program, the containment spray system was discovered to be misaligned and was promptly corrected. Licensee management's approach towards resolution of this issue is technically sound and is a positive step in controlling valving errors.

A regional specialist inspection examined the licensee's inservice inspection activities during the Unit 1 1983 outage. Areas examined included a review of the current program and procedures, and personnel certification records. In addition, the eddy current examination of 15 steam generator tubes was

observed. No items of noncompliance or deviations were identified. The activities observed, the management controls used, and the records and record control systems in place met requirements. Personnel involved in the areas reviewed were properly trained and certified.

Ten Licensee Event Reports submitted during the evaluation period related to problems in the execution of the surveillance program. None of the events were considered serious nor were any two a result of the same cause. Several were a result of varying procedural inadequacies and two were a result of unrelated scheduling errors. As noted in the last SALP report the licensee is continuing efforts to improve the administrative controls and procedural adequacy under the RPIP. This effort is scheduled to be complete at the end of the next biannual review cycle. In general, surveillance testing was performed according to program schedules and approved procedures.

In summary, licensee management involvement continues to improve in this area. Adequate resources are applied to support program goals. Continued progress of RPIP actions underway should result in further improvement.

2. Conclusion

The licensee is rated Category 2 in this area. This is the same rating as the previous period. Licensee performance has generally improved over the course of the SALP assessment period.

3. Board Recommendations

None

E. Fire Protection and Housekeeping

1. Analysis

During a previous assessment period a special inspection was conducted to verify compliance with Appendix R to 10 CFR 50. Enforcement action on these items is still pending. During this assessment period, determinations of compliance to fire protection requirements and good housekeeping practices were part of routine inspections by the resident inspectors. One item of noncompliance was identified as follows:

Severity Level V - Failure to submit a special report when the Halon System was declared inoperable (Inspection Reports 50-315/83-21; 50-316/83-22).

The above noncompliance was of minor safety significance, was not repetitive and does not appear to have generic or programmatic implications.

There were 47 fire protection related LERs during the assessment period of which 11 were caused by personnel errors and deficient procedures. This is a sharp decrease from SALP 3 in which 87 LERs were submitted of which 37 were attributed to personnel error alone. The decrease in the number of LERs appears due to increased administrative controls, training, and management involvement.

Housekeeping conditions noted during this SALP evaluation period were of a comparable level of cleanliness to that noted in previous evaluation periods. The licensee's housekeeping inspection currently consists of a monthly inspection conducted by a team of QC inspectors; assignment to the team among the QC inspectors rotates on a monthly basis. This program has not proven effective due to lack of involvement of personnel from other plant disciplines, (infrequent inspections), lack of assignment of responsibilities for housekeeping, and inadequate management attention.

2. Conclusion

The licensee is rated category 2 in this area. This is an improvement over the previous rating. Licensee performance has remained essentially constant over the SALP assessment period.

3. Board Recommendations

The Board recommends that more management attention be focused on strengthening the housekeeping inspection program.

F. Emergency Preparedness

1. Analysis

Three inspections were conducted and a Safety Evaluation Report was written during the assessment period to evaluate compliance with 10 CFR Part 50, Technical Specifications, and procedures. One item of noncompliance was identified as follows:

Severity Level IV - Failure to perform monthly, quarterly, annual, and semi-annual drills, tests, reviews, and verifications (Inspection Report Nos. 315/84-05 and 316/84-05).

The above noncompliance resulted from a complete turnover of the licensee's site and corporate staff responsible for emergency preparedness. Prior to this turnover management responsible for the program had apparently failed to ensure these aspects of the emergency preparedness program would be properly implemented as described in the licensee's Emergency Plan. Since August 1983, the entire emergency planning staff at both the site and corporate office has been replaced contributing to the above lapse in program implementation. However both the current emergency planning personnel and licensee management showed a very positive attitude with regard to resolving NRC concerns with their emergency planning program.

