SALP 2

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

Commonwealth Edison Company
Byron Station, Units 1 and 2
Docket Nos. 50-454; 50-455
Report No. 50-454/82-13; 50-455/82-09

Assessment Period
July 1, 1980 to December 31, 1981

May 1982

CONTENTS

Docket No. 50-454
Docket No. 50-455

Commonwealth Edison Company
ATTN: Mr. Cordell Reed
Vice President
Post Office Box 767
Chicago, IL 60690

Gentlemen:

This is to confirm the conversation between you and Mr. R. C. Knop of the Region III staff scheduling May 18, 1982, at 1:00 p.m. as the date and time to discuss the Systematic Assessment of Licensee Performance (SALP) for the Byron Station. This meeting is to be held at Region III Office, Glen Ellyn, Illinois, and members of the NRC staff will present the observations and findings of the SALP Board. Since this meeting is intended to be a forum for the mutual understanding of the issues and findings, you are encouraged to have appropriate representation at the meeting. As a minimum we would suggest you, Mr. V. I. Schlosser, Project Manager, Mr. M. Sanish, QA Superintendent, and managers for the various functional areas where problems have been identified.

The enclosed SALP Report which documents the findings of the SALP Board is for your review prior to the meeting. Subsequent to the meeting the SALP Report will be issued by the Regional Administrator.

Enclosure 1 to this letter summarizes the more significant findings identified in the SALP Board's evaluation of the Byron Station for the period July 1, 1980 to December 31, 1981.

If you desire to make comments concerning our evaluation of your facility, they should be submitted to this office within twenty days of the meeting date. Otherwise, it will be assumed that you have no comments.

In accordance with Section 2.790 of the NRC's "Rules of Practice" Part 2, Title 10, Code of Federal Regulations, a copy of this letter, the SALP Report and your comments, if any, will be placed in the NRC's Public Document Room when the SALP Report is issued.

The comments requested by this letter are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-5111.

If you have any questions concerning the SALP Report of the Byron Station we will be happy to discuss them with you.

Sincerely,

J. A. Hind, Director
Division of Emergency Preparedness
and Operational Support

Enclosures:
1. Significant Findings
2. Byron SALP Report
(5 copies)

cc w/encl:
Resident Inspector, RIII

ENCLOSURE 1

Significant SALP Report findings for the Byron Station Units 1 and 2.

General Observations

In this evaluation period, some improvements over the previous period have been noted in the area of design controls. In the area of procedures control, the failure to provide adequate documented instructions and procedures was the designated cause of 20% of the noncompliances identified in this period compared to 30% in SALP 1 indicating a need for further improvement in this area.

A special team inspection in April 1982, following this evaluation period, identified that in general within the areas inspected, the licensee's QA program was good. However, implementation of the program requires improvement in the areas of qualification, certification and training of QC inspectors; completeness and adequacy of corrective action in the electrical area; tracking and correcting of discrepancies without documented procedures; and independence of QA personnel.

Functional Areas

Electrical Power Supply and Distribution

The noncompliances in this area contributed 53% of all noncompliances identified during the period; however, most of them were identified in one inspection in December 1980, and timely corrective actions were taken to resolve the problems in this area. Inspections in the latter part of the evaluation period confirmed that the corrective actions have been effective and activities in this area are now considered adequate.

Quality Assurance

Although no programmatic inspections were conducted in this area, inspections in other functional areas indicate that efforts to strengthen controls of procedures and tests, test and measuring equipment and more timely corrective measures would benefit the overall construction and preoperational testing efforts at the Byron Station.

