

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

OCT 15 1976

Iowa Electric Light and Power
Company

Docket No. 50-331

ATTN: Mr. Duane Arnold
President

IE Towers
Post Office Box 351
Cedar Rapids, Iowa 52406

Gentlemen:

This refers to the inspection conducted by Mr. H. B. Kister of this office on September 13-17, 1976, of activities at Duane Arnold Energy Center authorized by NRC Operating License No. DPR-49 and to the discussion of our findings with Mr. Hunt and his staff at the conclusion of the inspection.

The enclosed copy of our inspection report identifies areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations, and interviews with personnel.

During this inspection, certain of your activities appeared to be in noncompliance with NRC requirements, as described under Enforcement Items in the Summary of Findings section of the enclosed inspection report. The inspection showed that action had been taken to correct the noncompliance item 2.a and to prevent recurrence. Consequently, no reply to this noncompliance is required and we have no further questions regarding this matter at this time.

This notice is sent to you pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office within twenty days of your receipt of this notice a written statement or explanation in reply, including for each item of noncompliance: (1) corrective action taken and the results achieved; (2) corrective action to be taken to avoid further noncompliance; and (3) the date when full compliance will be achieved.



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Certain other activities, set forth under Other Significant Items in the Summary of Findings section of the enclosed inspection report, appear to be deviations from commitments which you have made in previous correspondence with the Commission. Please advise us in writing within twenty days of the corrective action you have taken or plan to take, showing the estimated date of completion with regard to this deviation.

Noncompliance identified through your management control system and corrected in a timely manner is described under Other Significant Items in the Summary of Findings section of the attached inspection report. We have no further questions regarding this matter at this time.

In addition to the need for corrective actions regarding the items of noncompliance described under Enforcement Items and the Deviations described under Other Significant Findings in the Summary of Findings section of the report, we are concerned about your management control systems that permitted them to occur. We plan to meet with you on October 19, 1976, to discuss your corrective actions.

Subsequently, in your reply you should describe those actions taken or planned to improve your management control systems. In particular, we are interested in improvements you plan for reducing the number of events related to personnel error, steps you plan to take to improve supervisory and Operations Committee review to ensure procedures are being followed, and planned actions for improvement of problem resolutions to ensure that measures taken are adequate to preclude recurrence.

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 notice, the enclosed inspection report, and your response to this notice will be placed in the NRC's Public Document Room, except as follows. If this report contains information that you or your contractors believe to be proprietary, you must apply in writing to this office, within twenty days of your receipt of this notice, to withhold such information from public disclosure. The application must include a full statement of the reasons for which the information is considered proprietary, and should be prepared so that proprietary information identified in the application is contained in an enclosure to the application.

Iowa Electric Light and Power
Company

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OCT 15 1976

We will gladly discuss any questions you have concerning this inspection.

Sincerely yours,

James G. Keppler
Regional Director

Enclosure:

IE Inspection Rpt No.
050-331/76-22

cc w/encl:

Mr. G. G. Hunt, Chief
Engineer

bcc w/encl:

Central Files

Reproduction Unit NRC 20b

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UNITED STATES NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report of Operations Inspection

IE Investigation Report No.050-331/76-22

Licensee: Iowa Electric Light and Power Company
Security Building
P. O. Box 351
Cedar Rapids, Iowa 52406

Duane Arnold Energy Center
Palo, Iowa

License No. DPR-49
Category: C

Type of Licensee: BWR (GE) 583 MWe

Type of Inspection: Routine, Announced

Dates of Inspection: September 13-17, 1976

Principal Inspector: H. B. Kister

H. B. Kister 10/12/76
(Date)

Accompanying Inspector: None

Other Accompanying Personnel: None

Reviewed By: *R. C. Knop*
R. C. Knop, Chief
Reactor Projects
Section 1

10/14/76
(Date)

SUMMARY OF FINDINGS

Inspection Summary

Inspection on September 13-17, 1976, (76-22): Review of plant operations, reportable events, control of reportable events, outstanding inspection items, and followup on previous enforcement items. Seven items of noncompliance were identified relating to failure to comply with Administrative Control Procedures, reporting requirements, surveillance test procedures, failure to comply with Limiting Conditions for Operation, and personnel qualifications.