The inspection of open items, deficiencies, and actions to correct previous noncompliances indicated that all issues had been corrected with the exception of one open item. The licensee's overall performance during their annual exercise showed improvement over the previous exercise. In general, exercise participants demonstrated good knowledge and ability to perform their emergency response duties. Weaknesses identified in the licensee's emergency preparedness program dealt primarily with the lack of a formal system to followup on weaknesses identified to ensure their correction, insufficient coordination with state personnel in the development of protective action recommendations (also addressed in the above noncompliance), and training of shift supervisors in the areas of event classification and protective action decisionmaking. It appeared that many of these weaknesses were also related to the above mentioned staffing change. The Safety Evaluation Report identified ten items requiring clarification, to which the licensee provided resolution of seven. The three remaining items were deferred until submission of the licensee's next Emergency Plan revision. Overall, the Emergency Plan was found to be well written and generally complete.

2. Conclusion

The licensee is rated Category 2 in this area. Licensee performance has essentially remained constant over the course of the SALP assessment period.

3. Board Recommendations

None

G. Security and Safeguards

1. Analysis

Two safeguards inspections (one routine and one special inspection) were completed by regional based inspectors during the assessment period. The special inspection involved allegations concerning falsified security records, security equipment not working properly, and security related problems not being adequately corrected. In addition, the resident inspectors routinely conducted observations of security activities. Three items of noncompliance were identified relative to the security program. Two items of noncompliance (a and b) were identified during the routine inspection program; the third item (c) was identified during the special inspection and was related to an allegation. The remaining allegations were not substantiated. The noncompliances involved:

- a. Severity Level IV - The security contractor's agreement with the licensee does not contain provisions required by the Security Plan. (Inspection Reports 50-316/83-06; 50-316/83-07)

- b. Severity Level IV - The licensee was not following security plan commitments relating to key control. (Inspection Reports 50-315/83-06; 50-316/83-07)
- c. Severity Level IV - The licensee failed to provide an adequate locking device on a vital area portal (Inspection Report 50-315/83-17; 50-316/83-18).

All of the above items were corrected promptly. The items of noncompliance did not represent significant programmatic deficiencies, and these items did not present an immediate threat to the public.

The above items were comparable in number to the noncompliances identified during the previous assessment period. The nature of the items appears to have shifted from equipment/procedural errors to management/supervisory problems. These items could have been prevented by site management's attention to these areas, although site security management is adequate to implement the overall security program. There appears to be coordination between the site security director and corporate officials designated security responsibilities.

The contract security force is well managed, properly trained, and adequately supervised. Procedural guidance for the security force is in sufficient detail to assure personnel are knowledgeable of their responsibilities. Security staffing levels appear to be adequate.

## 2. Conclusion

The licensee is rated Category 2 in this area. Licensee performance has remained essentially constant over the course of the SALP period.

## 3. Board Recommendations

None

## H. Refueling

### 1. Analysis

Evaluation of this functional area is based on the results of portions of three inspections conducted by the resident inspectors which covered direct observation of fuel movement, new fuel receipt inspection, review of procedures, verification that required surveillance was performed, verification of containment integrity, and followup of corrective action documents. One item of noncompliance was identified as follows:

- a. Severity Level IV - Heavy load near the spent fuel pool not controlled (Inspection Report 50-315/83-16)

The above noncompliance was not repetitive of the two noncompliances identified during the previous SALP period and does not appear to have generic or programmatic implications.

Management controls in this area consistently showed evidence of prior planning, proper understanding of and implementation of plant procedures, and appropriate post-work reviews and tests. Management involvement was evidenced by the identification and correction of occasional examples of failure to follow procedures. Improved control over the refueling contractor was exhibited during the refueling sequence.

2. Conclusion

The licensee is rated Category 1 in this area. This is an improvement over the previous SALP assessment.

3. Board Recommendation

The licensee would normally be considered for reduced inspection but, based on a subsequent inspection during the Unit 2 refueling outage which indicated problems with loose parts control, the board recommends that the level of inspection remain the same.