Commonwealth Edison
One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

June 2, 1982

Mr. James G. Keppler, Regional Administrator
Directorate of Inspection and
Enforcement - Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Systematic Assessment of Licensee Performance (SALP)
Commonwealth Edison Company Comments
LaSalle County Station Units 1 and 2;
Byron Staton Units 1 and 2; and
Braidwood Station Units 1 and 2
NRC Docket Nos. 50-373/374, 50-454/455, and 50-456/457

References (1): 47 FR 12240, dated March 22, 1982

(2): J. A. Hind letter to Cordell Reed dated May 6, 1982 (LaSalle County Station)

(3): J. A. Hind letter to Cordell Reed dated May 7, 1982 (Byron Station)

(4): J. A. Hind letter to Cordell Reed dated May 5, 1982 (Braidwood Station)

Dear Mr. Keppler:

The purpose of this letter is to transmit comments as allowed in Reference (1) in response to the Systematic Assessment of Licensee Performance (SALP) reports provided in References (2), (3), and (4). Specific detailed comments for each of the subject sites were presented to your staff at the public meeting on May 18, 1982, and are documented in the enclosures to this letter.

There are two general observations that we believe need to be made relative to the SALP process which are evidenced by our specific comments. First, it is very difficult for this licensee to understand how the evaluation criteria are applied to categorize activities. We are unable to understand what constitutes the threshhold for any of the categories; but most importantly, we see no objective standard for a finding that an area is Category 1 (Reduced NRC attention may be appropriate). Although functional area 2 at Byron Station was identified as Category 1, our review of your bases for that finding as opposed to the findings for

functional areas 4, 9 and 13 at LaSalle County (all Category 2) provided no basis for distinction. If we are to devote the resources to improve our performance, as evaluated by your staff, we must have a better understanding not only of the criteria you use but also of the way in which these criteria are applied to reach decisions. It is not enough to say that Category 2 performance is acceptable. We are firmly committed to improve our performance and feel justified in this request for clarification of the bases upon which we will be judged.

Second, the application of the Category 3 designation in at least two instances - LaSalle County Area 17 and Byron Area 6 - does not appear consistent with the definition of this category provided in Section II of Enclosure 2 of the SALP Reports. Specifically, the definition indicates that both NRC and licensee attention should be increased, presumably, beyond that attention then being applied at the time the SALP report is issued. In the case of the two referenced areas, performance at the time of the SALP report was categorized as "more than adequate" and improved from early in the evaluation period. It is our understanding, based on comments by your staff, that our performance at the time of the SALP report for both stations and, in the case of Byron Area 6, at the time the SALP period ended, would have been acceptable. In both instances, we know of no increased licensee attention that could or necessarily should be applied in these areas. We request that you clarify your position relative to any future action on our part judged necessary by your office.

You will also see in reviewing our specific comments on the Category 3 designation for Braidwood Functional Area 9, that we believe this finding is not justified by the facts, which we have attempted to summarize in the enclosure. We would greatly appreciate any additional attention you may devote to this area. At a minimum, we request a more comprehensive discussion of the bases upon which the SALP finding was made.

We are available at your convenience to discuss these comments. Should you have any questions, please direct them to this office.

Very truly yours,

Cordell Reed
Vice President

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ENCLOSURE 1

Comments on Byron and Braidwood SALP Reports

1. Functional Area 8 - Licensing Activities

The analysis fails to note that NRR's review of the Byron/ Braidwood SER was conducted on a very short schedule because NRR resources were devoted to other projects. The bulk of the work done in this eighteen month reporting period was done in the last four months. Continuity in this period was poor because the NRR Licensing Project Manager was changed at least six times. Most of the review work was completed in accordance with a new Standard Review Plan that wasn't issued until September, 1981. Given these circumstances, the conclusions regarding responsiveness to NRC initiatives seem unwarranted.

2. Byron Functional Area 10 - Quality Assurance

Four problems were identified in the discussion of the April, 1982 special team inspection at Byron. The fourth item listed contains an unnecessary broad characterization of the deficiency found in discrepancy tracking. Based on the information given to us in the exit meeting, only two contractors were involved.

3. Braidwood Functional Area 9 - Quality Assurance

The conclusion regarding our performance in this area is based upon an unfair expansion of a single auditor's findings. Most of those findings are in dispute. Reconsideration of this rating is requested. The following comments address specific concerns highlighted in the analysis:

Concern (1): Failure to plan ahead for corrosion inspection of post tensioning tendons, and to provide written procedures and checklists in accord with the policies established by the Quality Assurance Topical Report.