Enforcement Items

A. Violations

None.

B. Infractions

1. Contrary to 10 CFR, Part 50, Appendix B, Criterion VI Document Control, Quality Assurance Directive (QAD) 1306.1, Section 5.5 and Administrative Control Procedure (ACP) 1409.2, Section 5.1, the latest revisions of controlled Piping and Instrument Drawings, (P&IDs) 176, 143, and 149, do not represent existing plant configuration. (Paragraph 2.a, Report Details)
2. Contrary to 10 CFR, Part 50, Appendix B, Criterion V, Quality Assurance Directives, and Administrative Control Procedures were not adhered to as follows:
 - a. The Shift Engineer's log has not been maintained in accordance with ACP 1404.4. (Paragraph 2.b, Report Details)
 - b. Deviation Report number 76-128, regarding Reportable Occurrence No. 50-331/76-44, did not include a review, by the Technical Engineer, of immediate or long term corrective actions as required by ACP 1401.7. (Paragraph 3, Item g, Report Details)
 - c. Design Change Request 187, which installed certain Core Spray Pump alarms, was not accomplished in accordance with the Design Package instructions. (Paragraph 3, Item h, Report Details)

- d. The Core Spray Line Break Alarm card was pulled without formal authorization and control as required by QAD 1301.6 and ACP 1401.4, and resulted in the card not being replaced and alarms not being operable prior to reactor startup. (Paragraph 3, Item i, Report Details)
3. Contrary to DAEC Technical Specifications, Section 6.5.g, 6.6.2, and Section 6.11, the licensee failed to properly review and correctly report event No. 76-44. (Para. 3, Item g, Report Details)
 - a. Appropriate action to prevent recurrence was not properly defined.
 - b. The Reportable Event was submitted as a 30 day written report in lieu of the required prompt notification and written followup within two weeks.
4. Contrary to DAEC Technical Specifications, Section 6.8.1, a relay block was not removed from the HPCI Control Logic in accordance with the surveillance test procedure. (Paragraph 3, item e, Report Details)
5. Contrary to DAEC Technical Specifications, Section 3, Table 3.2-A, the limiting conditions for operation were not adhered to in that four instrument subchannels of the Main Steam Line Area High Temperature trip logic were miscalibrated to a value greater than specified trip setting. A minimum of two operable or tripped channels are required. (Paragraph 3.g, Report Details)
6. Contrary to DAEC Technical Specifications, Section 3, Table 3.2-B, the HPCI Turbine Steam Hi Flow Trip has been set at ± 100 inches of H_2O in lieu of the technical specification trip set point of ± 225 inches of H_2O . (Paragraph 4.a, Report Details)
7. Contrary to DAEC Technical Specifications, Section 6.3, Responsibilities assigned to the Reactor and Plant Performance Engineer in ACP 1408.3, Section 4.5 are being carried out by an engineer who does not meet the minimum experience requirements of ASNI 18.1. (Paragraph 2.f, Report Details)

Licensee Action on Previously Identified Enforcement Actions

- A. Inspection Report No. 050-331/76-01, Letter Item 1, Full implementation of a commitment Followup System by March 31, 1976.^{1/}
The inspector reviewed the licensee's commitment and determined
1/ IEL&P letter dated March 22, 1976.

that a followup system had not yet been fully implemented.
(Paragraph 4.b, Report Details)

- B. Inspection Report No. 050-331/76-16, Deviation No. ^{1/} Installation of Torus Level Hi/Lo Alarms by March 15, 1976.^{2/} The inspector reviewed the alarm installation and noted that the status remained as stated in Inspection Report No. 050-331/76-12 dated June 10, 1976, in that the alarms are inoperable. Further action is still pending additional engineering action. (Paragraph 4.c, Report Details)

Other Significant Findings

A. Systems and Components

The inspector reviewed the status of the licensee's commitment in their response^{3/} to IE Bulletin 75-03 concerning problems with Series 8300 and 8302 ASCO Solenoid Valves. The inspector noted that the commitment to install conversion kits was never completed due to a later determination that their installed valves were not of the type in question; however, the NRC was never notified of the change in direction. The licensee is preparing an update to their original response.