I. Quality Programs and Administrative Controls Affecting Quality

1. Analysis

This area was examined as part of routine inspection by resident inspectors and two inspections by regional specialists. The Technical Specifications, QA Program, Corporate and Plant Procedures, 10 CFR 21, and Appendix B to 10 CFR 50 formed the basis for these inspections. Specific items reviewed included QA program implementation; auditing; organization and administration; procedures; corrective action; committees and reporting. Fifteen items of noncompliance were identified:

- a. Severity Level V - Records Storage requirements not met: storage of supplemental QA records not described, fire door underrated, conduit penetrations not sealed. (Inspection Report 315/83-07(DE); 316/83-08(DE))
- b. Severity Level IV - Failure to provide adequate design control regarding design verification activities. (Inspection Report No. 315/83-18(DE); 316/83-19(DE))
- c. Severity Level IV - Failure of the offsite committee to review all violations of requirements. (Inspection Report No. 315/83-18(DE); 316/83-19(DE))
- d. Severity Level IV - Failure of the offsite committee to periodically assess the scope, implementation, and effectiveness of the QA Program. (Inspection Report Nos. 315/83-18(DE); 316/83-19(DE))

- e. Severity Level IV - Failure of the offsite committee to review the onsite committee minutes. (Inspection Report Nos. 315/83-18(DE); 316/83-19(DE))
- f. Severity Level IV - Failure of the offsite committee to examine all provisions of the Technical Specifications. (Inspection Report Nos. 315/83-18(DE); 316/83-19(DE))
- g. Severity Level IV - Failure to provide the required evaluation statements in the offsite committee audits. (Inspection Report Nos. 315/83-18(DE); 316/83-19(DE))
- h. Severity Level V - Failure to issue audit reports or forward the reports as required within 30 days. (Inspection Report Nos. 315/83-18(DE); 316/83-19(DE))
- i. Severity Level IV - Inadequate offsite committee procedure regarding response to audits and late audit responses to corrective action documents. (Inspection Report Nos. 315/83-18(DE); 316/83-19(DE))
- j. Severity Level IV - Failure of the offsite committee audits to examine all corporate activities. (Inspection Report Nos. 315/83-18(DE); 316/83-19(DE))
- k. Severity Level V - Failure of the NSDRC to review and approve safety evaluations. (Inspection Report Nos. 315/83-18(DE); 316/83-19(DE)).
- l. Severity Level IV - Failure to implement corrective action. (Inspection Report Nos. 315/83-19(DPRP); 316/83-20(DPRP))
- m. Severity Level V - Failure to submit a current description of the quality assurance program by the date requested. (Inspection Report Nos. 315/83-12(DPRP); 316/83-13(DPRP))
- n. Severity Level IV - Failure to implement a commitment of the FSAR. (Inspection Report Nos. 315/83-12(DPRP); 316/83-13(DPRP))
- o. Severity Level V - Failure to prevent repetition of personnel initiated fire protection occurrences. (Inspection Report Nos. 315/83-11(DPRP); 316/83-12(DPRP))

The licensee corrected the programmatic issues identified by Noncompliance a. in a timely manner, sealed the penetrations, and ordered a new, three-hour rated Class "A" fire door. These actions were considered to be timely and adequate. Two additional concerns were identified during the inspection regarding housekeeping in the records vault and the design adequacy of the vault ceiling, floor, and support columns. The licensee's actions in these areas were considered aggressive in that a comprehensive design review of the records storage facility was performed and corrective action initiated.



Noncompliance b. is considered a design control programmatic violation of potential significance. The licensee's procedures for design control did not fully incorporate the design verification requirements of ANSI N45.2.11-1974. The approved dates of the procedures indicated that at least part of the original plant design as well as all modifications may have been accomplished without the required design verification being performed or documented. This deficiency has potential safety significance depending on the result of the selected reviews of the original design and plant modification review activities that have been initiated by the licensee as a result of the NRC findings.

Noncompliances c. through k. taken together represent a substantial failure to perform the offsite review function. Subsequent to the inspection the licensee has revised its offsite review committee charter and procedures to bring the offsite review function into compliance with Technical Specifications and 10 CFR requirements. This matter also has potential safety significance, depending on the result of the selected reviews and audits of the past offsite committee practices that have been initiated by the licensee as a result of the NRC findings.

Noncompliances b. through k. were initially identified as potential enforcement findings resulting from the Performance Appraisal Team inspection (315/82-17 and 316/82-17) and discussed in SALP III. The followup inspection resulted in the noncompliance and the issuance of a Confirmatory Action letter dated November 17, 1983. The licensee has integrated the Confirmatory Action Letter commitments into the Regulatory Performance Improvement Program (RPIP) and provides Region III with monthly status reports.

Noncompliances l., m., and n. taken together indicate that the licensee has difficulty tracking commitments. The licensee has initiated corrective action on this problem as part of the licensee's Regulatory Performance Improvement Program.