Comment: At the time of the NRC inspection (11/18-20/81) tendons which had been (or were soon to be) installed over 90 days were inspected for corrosion in accordance with NSCI procedure 7B, Rev. 5, Appendix "A" (attached). The inspections were documented in the form of memos to file.

Concern (2): Failure to understand and currently interpret previously established inspection requirement terms such as random sample, monthly, withdrawn, signs of corrosion, and rejected. When an inspection procedure for inspecting tendons installed over 90 days was prepared, the actual inspection included no tendons installed over 90 days, indicating that the most convenient sample was chosen rather than a representative sample.

Comment: Site personnel understood previously established inspection requirements terms such as random sample, withdrawn and signs of corrosion. To minimize the possibility of misinterpretation NSCI's procedure 7B, Rev. 6, (attached) was revised to define these terms. This was done at the NRC Inspector's request. However, when this was done the Inspector implied that the inspection requirements had been reduced to suit field practices.

The inspections that were performed on ungreased, horizontal tendons installed over 90 days are shown below. It should be noted that of 191 inspections performed , no detrimental corrosion was observed. The 10% inspection requirement was achieved as shown below:

a) Of the 199 ungreased tendons that were installed over 90 days 29 were inspected for corrosion between the 74th day and the 118th day. 21 tendons were inspected after the 90th day with 20 (10% of 199) being required to be inspected.

b) Of the 199 ungreased tendons that were installed over 120 days 47 were inspected for corrosion between the 121st day and the 149th day. 20 tendons (10% of 199) were required to be inspected.

c) Of the 176 ungreased tendons that were installed over 150 days 80 were inspected for corrosion between the 151st day and the 180th day. 18 tendons (10% of 176) were required to be inspected.

d) Of the 98 ungreased tendons that were installed over 180 days 35 were inspected for corrosion between the 181st day and the 200th day. 10 tendons (10% of 98) were required to be inspected.

The above inspections are a combination of those inspections that were performed on tendons prior to stressing and during stressing, They are documented on NSCI's Form NS-19 and the Installation Cards.

Concern (3): Failure to respond in a timely way as the 90 day inspection was reached and exceeded for tendons that had not been greased.

Comment: It was anticipated by Braidwood Site that the ungreased tendons would be in place for over 90 days. This condition was and is accounted for in the tendon installation specification F/L-2722, para. 13-508.2 (attached). Consequently the inspections listed in (2) above were performed as required.

Concern (4): Failure to get advance approvals of inspection activity actually conducted on tendons and on the acceptability of the inspection records.

Comment: As stated in (1) above, corrosion inspections were performed in accordance with NSCI procedure 78, Appendix "A". This procedure was reviewed and approved by the Project Construction Department, the Site Q.A. Department, and by Engineering.

Concern (5): Failure to recognize that they had exceeded the 180 day limit of the specification for tendon greasing and to consider the 50.55(e) implications after exceeding the limit. An extensive review of the results is not yet complete.

Comment: Failure to recognize that some tendons exceeded the 180 day limit was due to NSCI misinterpreting the specification requirements. It was NSCI interpretation that the 28 day limit on stress-to-grease was additive to the 180 day limit on place-to-grease. Contractor personnel have been made aware of the correct interpretation. The requirements of 10 CFR 50.55(e) have been considered and found not to be applicable to this situation.

Concern (6): Failure to follow a controlled approach to changes to an audit checklist.

Comment: When the audit checklist for CECo audit #20-81-31 was developed, only part of the acceptance criteria was included in one of the questions. This situation was identified during the conduct of the audit. The auditor added the omitted criteria to the checklist and referenced the design document from which it came. Such corrective measures are permitted by an auditor and are subject to approval of the lead auditor and the supervisor, where applicable, who review the objective evidence of the audit checklist and approve the audit report. The entire audit report was later reviewed and accepted by the lead auditor and the Q.A. Superintendent before issuance.