B. Facility Items

None identified.

C. Managerial Items

The licensee was informed of the inspector's concern regarding the number of personnel errors that have occurred in the last six months and emphasized the need to investigate additional corrective actions. (Paragraph 3, Report Details)

D. Noncompliance Identified and Corrected by the Licensee

1. Contrary to DAEC Technical Specifications, Section 3.4.C.1, the sodium pentaborate concentration was not maintained in accordance with Figure 3.4-1. (Paragraph 3.a, Report Details)
2. Contrary to DAEC Technical Specifications, Appendix B, Section 3.3.1.D.1, the automatic securing and isolation of the mechanical vacuum pump was not verified during the first operating cycle. (Paragraph 3.d, Report Details)

^{2/} IEL&P letter dated December 18, 1976.

^{3/} IEL&P letter Dated May 1, 1976.

E. Deviations

1. Contrary to the licensee's commitment,^{4/} a system for followup on items of noncompliance, reportable occurrences and recommended actions which result from site or corporate review was not finally approved and fully implemented by March 31, 1976. (Paragraph 4.b, Report Details)
2. Contrary to the licensee's commitment,^{5/} an operable torus level alarm system was not completed by March 15, 1976. This is the second deviation^{6/} from this commitment. (Paragraph 4.c, Report Details)
3. Contrary to the licensee's commitment of May 1, 1975, in response to IE Bulletin 75-03, repair kits were not installed in 22 Asco Valves by September 1, 1976. (Paragraph 5, Report Details)

F. Status of Previously Reported Unresolved Items

None identified.

Management Interview

At the conclusion of the inspection, a management interview was conducted with Mr. Hunt, members of his staff, and Messrs. Rehrauer and Walling of the Corporate Engineering Group. The following matters were discussed:

- A. The inspector summarized his review of plant operations and noted the following concerns:
 1. The absence of P&IDs in the Control Room that represent existing plant configuration was discussed and will be considered an item of noncompliance. (Paragraph 2.a, Report Details)
 2. Several instances where the Shift Engineers log was not being maintained in accordance with ACP 1404.4 were noted. The inspector stated that there had been a significant improvement in the Shift Engineer's Log since the first day of the inspection, therefore, this item of noncompliance will require no further licensee response. (Paragraph 2.b, Report Details)
 3. Frequency of operation of the Emergency Service Water Pumps was discussed. The licensee stated that the pumps were only being run to supply cooling whenever personnel were required to be in the HPCI Room. Additional proposed changes to the HPCI Room ventilation system were discussed. (Paragraph 2.e, Report Details)
- ^{4/} IEL&P letter dated March 22, 1976.
^{5/} IEL&P letter dated December 18, 1976.
^{6/} Inspection Report No. 050-331/75-16 dated November 25, 1975.

4. The inspector stated that cleanliness of the plant has deteriorated, Rad Control Points were in poor condition and areas such as the HPCI and RHR rooms were in an unsatisfactory condition. (Paragraph 2.d, Report Details)
 5. The inspector discussed the increase in the reactor water activity particularly during startups and shutdowns. The licensee acknowledged the presence of pin hole leaks of a minor nature, and stated that equilibrium iodine still remains relatively low. (Paragraph 2.f, Report Details)
- B. The inspector summarized his review of selected reportable occurrences, administrative control of reporting activities and documented operational problems. Several items of noncompliance with reporting requirements, administrative control procedures and surveillance procedures were noted. Of particular concern was the increased number of incidents resulting from personnel error, some of which were of a repetitive nature indicating a need for additional corrective actions. (Paragraph's 3 and 6, Report Details)
- C. The inspector summarized his review of certain outstanding licensee commitments and stated that failure to fully implement a followup system, failure to install operable torus level alarms, and failure to keep NRC informed of their actions relating to IE Bulletin 75-03 would be considered deviations from commitments to the NRC. (Paragraph 4.b, 4.c, and 5, Report Details)
- D. The inspector discussed the lack of progress toward solution^{7/8/} of the HPCI Steam Line Hi Flow instrument elbow tap problem. Subsequent to the management interview, the inspector informed the licensee by telephone that the conflict between the technical specification set point and the set point presently being used will be included as an item of noncompliance. (Paragraph 4.a, Report Details)

7/ Reportable Occurrence No. 50-331/74-47.