During previous SALP periods and the first half of this SALP period, the licensee had difficulty initiating/implementing the Regulatory Performance Improvement Program. This is due in part to the corporate move from New York City, New York, to Columbus, Ohio, and apparent lack of attention by corporate management. During the second half of the SALP period, the NRC saw strong evidence that Corporate and Plant Management were taking an active interest in the program resulting in a working Regulatory Performance Improvement Program.

Among the most significant actions taken by the licensee to resolve NRC concerns in the area of Quality Assurance was to separate the QA and QC groups onsite, assigning a new QA Supervisor and increasing the staffing and qualification level of auditors. The QA organization is now independent of site management. There are now six QA auditors, one of which is a

licensed Senior Reactor Operator. A special effort has been made to assess the QA Program adequacy in parallel with audits performed. This program has shown good results in improving the quality of administrative controls for the QA Program. Initially the licensee was slow in staffing the Quality Control Department but by the end of the SALP period had filled seven of the ten planned positions. The increased staff should allow the Quality Control Department to perform the functions committed to under the RPIP. Surveillance of maintenance activities has increased attentiveness to procedural compliance and appears to have reduced maintenance errors based on LER history for this period.

2. Conclusion

The licensee is rated Category 3 in this area. This rating is the same as in the last two SALP periods, and is indicative of a lack of management attention to resolve identified problems. The new management team appeared to be hampered by past inadequate practices and was having difficulty dealing with the large number of problems. The Board noted that the licensee has integrated many significant problems into the RPIP. Aggressive management support of the RPIP, as shown in the last half of this SALP, should be the basis for improvement in future SALP evaluations. Licensee performance has generally improved over the course of the SALP period.

3. Board Recommendation

The Board recommends continued augmented attention to verify progress of the RPIP actions.

J. Licensing Activities

1. Analysis

This evaluation was based, in part, on review of the following licensing activities:

- . Safeguards licensing activities
- . Inservice Inspection: Relief from requirements of Section XI of ASME Code
- . Cycle 8 Reload w/Westinghouse Fuel: Technical Specifications
- . Containment Evaluation with LOCTIC Code: License Condition
- . Fuel Storage with Higher Enriched Uranium: Technical Specification and License Conditions
- . NUREG-0737 Requirements (Generic Letter 82-12): Technical Specifications

- . Miscellaneous License Changes Per Licensee's Request dated January 22, 1982: Technical Specifications
- . Fire Protection System: Technical Specifications
- . Fire Protection Exemptions: Relief from Requirements if 10 CFR 50.48 and Appendix R
- . Heavy Loads: Review of Phase 1

During this SALP period, there were 9 license amendments issued for each of Unit Nos. 1 and 2. There were no amendments issued on an emergency basis (as contrasted to four from the previous SALP period).

The principal licensing activities during this SALP period were the Cycle 8 reload, completion of the Heavy Loads review, and fire protection alternate shutdown and exemption reviews. Except for Cycle 8 reload these and most of the other licensing activities had been initiated in prior years and were carry-over from the New York Operation to the current Columbus organization. As such, there has been considerable effort by many new individuals to pick up and complete review submittals from the past. The Cycle 8 reload review for Unit 2, unlike the previous Cycle 4 reload for Unit 1, was well organized and generally complete. Increased management attention was obvious throughout the review process. It was necessary to ask for additional information to clarify certain items and certain unapproved methods were used which necessitated some re-evaluations and changes to Technical Specifications. The licensee was cooperative in providing additional information. For the Cycle 8 reload, the licensee's management and responsiveness to NRC initiatives were exemplary. The approach to resolution of technical issues was thorough and much improved from the previous reload application.

The heavy loads review was conducted primarily during earlier SALP reviews with most of the effort being performed by the New York organization. The final effort to clean up open issues and complete all Phase 1 tasks was acceptably done.