Concern (7): In addition, the licensee's approach to resolving some of the problems identified was to propose and attempt to change the specifications and procedures to reflect the work as completed rather than pursue the overall Q.A. program objective of corrective action to bring the work and results into conformance. One example of this was the attempt to resolve a Q.A. audit finding regarding safety-related equipment lifting procedures by eliminating

Concern (7): (Cont'd) the procedure. After complete review and approval by station construction, Sargent & Lundy and Station Q.A. to eliminate the procedure, the identifying auditor pointed out that this procedure is required by ANSI.

Comment: CECo Audit #20-81-22 of PGCo. found that the contractor did not generate special lift procedures for equipment which weighed in excess of 20,000 lbs. In response to this deficiency the contractor submitted a revised procedure eliminating the requirement of having special lift procedures for large equipment. The weight of a piece of equipment was not thought to be reason enough to generate special procedures. This procedure went through the review and approval cycle. When the auditor performed a follow-up surveillance on this audit deficiency, he found the corrective action to be inadequate. As a result, PGCo. withdrew the revised procedures and re-committed to generate special lifting procedures for lifts over 20,000 lbs. This is an example of the effectiveness of Commonwealth Edison's Q.A. program, not a deficiency.

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I. INTRODUCTION

The NRC has established a program for Systematic Assessment of Licensee Performance (SALP). The SALP is an integrated NRC Staff effort to collect available observations and data on a periodic basis and evaluate licensee performance based upon these observations. SALP is supplemental to normal regulatory processes used to ensure compliance to the rules and regulations. SALP is intended from a historical point to be sufficiently diagnostic to provide a rational basis for allocating future NRC regulatory resources and for providing meaningful guidance to licensee management to promote quality and safety of plant construction and operation.

A NRC SALP Board composed of managers and inspectors who are knowledgeable of the licensee activities, met on April 15, 1982, to review the collection of performance observations and data to assess the licensee performance in selected functional areas.

This SALP Report is the Board's assessment of the licensee safety performance at Commonwealth Edison Company's Byron Units 1 and 2, for the period July 1, 1980, to December 31, 1981.

The results of the SALP Board assessments in the selected functional areas were presented to the licensee at a meeting held May 18, 1982.

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

Functional Areas	Category 1	Category 2	Category 3
1. Soils and Foundations		Not Rated	
2. Containment and Other Safety-Related Structures	X		
3. Piping Systems and Supports		X	
4. Safety Related Components		X	
5. Support Systems		Not Rated	
6. Electrical Power Supply and Distribution			X
7. Instrumentation and Control Systems		X	
8. Licensing Activities		X	
9. Radiation and Environment Controls		X	
10. Quality Assurance		X	
11. Surveillance and Pre-operational Testing		X	
12. Preservice Inspection		X	

IV. PERFORMANCE ANALYSES

1. Soils and Foundations

The licensee is not rated in this area. No inspections were performed in this area during this SALP period. All major work in this area has been completed.

2. Containment and Other Safety-Related Structures

a. Analysis

Eleven inspections or portions of inspections were performed during the evaluation period and included containment penetration welding, cadwelding, containment post-tensioning, liner coating and observation of QA performance. No items of noncompliance were identified and there were no construction deficiency reports.

Construction and QC procedures were found to be acceptable and were followed. Storage of material was good. Inspection of records in this area indicated that they had been reviewed properly and were complete. Auditing in this area was complete and timely and the licensee was aggressive in taking necessary corrective measures. Some FSAR update inputs to NRR for this area were not made in a timely manner.

b. Conclusion

The licensee is rated Category 1 in this area.

c. Board Recommendations

None - work in this area is essentially complete.

3. Piping Systems and Supports

a. Analysis

Seven inspections or portions of inspections were performed and included welding; nondestructive examination; certification of welders, NDE personnel, and QC inspectors; fabrication and installation; material control; and observation of QA performance. During this SALP period two items of noncompliance, Severity Level V's, were identified as follows:

(1) Snubber structural attachment assemblies were not inspected and accepted by the QA staff as required by procedure (Criterion V).