8/ IE:III Inspection Report No. 050-331/76-12.

REPORT DETAILS

1. Persons Contacted

Site

E. Hammond, Assistant Chief Engineer
B. York, Operations Supervisor
J. Vinquist, Electrical Maintenance Supervisor
K. Young, Radiation Protection Engineer
R. Zook, Shift Supervising Engineer
D. Mineck, Shift Supervising Engineer
D. Gipson, Shift Supervising Engineer
M. Schwartz, Assistant to the Technical Engineer
R. Rockhill, Mechanical Maintenance Supervisor
L. Nelson, Surveillance Coordinator

Corporate

J. Wallace, Vice President, Generation
H. Rehrauer, Supervisor, Project Engineering
G. Walling, Mechanical/Nuclear Design Engineer
R. Salmon, Mechanical/Nuclear Design Engineer
K. Meyer, Nuclear Licensing Administrator

2. Plant Operations

The inspector reviewed selected areas of plant operations. Included was a review of control room and supervisor logs, auxiliary operator logs, operating orders, jumper lifted lead control, operational problems, control room manning, hold off log (caution and tag out), control room operations, and a plant tour.

Resultant comments are as follows:

- a. While observing control room operations the inspector noted that Reactor Building Exhaust Fan, 1, 2, 3 High Radiation alarm on Panel IC-35 was activated. When questioned, the operator indicated that the alarm was intermittent and a check of the reactor building exhaust stack monitors and recorders had verified that no problem apparently existed. Maintenance had checked the monitors and no problems had been reported. The inspector reviewed the Reactor Building ventilation and off-gas stack P&ID (176) and attempted to locate the alarm logic, however, the alarms were not on the drawing. Further investigation revealed that apparently

a Design Change had been made which added the alarm function but the drawing had not been updated. During further review of operational problems the inspector noted two additional drawings that did not represent existing plant configuration. P&ID 143, Containment Atmospheric Control System, did not show the added nitrogen storage tank, or the modification which added the original normal nitrogen storage tanks to the CAD system. Also, P&ID M149, Off-gas Recombiner System, did not show a valve that was added to the off-gas water separator loop seal (CV4179). (Another problem related to this valve was identified in that the valve also does not function as intended. The licensee stated that this problem had been passed back to engineering for resolution.)

The above examples demonstrate inadequate document control, which is contrary to 10 CFR, Part 50, Appendix B, Criterion VI, QAD 1306.1, and ACP 1409.2 in that documents in use do not represent existing plant configuration. The inspector informed the licensee that this would be included as an item of noncompliance.

- b. The inspector reviewed the following operating logs.

Shift Supervising Engineer	8-26-76 through 9-15-76
Operator Log	8-26-76 through 9-15-76
Auxiliary Operator Daily Log	8-25-76 through 9-1-76

Comments are as follows:

- (1) On September 8, 1976, the Shift Engineers log noted that the "B" SBLC Pump was removed from service at 1259 to change oil. At 1525 the pump was returned to normal, however, the operability test was not run at this time due to high radiation in the reactor building which subsequently resulted in a reactor shutdown. No further entry was found to verify that the operability test requirement for the "B" pump was ever satisfied. (Further investigation produced a completed test procedure which had been done on September 9, 1976 prior to start up). ACP 1404.4 requires that major components out of service be logged including limiting conditions for operation. This was not performed until it was brought to the attention of the Shift Supervisor by the inspector.