The licensee's efforts on fire protection and the several related licensing activities continued to improve during the SALP period. On November 22, 1983, the NRC provided approval of the D. C. Cook Alternate Shutdown System. On December 23, 1983, certain technical exemptions from the requirements of 10 CFR 50.48 and Appendix R were granted. On March 16, 1984, amendments 79/61 were issued which upgraded a number of Technical Specifications on fire protection systems and during this SALP period, many of the discussions had been completed on the final schedule for modifications to meet fire protection requirements. (The schedule approval was subsequently issued by letter dated April 16, 1984). Throughout the review process

of the revised Appendix R submittal the applicant's activities exhibited evidence of prior planning and assignment of priorities. Decisions which were made were usually at a level that ensured adequate management review. Management was aware of the importance of fire protection following the D. C. Cook audit and participated in most meetings and discussions to resolve open issues. The licensing project manager was kept abreast of the licensee's management involvement and decisions on key issues and progress of all submittals. Initial submittals were sometimes delayed for thorough management and committee review but the licensing project manager was always made aware of the status beforehand. The Technical Specification changes related to the fire protection system were initiated before the SALP period and some effort was required to provide additional information to complete the effort.

During the various meetings, telecons, and in the several documents submitted in conjunction with the resolution of the exemptions and other fire related issues, the applicant's representatives displayed a clear understanding of our concerns with the level of fire protection. The applicant's additional fire protection commitments revealed an adequate approach toward providing the needed level of safety. The justifications provided in support of the applicant's fire protection program were based on sound fire protection engineering principles, or the inability to provide any other alternative. With few exceptions, the applicant provided timely responses to our requests for information. Although most of the licensee's proposals to resolve our fire protection concerns were ultimately accepted, our effort to resolve some issues required a number of written submittals and meetings before acceptable resolution was achieved.

During this SALP period, the licensee completed and resolved the open issue on containment temperature and pressure on Unit 2. A license condition had existed since the issuance of the full power operation license in 1978. The licensee had performed calculations on the LOCTIC 3 code and MARVEL code and this review was completed this SALP period. The licensee showed a clear understanding of the issues involved and provided a sound technical basis for resolution.

In this SALP period the NRC was successful in completing two of the reviews by use of Regional Office resources. Generic Letter 82-12 provided model Technical Specifications for certain NUREG-0737 Action Items. The licensee management controls were adequate as minimal followup was required. The submittals satisfactorily addressed the technical issues and the response was adequate. The second item presented somewhat of a greater challenge to the licensee and reviewers since it dealt with a license amendment submittal from January 22, 1982, which had been prepared by the New York organization, and was somewhat outdated due to the late review. The evaluations required several contacts and meetings to get agreement to or withdraw

some parts. This tended to indicate a lack of management involvement and control and inadequate coordination between corporate and site management. The involvement of the Columbus organization, however, was to re-establish the review, update the request to today's needs, and document the basis for the request, which was lost in the transfer to Columbus. The licensee had an adequate understanding of the technical issues, taking a generally sound approach in resolving them.

Safeguards Licensing activities showed active management involvement in the continuing development and implementation of the physical security program. Both corporate and site management were cooperative in resolving NRC questions. The licensee has generally provided well planned approaches to technical safeguards issues and has exhibited a good capability to modify approaches to meet changing demands. Throughout the period of evaluation the licensee has generally responded promptly and completely to NRC safeguards licensing comments.

2. Conclusion

The licensee is rated a Category 2 in licensing activities.

The licensee has made considerable effort to upgrade all areas of operation from the organization in Columbus, Ohio. Significant progress has been made on fire protection reviews. The increased number of areas showing improvement is a clear indication of the licensee's goals to improve licensing activities.

3. Board Recommendation

None

V. Supporting Data and Summaries

A. Licensee Activities

Units 1 and 2 engaged in routine power operation throughout most of SALP IV. A major scheduled outage for plant refueling, modification and maintenance was conducted from July 15, 1983 to October 19, 1983 for Unit 1 and an outage began on March 10, 1984 with a scheduled completion date of June 9, 1984 for Unit 2. Other Unit 2 outages are summarized below:

June 24 to July 29, 1983: Repair primary to secondary Steam Generator tube leakage.

August 25 to September 2, 1983: Inspection of lower containment for possible design deficiencies; none were found.

October 15 to November 22, 1983: Repair primary to secondary Steam Generator tube leakage.

Unit 1 was automatically tripped four times and Unit 2 was automatically tripped nine times. Three of Unit 1 trips and five of Unit 2 trips were attributed to equipment malfunctions that required minor maintenance prior to returning the units to service. The remaining trips (one for Unit 1 and four for Unit 2) were attributed to personnel error. Licensee management pursued corrective actions following these trips, where appropriate. In all cases, the plant responded as designed.