(2) Three instances where snubber assembly installation design changes did not receive review and approval commensurate with the original design calculations

and modifications were completed before issuance of a field change request (Criterion III).

Corrective actions were implemented in a timely manner. The two items of noncompliance which were identified in one inspection represent a problem that has also been identified at other CECo sites.

A management meeting was held in August 1980 concerning the significant amount of construction rework at CECo sites including Byron (Section G).

Inspections in this area indicate that procedures were adequate, personnel were qualified in accordance with appropriate codes, inprocess and final inspections were performed by qualified inspectors and weld records and data reports were satisfactory.

b. Conclusion

The licensee is rated Category 2 in this area.

c. Board Recommendations

During a recent construction assessment team inspection in April 1982, concerns were identified with regard to QC personnel qualifications and training. The Board recommends increased inspection effort in this area.

4. Safety Related Components

a. Analysis

Five inspections or portions of inspections were performed and included storage of components, steam generator modifications, setting and alignment of Unit 1 reactor pressure vessel (RPV); RPV head storage; cavity liner installation; installation and records for RPV internals, incore flux tube, penetrations, Nuclear Steam Supply System supports; and observation of QA performance. During this evaluation period one Severity Level IV noncompliance was identified against Criterion IV of 10 CFR 50, Appendix B, and involved the improper alignment of essential service water pump and diesel engine hold down bolts. Licensee management and QA personnel implemented timely corrective actions. Except for this instance, a review of records, record control systems, personnel qualifications and training indicated that these activities were well managed.

b. Conclusion

The licensee is rated Category 2 in this area. No significant strengths or weaknesses were identified in this area.

c. Board Recommendations

None.

5. Support Systems

The licensee is not rated in this area. No inspections were performed in this area.

The Board recommends an inspection of the HVAC system be conducted since problems have been identified in this area at other sites.

6. Electrical Power Supply and Distribution

a. Analysis

Seven inspections or portions of inspections were performed and included observations of electrical hanger installation activities, storage of electrical equipment, electrical contractor's procedures, diesel generator installation and records, DC system installation and records, raceway support welding and records, electrical cable installation activities, electrical penetrations, procurement records, and QA performance. During this SALP period nine items of noncompliance were identified.

During an inspection in August 1980, one Infraction against Criterion V of 10 CFR 50, Appendix B was identified concerning inadequate documented instructions for battery rack coatings, instrument rack inspections and the segregation and disposition of defective equipment.

In a team inspection conducted in December 1980, seven items of noncompliance were identified as follows:

(1) Severity Level IV - Cable entrance frames for seismic Category 1 safety-related equipment were designed without engineering approval, built without an approved QA Program and purchased and installed without QA approval (Criterion II).

(2) Severity Level IV - Failure to provide separation between Class IE and Non Class IE circuits and separation between redundant transmitter impulse lines (Criterion III).

(3) Severity Level IV - Failure to establish measures to assure that deviations in cable routing, cable tray welding and filling were identified and corrected (Criterion XVI).

(4) Severity Level IV - Five examples of failure to provide adequate documented instructions, procedures, drawings and checklists (Criterion V).

(5) Severity Level V - Failure to provide adequate QC inspections of cable trays prior to pulling in cables (Criterion X).

(6) Severity Level V - Five examples of failure to establish measures to identify nonconforming components (Criterion XV).

(7) Severity Level VI - Five examples of failure to establish measures to control and protect equipment to prevent damage or deterioration (Criterion XIII).

During and following this inspection, management meetings were held to review QA problems in this area on December 31, 1980 and January 9 and 12, 1981. On January 12, 1981, the licensee issued a Stop Work Order to Hatfield Electric Company for all safety-related cable work. Region III issued an Immediate Action Letter (IAL) on January 13, 1981 confirming the Stop Work Order and the corrective actions required.

The licensee took prompt and satisfactory corrective actions and following Region III inspections on January 29 and February 4, 1981 to review these actions the Stop Work Order was rescinded.