- (2) On September 10, 1976, I-131 concentration was found to be greater than .012 uCi/gm which is an action point and requires an increased analysis frequency if power transients exceed 15%. No further entry regarding the status of the I-131 concentration was found nor was there any entry regarding the potential LCO. ACP 1404.4 requires that changes in plant status be recorded.
- (3) On September 13, 1976, the inspector entered the control room and noted that the Hi Oxygen, Channel B (torus) alarm was activated. The ensuing discussion revealed that they had been having a problem with oxygen in leakage in the torus and a loss of nitrogen. The log did not adequately identify the problem or the ongoing investigations into the cause. Again, the ACP requires that changes in plant status be recorded and also that corrective maintenance be identified including the system or component and cause of malfunction.

The above examples appeared to indicate a laxity in maintaining the Shift Engineer's log book and represents a noncompliance with the requirements of ACP-1404.4. The inspector discussed his concern with the shift supervisors present and the Operations Supervisor. Near the end of the inspection, the inspector noted a significant improvement in log entries. The inspector informed the licensee that corrective action appeared adequate, therefore, the noncompliance would require no further response.

c. Operational Problems

The inspector reviewed deviation reports for the quarter and noted several cases of shallow evaluation by the Technical staff, particularly where personnel errors were involved. The inspector further noted that the evaluation conducted for reportable occurrence 76-44, (DR 76128) failed to recognize that the circumstances called for prompt notification of the event followed by a report within 2 weeks. The report was evaluated as a 30 day report. See Paragraph 3, item g, and summary for additional discussion.

d. Plant Tour

The inspector conducted a tour of selected areas of the facility. Included were the HPCI Room, and adjacent RHR room, Essential Switchgear rooms, Diesel Generator rooms and the refueling floor. Comments are as follows:

The radiation control point to the HPCI and RHR rooms was in very bad condition. The control point sign was on the floor, used anti C clothing was laying on the floor instead of in the receptacle provided and the area was generally dirty. The doors to the rooms were open however, no personnel were present. The HPCI room was also in very bad condition. Combustibles, such as poly bags, rags and cloth gloves were lying on the floors and upper gratings. Also, empty and partially filled aerosol spray cans of WD-40 lubricant were lying around on gratings. The cans are potentially explosive in high temperature areas and are a fire hazard. The licensee removed the combustibles. The RHR room was also in need of cleaning.

The inspector further noted that control points and change areas throughout the plant were generally in poor condition with the exception of the control point to the refueling floor.

The inspector discussed the above conditions with the Operations Supervisor and the Radiation Protection Engineer and noted his concerns about the deterioration of plant housekeeping.

e. Emergency Service Water Pump Operation

While observing control room operations the inspector noted that an ESW pump was running. The two pumps are normally in a standby condition and operate in the accident mode to provide cooling for engineered safeguards equipment and spaces. The inspector questioned the Shift Supervisor regarding the pump. He stated that the pump is run to provide cooling in the HPCI room while personnel are working in the area. HPCI room cooling was a subject of a previous report^{9/} where conditions required the coolers to be operating to maintain the room ambient temperature below the high temperature trip set points. Subsequently, a design change was accomplished to improve the HPCI room ventilation and improvement was noted, however, according to the licensee, temperatures are such that additional cooling is still needed for personnel comfort. Additional ventilation is being considered to alleviate the need for running the ESW pumps. The inspector commented that the pumps are subject to accelerated impeller deterioration due to the presence of sand when continuously operated and suggested that running time be minimized.

f. Water Chemistry

The inspector reviewed a sample of water chemistry records to determine compliance with Technical Specification limits for

activity, conductivity, and chlorides. No noncompliance with limits were identified. The inspector noted activity spikes during transients (startups and shutdowns) which indicates the presence of minor fuel pin leakage as noted in a previous report.^{10/} Equilibrium iodine appears to remain low during operation.