B. Inspection Activities

1. Noncompliance Data

a. Facility Name: Donald C. Cook, Unit 1 Docket No. 50-315

Inspection Reports: No. 83-06 through 83-22  
 No. 84-01 through 84-05

Functional Area Assessment	Noncompliances and Deviations Severity Levels					Dev.
	I	II	III	IV	V	
1. Plant Operations				1(1)*		
2. Radiological Controls				(1)		(1)
3. Maintenance						
4. Surveillance and Inservice Testing				1	1	
5. Fire Protection and Housekeeping					(1)	
6. Emergency Preparedness				(1)		
7. Security and Safeguards				(3)		
8. Refueling Operations				1		
9. Licensing Activities						
10. Quality Assurance				(10)	(5)	
TOTALS	<u>0</u>	<u>0</u>	<u>0</u>	<u>3(16)</u>	<u>1(6)</u>	<u>0(1)</u>

\*Numbers in parentheses indicate noncompliances common to both Units.

b. Facility Name: Donald C. Cook, Unit 2 Docket No. 50-316

Inspection Reports: No. 83-07 through 83-23  
 No. 84-01 through 84-05

Functional Area Assessment	Noncompliances and Deviations Severity Levels					Dev.
	I	II	III	IV	V	
1. Plant Operations				(1)*	2	
2. Radiological Controls				(1)	1	(1)
3. Maintenance						
4. Surveillance and Inservice Testing				2	1	
5. Fire Protection and Housekeeping					(1)	
6. Emergency Preparedness				(1)		
7. Security and Safeguards				(3)		
8. Refueling Operations						
9. Licensing Activities						
10. Quality Assurance				(10)	(5)	
TOTALS	<u>0</u>	<u>0</u>	<u>0</u>	<u>2(16)</u>	<u>4(6)</u>	<u>0(1)</u>

\*Numbers in parentheses indicate noncompliances common to both Units.

No major team inspections were performed during this evaluation.



C. Investigation and Allegation Reviews

The Office of Investigation continued activity concerning alleged false statements concerning compliance with fire protection requirements.

Inspection Reports 315/83-17; 316/83-18 document the review of allegations concerning the licensee's security program. Inspection resulted in the third item of noncompliance listed under Paragraph IV. G. The remaining allegations were not substantiated, or had been previously identified by the licensee and proper action taken.

D. Escalated Enforcement Actions

No civil penalties or orders were issued.

E. Management Conferences Held During Appraisal Period

1. Confirmation of Action Letters (CAL)

A CAL was issued on November 17, 1983, to confirm licensee short-term actions regarding review and audit activities of the Nuclear Safety and Design Review Committee, engineering design verification activities, and the licensee lack of adequate corrective actions following the 1982 Performance Appraisal Team inspection.

2. Management Conferences

- a. June 22, 1983 (Glen Ellyn, Illinois): Systematic Assessment of Licensee Performance (SALP) - April 1, 1982, to March 31, 1983.
- b. October 31, 1983 (D.C. Cook Plant site): Enforcement conference for discussion of noncompliance involving two valving errors (Diesel Generator Day Tank Level Column and Boron Injection Tank Sample Valves).
- c. October 31, 1983 (D.C. Cook Plant site): Management meeting to discuss access controls, reportability of leakage in containment closed cooling water systems, and the licensee Regulatory Performance Improvement Program.
- d. December 8, 1983 (Glen Ellyn, Illinois): Management meeting to discuss the Regulatory Performance Improvement Program.
- e. January 31, 1984 (Glen Ellyn, Illinois): Management meeting to discuss the progress and status of the Licensee Regulatory Performance Improvement Program.

- f. February 29, 1984 (D.C. Cook Plant site): Same as item d, above.
- g. March 28, 1984 (D.C. Cook Plant site): Same as item d, above.

F. Review of Licensee Event Reports and 10 CFR 21 Reports

1. Licensee Event Reports (LERs)

On August 29, 1983, the NRC published an amendment clarifying its' regulations regarding Licensee Event Reports (LERs) required by 10 CFR 50.73. Details of the new reporting system were published as NUREG-1022 "Licensee Event Report System". The effective date of this amendment was January 1, 1984. The new rule deleted reporting requirements for several types of LERs which had been found, through experience, to be of little value to the Commission. Therefore, LER data for this SALP period are not comparable with previous statistics.