At an enforcement conference held on March 27, 1981, to review the problems and corrective actions taken during and following the Stop Work Order, it was concluded that the many noncompliances were not indicative of a total programatic breakdown but did indicate several weaknesses in implementation of the QA Program in this area. During later inspections, it was determined that commitments agreed to in the IAL had been satisfactorily met and all items of noncompliance had been resolved.

Work in this area has been inspected four times since the enforcement conference and one item of noncompliance has been identified. This noncompliance against Criterion XVI, resulted from the failure to take timely actions to correct an identified item of noncompliance concerning the separation criteria between safety-related and nonsafety-related cables.

b. Conclusion

The licensee is rated Category 3 in this area. While the number of noncompliances in this area showed a weakness existed early in the evaluation period, subsequent Region III reviews have indicated an improvement in this area brought about by the prompt corrective actions taken by the licensee.

c. Board Recommendations

The Board Recommends continued licensee attention in this area to ensure continued quality work.

7. Instrumentation and Control Systems

a. Analysis

Seven inspections or portions of inspections were performed in this area during this period and included observations of cable installation activities, reactor protection system pressure and flow instruments including line slope, main control board panels (MCBP's), and QA performance. One item of noncompliance Severity Level VI was identified against Criterion XIII for failure to establish measures to control and protect equipment to prevent damage or deterioration.

During an inspection conducted after this evaluation period, many instances were identified where safety-related equipment were not properly protected. A Severity Level IV noncompliance was issued because of the many examples and because it was a repeat violation.

b. Conclusion

The licensee is rated Category 2 in this area. No significant strengths or weaknesses were identified.

c. Board Recommendations

The Board recommends additional attention by both the licensee and NRC in the protection of safety-related equipment and instruments.

8. Licensing Activities

a. Analysis

Discussions with licensee management indicate that they are aware of the details of licensing activities. Corporate management is involved with site activities. The licensee generally exhibits conservatism in proposed technical resolutions; however, they have not optimally utilized their previous licensing experience. Additionally, the licensee sometimes took exception to NRC concerns without providing adequate bases for the exceptions. Licensee staff were cooperative at meetings requested by the NRR staff to resolve issues; however, commitments made at those meetings occasionally were not implemented unless formal questions were sent to the licensee. In several instances the initial response to staff questions required supplemental information to adequately resolve staff concerns. Corporate or site personnel who participated in technical meetings were extremely knowledgable in the subject matter. Corporate licensing and engineering personnel were familiar with plant systems and operations, either due to licensee-provided training or previous plant experience. Staffing for corporate and station organizations involved in licensing activities is strong.

b. Conclusion

The licensee is rated Category 2 in this area. Improvements in the area of responsiveness to NRC initiatives would have resulted in a rating of Category 1.

c. Board Recommendations

None.

9. Radiation and Environmental Controls

a. Analysis

Two inspections were performed during the evaluation period. One was the initial radiation protection preoperational inspection. The other inspection concerned environmental controls during construction preoperational environmental program and a review of the onsite meteorological monitoring program. Two Deficiencies were identified as follows:

(1) Three examples of failure to follow the commitments to conduct periodic checks of construction activities in the construction permit and the "Finalized Onsite Environmental Monitoring Program".

(2) Failure to correct errosion problems near the northwest corner of the site.

The licensee took prompt action to correct the deficiences.

The environmental monitoring program appears adequate to assure protection during construction and preoperational testing. The licensee has completed terrestrial, ecological and aquatic monitoring commitments and required sampling programs in these areas have been established.

b. Conclusion

The licensee is rated Category 2 in this area. Inspections in this area were preliminary ones. No significant strengths or weaknesses were identified.

c. Board Recommendations

Normal inspection efforts will be conducted in this area as activities increase.

10. Quality Assurance

a. Analysis

No specific inspection was conducted on the QA Program; however, inspections conducted in other functional areas

included reviews of the QA Program in those areas. One noncompliance, Severity Level VI against Criterion XII, was identified for failure to maintain the calibration of a voltmeter used in preoperational tests. Proper corrective actions were taken.