In the process of reviewing the water chemistry surveillance tests the inspector noted that review by the Reactor and Plant Performance Engineer was being signed off by a new engineer with less than a year's experience. ACP 1408.3 assigns responsibility for test review to the Reactor and Plant Performance Engineer. The subject engineer does not meet the minimum experience levels of the Technical Specifications, Section 6.3 which references ANSI 18.1, Selection and Training of Nuclear Power Plant Personnel, for this position. The licensee was informed that this was not in compliance with the Technical Specifications and ACP 1408.3.

3. Review of Licensee Event Reports

A review of reporting, corrective actions, licensee review and evaluation and compliance with regulatory requirements was conducted for the following reportable occurrences.

Event Title	Event Date	Licensee Report Date
a. 50-331/76-02 SBLC Sys. Sodium Pentaborate Concentration Below T.S.	3-17-76	3-30-76
b. 50-331/76-023 Foreign Material in Feedwater Check Valve V-14-1	3-24-76	4-06-76
c. 50-331/76-33 MSL HI Temp. Switch Bypassed	5-3-76	6-2-76
d. 50-331/ETSV-76-02 Mechanical Vacuum Pump STP not Performed	5-27-76	6-2-76
e. 50-221/76-41 Failure to Remove Relay Block During HPCI Surveillance Test.	6-14-76	6-16-76

^{10/} IE Inspection Report No. 050-331/76-15 dated July 12, 1976.

f.	50-331/76-43 ESW System Strainer Plugged Causing D.G. to Shutdown During Surveillance Testing.	6-14-76	6-16-76
g.	50-331/76-44 MSL Hi Temp Switches Miscalibrated.	6-22-76	7-9-76
h.	50-331/76-50 Core Spray Pump Alarm Wiring Not Completed Per Design Change Documents.	8-9-76	8-20-76
i.	50-331/76-51 Core Spray Fire Break Alarm Card Pulled Causing Alarm to be Inoperable.	8-16-76	8-18-76

The inspector's review included discussions of each event with licensee representatives as required, examination of the report referenced above, and other documents related to the particular areas reviewed. Comments are as follows:

- Items a and d - The inspector reviewed the licensee's corrective actions and no problems were identified. The inspector informed the licensee that the two events would be listed as items of noncompliance identified and corrected by the licensee.
- Item c - The inspector reviewed the event report and had no further comments other than those provided in IE:III Inspection Report 50-331/76-12 dated July 12, 1976.
- Item e - The inspector reviewed the event and the licensee's corrective action. The inspector agreed with the addition of relay blocks to the lifted lead and jumper control system, however, the reinstruction of personnel regarding failure to follow surveillance procedures is not considered adequate and additional corrective action appears necessary. Refer to the summary below.
- Item f - The inspector reviewed the licensee's corrective actions regarding the collection of silt in the ESW pits. No problems were identified, however, when questioned about the design change request for a sparger arrangement, the licensee stated that this had been reviewed but was considered impractical,

However, other alternatives are being evaluated. The inspector requested that the event report be updated to include the alternatives. The inspector also noted that divers had entered the pits during the past week to determine the extent of silt collection since the pits were last cleaned. The licensee reported that small amounts of silt had collected in the corners but were considered not to be a problem.

Item g

- The inspector reviewed the event report and noted the following:

- (1) The LER was initially submitted as a 30 day report however, the inspector noted that the event described did not comply with the minimum of two operable instrument channels per trip system specified in the Technical Specifications, Table 3.2-A. Four instrument sub channels were found to be set at greater than the trip level setting. Noncompliance with an LCO requires prompt notification followed by a report within two weeks.
- (2) Corrective action to prevent recurrence was not specified as required by Technical Specifications, Section 6.11 and 6.6.2.
- (3) The inspector reviewed the Deviation Report (76-128) and noted that the evaluation and determination of corrective action, which is required by ACP 1401.7 was not complete.
- (4) The inspector also questioned the quality of the reportable occurrence review. The event had been prepared by the assistant Chief Engineer, reviewed by the Operations Committee and approved by the Chief Engineer without the corrective action to prevent recurrence specified or the error in reporting recognized. This is contrary to Technical Specifications, Section 6.5g., 6.6.2 and 6.11.

