U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-331/85014(DRS)

Docket No. 50-331 License No. DPR-49

Licensee: Iowa Electric Light and Power Company
Security Building, P.O. Box 357
Cedar Rapids, Iowa 52406

Facility Name: Duane Arnold Energy Center

Inspection At: Palo, Iowa

Inspection Conducted: May 20-24, 1985

Inspector: W. Milbrot 6/13/85
Date

Approved By: W. Guldemond, Chief 6/13/85
Operational Programs Section Date

Inspection Summary

Inspection on May 20-24, 1985 (Report No. 50-331/85014(DRS))
Areas Inspected: Routine, announced inspection of refueling preparations, refueling surveillances, and tests activities. The inspection involved a total of 36 inspector-hours onsite by 1 NRC inspector including 3 inspector-hours onsite during off-shifts.
Results: No violations or deviations were identified.

DETAILS

1. Persons Contacted

Iowa Electric Light and Power Company

W. Miller, Technical Services Superintendent
*R. Hannen, Assistant Plant Superintendent, Operations
*C. Mick, Operations Supervisor
*K. Howard, Plant Performance Supervisor
*J. Smith, Technical Support Supervisor, Acting
*G. Fulford, Mechanical Maintenance Planner
*M. Grim, Licensing Engineer
*J. West, Quality Assurance Engineer
R. McCracken, Quality Control Supervisor

USNRC

J. Wiebe, Senior Resident Inspector
N. Valliere, Resident Inspector

The inspector also contacted and interviewed other licensee personnel during this inspection.

*Denotes personnel attending the May 24, 1985 exit.

2. Refueling Preparations

The inspector reviewed maintenance, inspection, test, and surveillance procedures covering the preparation, testing, and operational check out of refueling tools and equipment required to support the fuel loading activities to assure that the applicable Technical Specifications (TS) and licensee's procedure requirements were included. The inspector also reviewed reactor fuel and component handling procedures and surveillance test procedures that support the actual fuel transfer operation to assure that support systems are required to be operational for fuel movement.

New fuel was inspected in accordance with Fuel and Reactor Component Handling Procedure (FRCHP) Number 9, Revision 12, "New Fuel Receiving and Inspection". Personnel that performed the inspection were previously trained and certified as new fuel inspectors. The inspection results noted that all nonconformance reports were properly dispositioned and all fuel was acceptable for use. FRCHP Number 9 required that torque wrench calibration data be recorded on the receiving inspection record sheet, attachment 4. This was not accomplished although the information was available on a separate document in the inspection package. The licensee reported that the data would be properly recorded on the inspection record sheet as required by the procedure. A separate QC surveillance inspection report form, completed to support documenting inspection requirements of FRCHP Number 9, listed attributes such as, "fuel free of scratchs, nicks, dents" and "fuel clean, free of oil smears, rust, dents" as not applicable. The licensee reported that any attributes reported as not applicable were not observed by that particular new fuel

inspector. The NRC inspector noted that the reported information is not reflective of the conditions observed. The licensee stated that the surveillance inspection reports would be reviewed for more meaningful recording of inspection results.

The licensee conducted a core reload safety evaluation in accordance with 10 CFR 50.59 that demonstrated changes to the Technical Specifications where required to support the new fuel reload and restart for Cycle 8 operations. These changes were issued as Amendment No. 117 to License No. DPR-49. To support the new fuel reload requirements the licensee issued STP 55A001, Revision 0, specifying fuel pool reactivity checks which was completed satisfactory prior to loading new fuel into the spent fuel storage pool.

No violations or deviations were identified.

3. Refueling Surveillance and Tests

The inspector reviewed documentation of removing fuel from the core in preparation for refueling. The following fuel handling surveillance tests were verified as having been completed:

STP 41A017, Revision 5, APRM High Flux 15% Scram
STP 41A001, Revision 65, Daily and Shiftly Instrumentation Checks
STP 42C005, Revision 8, SRM Trip Functional Test and Calibration
STP 43B001, Revision 2, SRM Daily Response Test
STP 47B003, Revision 14, SBGT System HEPA and Charcoal Filter Efficiency Test
STP 47C001, Revision 8, Secondary Containment Integrity
STP 49A001, Revision 9, Refueling Interlocks Functional Test

FRCHP #5, Revision 17, "Procedure for Moving Fuel Between Reactor Core, In Vessel Rack, and Spent Fuel Pool or Within the Reactor Core, or In Vessel Rack, or Spent Fuel Pool", is the parent document which identifies the full handling prerequisites for refueling and gives details for managing the fuel moving plan (FMP). The FMP provides the required sequence for moving fuel and core components. All record keeping requirements in FRCHP #5 were complete and satisfactory. Review of the official completed copy of the FMP for off loading the core identified that several signatures were missing that verify completion of fuel assembly transfer. The licensee took action to complete the missing signatures using information available from working copies of the FMP.

The licensee imposed inspection requirements on the refueling platform over and above those specified by TS in the form of Test Procedure OP-015, Revision 1, Refueling Platform Shift Inspection. The procedure requires that the refueling platform be inspected each shift during fuel moving activities. During a review of the inspection results it was noted that test data was available only on a daily basis and of the data sheets reviewed several were incomplete and/or missing signatures. The licensee reviewed both Senior Reactor Operator and Reactor Operator logs and reported to the inspector that there was evidence that all shiftly inspections were completed when required. The licensee also reported that some of the test data sheets became contaminated during the test period and were destroyed without making duplicate copies. The licensee further reported that all the missing test data were reconstructed on

data sheets and given the required review signature. The inspector has concerns regarding the licensee's lack of attention to properly completing data, check, test, inspection, etc. sheets as noted here and in other areas of this report and also as previously identified in Inspection Report (331/85010(DRS)). This point was discussed with members of licensee management. This is considered an open item (331/85014-01(DRS)) pending action by the licensee to ensure complete documentation of information when required by procedures and instructions.

Inspection Procedure (IP) 231, Revision 0, "Refueling Platform", covers inspection requirements of the refueling platform prior to use. Steps 2.2, 2.3, and 2.4 of the procedure checklist were not listed as complete. The licensee reported that the requirements of the three subject paragraphs were accomplished in accordance with Inspection Procedure 129, Revision 0, "Steams-Roger Corporation Refueling Platform", which the licensee considered to be similar. Since completion of core off loading, Revision 1 of IP 231 has been issued which specifies additional inspection requirements. The inspector questioned the licensee on the need for completing Revision 1 of IP 231 prior to loading fuel. The licensee made an evaluation and performed the additional inspection requirements.

No violations or deviations were identified.

4. Refueling Activities

In preparation for reloading the core, personnel training was completed, status boards were established on the refueling floor, area radiation monitors on the refueling floor were within calibration and verified operational with visual and audible indication in the control room and on the refueling floor, spent fuel storage pool water level was verified satisfactory, and good housekeeping and material accountability practices were put into effect.

The inspector did not observe core loading activities during the inspection period.

No violations or deviations were identified.

5. Open Items

Open items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or licensee or both. An open item disclosed during the inspection is discussed in Paragraph 3.

6. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) on May 24, 1985 to discuss the scope and findings of the inspection. The licensee acknowledged the statements made by the inspector with respect to items discussed in the report. The inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection. The licensee did not identify any such documents/processes as proprietary.