A review of noncompliances identified in the other functional areas show that about 25 percent were failure to provide documented and approved instructions, procedures and drawings (four noncompliances with ten examples in Criterion V).

The licensee's QA Program is considered to be good. Some improvements over the previous evaluation period have been noted in design controls; however, some problems still exist with procedural controls and controlling work requiring approved procedures.

In general the licensee has been responsive to nonconforming conditions identified. Some improvement has been noted in the identification and reporting of construction deficiencies; however, fewer deficiencies are reported for Byron than for similar sites in Region III possibly indicating the reporting threshold is too high.

A special team inspection was conducted in April 1982, after the evaluation period, to assess construction activities in several areas. The inspection findings indicated there was no major or widespread breakdowns in the areas appraised. The inspection did identify problems in certain areas such as:

(1) Qualification and training of piping contractors QC inspectors.

(2) Inadequate corrective actions taken by some contractors.

(3) The independance of QA personnel from construction management.

(4) Inadequate procedures for tracking and correcting discrepancies.

Actions to resolve these problems are underway.

b. Conclusions

The licensee is rated Category 2 in this area.

c. Board Recommendations

The Board recommends additional licensee attention on the control of activities to assure they are covered by approved instructions or procedures. Normal inspection effort will be made unless evaluations of the special team inspection indicate increased effort in certain areas is needed.

11. Surveillance and Preoperational Testing

a. Analysis

Five inspections or portions of inspections were conducted in this area consisting of reviews of the preoperational testing administrative controls; training; procedure development; procedures; procedure and document controls; control of testing instruments, cleanliness, system turnover; and QA performance during preoperational testing. Two items of noncompliance were identified as follows:

(1) Severity Level V - Failure to provide documented instructions for tests and calibrations. Three examples were cited (Criterion V and XI).

(2) Severity Level VI - Failure to adequately review and proofread changes made in Revision 4 of the Startup Manual (Criterion VI).

The results of the inspections indicate a generally positive attitude toward nuclear safety. Responses to NRC concerns have been thorough and timely in both preoperational testing and QA areas. With the exception of minor damage to a battery charger during the 125VDC preoperational test, there has been no material or equipment problems identified.

b. Conclusions

The licensee is rated Category 2 in this area. Management controls for surveillance and preoperational testing appear adequate.

c. Board Recommendations

The normal inspection program will be carried out in this area.

12. Preservice Inspection

a. Analysis

One inspection was performed in this area during the evaluation period. The licensee's contractor's program, including procedures, materials and equipment had been reviewed and accepted by the licensee. Areas inspected were procedures and program, material and equipment certification, NDE personnel certifications, observations of work activities and data review. Management controls of preservice inspection activities appear to be effective.

b. Conclusion

The licensee is rated Category 2 in this area.

c. Board Recommendations

None.

V. SUPPORTING DATA AND SUMMARIES

A. Noncompliance Data

Facility Name: Byron, Unit 1 Docket No. 50-454
Inspections No. 80-13 through No. 80-25
No. 81-01 through No. 81-18

	Noncompliances and Deviations[1]									
	Severity Levels						Categories			
Funtional Area Assessement	I	II	III	IV	V	VI	Viol.	Infr.	Def.	Dev.
1. Soils and Foundations										
2. Containment and Other Safety-Related Structures										
3. Piping Systems and Supports					(2)					
4. Safety-Related Components				(1)						
5. Support Systems										
6. Electrical Power Supply and Distribution				(4)	(3)	(1)		(1)		
7. Instrumentation and Control Systems						1				
8. Licensing Activities										
9. Radiation and Environmental Controls									(2)	
10. Quality Assurance						(1)				
11. Surveillance and Preoperational Testing					1	1				
12. Preservice Inspection										
Totals				(5)	1	(5)	2	(2)	(1)	(2)

[1] Numbers in parenthesis indicate noncompliances common to both units.