The cause of the event was apparently due to improper calibration. This, coupled with failure to adhere to reporting requirements and failure to properly evaluate the cause and determine proper corrective action in accordance with Technical Specification requirements and Administrative Control procedures indicates a need for additional corrective action. Refer to the summary below.

Item h

- The inspector reviewed the event report and noted that the cause of the event was:

- (1) Failure of personnel to complete the modification in accordance with the design change documents.
- (2) Failure of supervision to adequately review the completed work and,
- (3) Failure to adequately test the modified system to ensure proper operation.

The corrective action only addresses a change in the design format to add testing requirements and commitment to review past DCR's for testing requirements. The problem of proper installation and completion of plant work by maintenance personnel is not addressed. The inspector considers that additional corrective action is necessary regarding this event. Refer to the summary below.

Item i

- The inspector reviewed the event report and noted that the inoperable alarm is apparently the only indication in the control room of a possible core spray line break in the "B" Core Spray System. The inspector also noted that the cause of the event was probably attributable to personnel not recognizing the need to follow existing administrative controls for controlling plant work to maintain system integrity. As in Items e, g and h above, additional corrective action is considered necessary to improve performance in this area. Refer to the summary below.

Summary

A review of the Licensee Event Reports (LERs) and operating problems (Deviations Reports) over the past ten months indicate an increasing number of events attributable to personnel error. Of particular concern are those involving instrument and control. In the case of LERs, corrective action, when indicated, included reinstruction of personnel, however, it has not been effective to date in preventing recurrence. Reference is made to Items e, g, h and i above and the examples listed below:

<u>Reference</u>	<u>Event Date</u>	<u>Subject</u>
RO 76-57	9-9-76	Torus water level exceeded.
RO 76-55	9-3-76	Drywell O ₂ concentration exceeded T.S. limit for 20 hours due to operator miscalculation.
RO 76-54	8-27-76	MS low pressure instrument switch found valved out.
DR 76-174	8-19-76	Rod Worth Minimizer system lead lifted without authorization.
DR 76-169	8-14-76	Reactor tripped due to low water level during a start-up-operator allowed level to get away.
DR 76-167	8-14-76	Water Chemistry not performed per T.S. with reactor in Startup Mode. Personnel oversight.
DR 76-158	7-28-76	Work accomplished without SSE authorization.
ETSV 76-4	6-10-76	Soil samples not taken during growing season per T.S.
RO 76-36	5-28-76	Torus level exceeded T.S. limit.
RO 76-32	4-30-76	I&C technicians bypassed MSL Hi temperature switch without authorization.
RO 76-28	4-20-76	RSCS inoperable due to unauthorized jumper installed.
RO 75-69	12-12-75	Recirc Pump DP switch left isolated after test.
RO 75-63	11-19-75	RHR system low pressure switches calibrated wrong.
IE:IR 50-331/75-13	10-6-75	Noncompliance regarding installation of unauthorized jumper.

Apparently corrective actions taken to prevent recurrence have not been adequate. Technical Specifications, Quality Assurance Directives, and Administrative Control Procedures provide the tools for evaluating reportable occurrences and operating problems and require that both short term and long term corrective actions be initiated. All event reports and deviation reports require several levels of review and include the Department Heads, Technical Engineer, Quality Supervisor, Operations Committee, and the Chief Engineer. The Safety Committee also reviews these reports. Audits by Plant Quality and Corporate Quality Assurance are also performed and problems identified but apparently management does not have a formal system for identifying problem trends. This concern was also addressed in a previous inspection.^{11/}

The inspector discussed his concern with the licensee regarding this matter. This was also discussed with the Vice President, Generation, on September 15, 1976.

In conclusion, Paragraph 3, Items e, g, h and i will be included as items of noncompliance and will require additional response relating to additional corrective actions.

4. Review of Outstanding Inspection Items

- a. The inspector reviewed the progress of the HPCI High steam flow instrument elbow tap problem. (AO 50-331/74-47)
It was noted that the problem has now remained unresolved for almost two years. Progress since the previous review^{12/} has consisted of performing one test and according to the licensee, results were inconclusive and additional testing must be performed.