- a. Unit 1
  - LERs No. 83-25
  - No. 83-29 through 83-131
  - No. 84-01

Proximate Cause Code	SALP II*	SALP III**	SALP IV**
Personnel Error (A)	21(15)	28	17(0)***
Design Deficiency (B)	9(8)	4	10(0)
Defective Procedures (D)	2(2)	11	11(0)
Component Failure (E)	37(32)	51	57(0)
Others (X)	17(15)	27	9(1)
Total	86(72)	121	104+(1)=105

- b. Unit 2
  - LERs No. 83-36
  - No. 83-38 Through 83-126
  - No. 84-01 through 84-05

Proximate Cause Code	SALP II*	SALP III**	SALP IV**
Personnel Error (A)	12(9)	29	17(2)***
Design Deficiency (B)	8(9)	5	6(2)
Defective Procedures (D)	4(3)	5	8(0)
Component Failure (E)	58(51)	63	47(0)
Others (X)	24(22)	24	12(1)
Total	106(94)	126	90+(5)=95

\*SALP II was an 18 month evaluation period. The numbers in parenthesis were the number of LERs submitted in the last 12 months of the evaluation period.

\*\*SALP III and IV covers a twelve month inspection period.

\*\*\*The numbers in parenthesis were the LERs submitted since 10 CFR 50.73 "Licensee Event Report System" went into effect on January 1, 1984.

Since the new reporting system went into effect on January 1, an insufficient number of LERs have been submitted to provide a summary of findings and trends.

c. Evaluation

The Office for Analysis and Evaluation of Operational Data reviewed the LERs for this period and concluded that the information given presented a clear and adequate description of each event; the entries reviewed appeared to be essentially correct and the system code agreed with the information in the narrative. Supplementary information was provided for 59 of the 200 LERs. Lack of supplemental information for the other LERs did not inhibit the understanding of the event. Unit 1 LERs 83-052, 84-001, and Unit 2 LERs 83-073, 84-001 were considered good examples of the use of supplementary information for clarification; twenty-two followup reports were promised, ten were found; the majority of similar occurrences were accurately referenced. Some were misleading, as in the case of fire doors failing to latch. References were given only if the same door failed repeatedly when, in fact, many doors had failed to latch properly. Two Unit 2 LERs 83-054 and 83-081 contained information in a single LER that should have been reported in separate LERs.

In summary, the review indicates that, based on the stated criteria, the licensee provided adequate event reports during the assessment period. However, as mentioned above, some specific areas could be improved. Other conclusions are discussed in pertinent functional areas, and were used to support the category rating or trend.

2. 10 CFR 21 Reports

Two 10 CFR 21 Reports were made by vendors who have supplied equipment to D. C. Cook. The first concerned Eaton Corporation low voltage motor starters. The licensee is still reviewing this issue. The second was made by Westinghouse concerning Barton pressurizer pressure transmitters. Unit 1 required set-point changes for the low pressurizer pressure safety injection setpoint. Unit 2 utilizes transmitters of a different model and no determination has yet been made by Westinghouse as to the required action.

The licensee does not consider the time clock for reporting to be started until their reviews are completed. At the end of this period there were a total of 22 unresolved potential Part 21 issues, some dating back to 1979. This indicates a lack of prompt attention on the part of management. There is little evidence of management involvement in the area of Part 21 reports.

G. Regulatory Performance Improvement Program (RPIP)

The licensee submitted a RPIP on October 16, 1981 with revisions dated January 31, 1982, May 31, 1982, and February 7, 1983. During a management meeting on October 31, 1983 the licensee's unsatisfactory progress and missed milestone dates were discussed. At a management meeting on January 31, 1984 the licensee restated its commitment to the RPIP, presented an updated RPIP for comment and committed to discuss the RPIP at monthly management meetings. The licensee's revised RPIP was docketed on February 23, 1984. This letter included a status of completed actions and schedules for future actions. Since January 31, 1984, the licensee has held monthly management meetings with the NRC to discuss the RPIP. The RPIP is currently progressing on schedule as established in their updated RPIP of February 23, 1984.