Facility Name: Byron, Unit 2 Docket No. 50-455
Inspections No. 80-12 through No. 80-23
No. 81-01 through No. 81-14

	Noncompliances and Deviations[1]									
	Severity Levels							Categories		
Funtional Area Assessement	I	II	III	IV	V	VI	Viol.	Infr.	Def.	Dev.
1. Soils and Foundations										
2. Containment and Other Safety-Related Structures										
3. Piping Systems and Supports					(2)					
4. Safety-Related Components				(1)						
5. Support Systems										
6. Electrical Power Supply and Distribution				(4)	(3)	(1)		(1)		
7. Instrumentation and Control Systems										
8. Licensing Activities										
9. Radiation and Environmental Controls									(2)	
10. Quality Assurance						(1)				
11. Surveillance and Preoperational Testing										
12. Preservice Inspection										
Totals				(5)	(5)	(2)		(1)	(2)	

[1] Numbers in parenthesis indicate noncompliances common to both units.

B. Report Data

1. Construction Deficiency Reports (CDR)

During this SALP period four CDRs were submitted by the licensee under the requirements of 10 CFR 50.55(e). Three of these were Part 21 reports issued by the licensee's suppliers:

a. Westinghouse 3-inch, 1500 psi rated, gate valves, used as charging system isolation valves, failed to close at design pressure during tests at the manufacturer's facility.

b. Deficiencies in certain electrical installation activities that were identified during a December 1980 NRC inspection (See Section IV.6).

c. Westinghouse Electro-Mechanical Division 1500 psi rated gate valves in sizes 3-inch through 18-inch failed to close when subjected to high differential pressures during tests.

d. The possibility that a single random failure in the volume control tank level control system could, in absence of operator actions, lead to a loss of redundancy in high head injection.

2. Part 21 Reports

The licensee issues 50.55(e) reports for all reportable deficiencies. For deficiencies reportable under Part 21, the required information is provided in the 50.55(e) report.

C. Licensee Activities

The main construction areas during the evaluation period were completion of vessel internals installation; alignment of equipment; and installation of piping, snubbers, cable trays, conduits, electrical equipment, instruments, and cables.

Unit 1 and Unit 2 were reported by the licensee to be 78% and 62% complete, respectively, as of September 30, 1981. Fuel load dates are estimated to be April 1983 for Unit 1 and April 1984 for Unit 2. NRC feels that these fuel load dates are optomistic.

D. Inspection Activities

The routine inspection effort by the NRC consisted of 30 inspections during the evaluation period. Several of the inspections in the areas of electrical, instrumentation and preoperational testing were carried out by inspection teams of from 3 to 5 inspectors. One special inspection was conducted along with the NRR Case Load Forecast Panel review on January 6 and 7, 1981.

On October 5, 1981, a Senior Resident Inspector was permanently assigned to the Byron site and a Resident Inspector is scheduled to be assigned in August 1982.

E. Investigations and Allegations Review

No investigations were conducted.

F. Escalated Enforcment Action

1. Civil Penalties

None.

2. Orders

None.

3. Immediate Action Letters

January 13, 1981, confirming a CECo Stop Work Order and corrective actions required for deficiencies in certain electrical installation activities (See Section IV.6).

G. Management Conferences

Inspection Reports 80-13 and 12, dated August 15, 1980, documents the management meeting held on July 24, 1980, at NRC's request to elicit a commitment from the licensee to perform an in-depth examination and evaluation of their design/engineering organizations and function, and to provide a comprehensive evaluation of the conditions and circumstances which have led to certain areas of significant construction rework at several CECo sites including the Byron site.

Inspection Reports 80-22 and 21, dated December 22,1980, documents the management meeting held at NRC's request to discuss the regulatory performance at Byron, as concluded in the Systematic Assessment of Licensee Performance program (SALP-1). The licensee's performance was considered to be adequate.

Inspection Reports 80-25 and 23, dated April 17, 1981 documents management meetings held December 31, 1980, Janauary 9 and 12, 1981, and an enforcement conference on March 27, 1981 to discuss deficiencies in electrical installation activities that were identified during a December 1980 NRC inspection.