As previously discussed, the trip set point being used ($\pm 100'' \text{ H}_2\text{O}$) does not agree with the Technical Specification set point ($\pm 225'' \text{ H}_2\text{O}$). The licensee's original commitment stated that a change had been prepared but was pending a resolution of the instrument elbow tap problem. In a subsequent conversation the inspector informed the licensee that the problem was not being resolved in a timely manner and that the item would be included as a noncompliance with the Technical Specification set point.

- b. The inspector reviewed the licensee's commitment^{13/} to finally approve and fully implement a followup system for NRC non-compliance, reportable occurrences, etc., by March 31, 1976. The inspector's review determined that a followup system still has not been fully implemented nor does there appear to be any direction provided toward satisfying the commitment. The corporate office has been experimenting with a computerized system and the plant has an Operations Committee Punch List,

^{11/} IE Inspection Report No. 050-331/76-12 dated June 10, 1976.

^{12/} IEL&P letter dated March 22, 1976.

^{13/} IEL&P letter dated December 18, 1976.

neither one is complete or acceptable. The inspector informed the licensee that failure to complete the commitment would be included as a deviation. It was noted that this is the second deviation attributed to this commitment.

- c. The inspector reviewed Deviation Report 76-188 (RO 76-57) relating to an event where the torus water level exceeded Technical Specification limits. The inspector noted that installation of operable Torus Water Level Alarms was not yet complete. The licensee's commitment to have the alarms installed by March 15, 1976, was only partially met in that the alarms have never been operable. Six months have passed and an adequate fix to make the alarms operable has not yet been accomplished. The inspector informed the licensee that this would be the subject of a deviation from a commitment to NRC. It was further noted this is the second deviation from the commitment to provide Torus Water Level Alarms.

5. Inspection and Enforcement Bulletin No. 75-03 Relating to Certain Asco Valves

The inspector reviewed the licensee's response^{14/} to the subject bulletin and noted that 22 valves were to have been modified by September 1, 1975. The inspector requested the status of the valve modification and was informed by the licensee that the modification had not been performed. An attempt had been made to install the valve kits, but it was discovered that the installed valves were apparently not of the type in question, even though the vendor prints at the plant described the valve. The inspector asked the licensee if notification to NRC had been made describing the abnormality. The licensee stated that a supplementary response had not been made. The inspector requested the licensee to update the bulletin response and informed him that failure to notify the NRC of a change in commitment would be considered a deviation.

6. Reportable Occurrence Review

The inspector reviewed the process by which Reportable Occurrences are reviewed and noted that events are reviewed in accordance with ACP 1401.6, Plant Investigation and Reporting Activities and are reviewed for reportability in accordance with ACP 1401.7, Documenting Operational Problems. It was further noted that ACP 1401.6 had not been revised to reflect the latest Technical Specifications which were changed in January 1976. The licensee stated that action would be taken to update the subject procedure.

^{14/} IEL&P letter dated May 1, 1976.

The inspector also reviewed the process by which copies of reportable occurrences are forwarded to the Safety Committee and the Vice President, Generation for review and approval of any recommendations. The inspector reviewed a log which is maintained at the site which records the transmittal of all reportable occurrences. It has been established that the transmittal letter must be signed and returned to the plant as acknowledgement of receipt of the document. Return of the transmittal letter is also logged in the record book. The inspector verified selected reportable occurrences and noted that receipt had been acknowledged.

The inspector discussed the review of reportable occurrences with the Vice President, Generation who stated that he reviews them and is aware of the requirements in the Technical Specifications Section 6.6. The question of maintaining a record of this review was discussed and the inspector was presented with a file containing copies of Reportable Occurrences. Also included were copies of Deviation Reports and monthly operating reports. There was no formal method to indicate on the reportable occurrences that they had been reviewed. The inspector discussed the matter with the Vice President, Generation and his secretary and suggested that a file be set up for Reportable Occurrences and Technical Specification violations only and that a cover sheet be attached which would provide space for documenting the required review and approval. It was agreed that it would be done.