

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-409/82-18(DPRP)

Docket No. 50-409

License No. DPR-45

Licensee: Dairyland Power Cooperative
2615 East Avenue - South
La Crosse, WI 54601

Facility Name: La Crosse Boiling Water Reactor

Inspection At: La Crosse Site, Genoa, WI

Inspection Conducted: September 1 through October 31, 1982

Inspector: *John S. Reges for*
W. W. Branch

11/23/82

Approved By: *John S. Reges for*
R. D. Walker, Chief
Projects Section 2B

11/24/82

Inspection Summary

Inspection on September 1 through October 31, 1982 (Report No. 50-409/82-18(DPRP))

Areas Inspected: Followup on Open Inspection Items; Routine Resident Inspection of Operational Safety Verification; Monthly Maintenance Observation; Monthly Surveillance Observation; Licensee Event Report Followup; Inspection and Enforcement Circular Followup; Inspection and Enforcement Bulletin Followup; Plant Trip Followup; Fire Protection/Prevention Annual Inspection; Audit Program Annual Inspection; Part 21 Report Followup; Regional Request Followup; and Startup Testing following Refueling. The inspection involved a total of 188 inspector-hours onsite by one NRC inspector including a total of 32 inspector-hours onsite during offshifts.

Results: Of the thirteen items inspected, no items of noncompliance were identified in eleven of the areas. Two items of noncompliance were identified in two areas. (Improper use of the explosive detector - Paragraph 3; improper implementation of the 18 month surveillance test specified in Technical Specification - Paragraph 5).

DETAILS

1. Persons Contacted

- *J. Parkyn, Plant Superintendent
- G. Boyd, Operations Supervisor
- *L. Goodman, Operations Engineer
- S. Rafferty, Reactor Engineer
- M. Polsean, Shift Supervisor
- W. Nowicki, Supervisor, Instrument & Electric
- R. Wery, QA Supervisor
- *G. Joseph, Security Director
- *L. Kelly, Assistant Operations Supervisor
- *P. Shafer, Radiation Protection Engineer
- *B. Zibung, Health & Safety Supervisor
- R. Brimer, Electrical Engineer
- D. Rybarik, Mechanical Engineer

*Denotes those persons present at the exit interview.

2. Followup on Open Inspection Items

(Closed) Unresolved Item (409/81-21-07): TMI Item II.k.3.27, Common Reference Level.

The licensee commitment to include the evaluation of common reference level in their control room design review (NUREG - 0737 Item 1.D.1) was accepted by NRR and was documented by the October 15, 1982, letter from Crutchfield to Linder.

(Closed) Noncompliance (409/81-23-01): Failure to take required temperature readings that resulted in excessive cooldown of the No. 1B forced circulation loop.

The inspector reviewed the licensee corrective action as specified in the licensee letter LAC-8525, dated August 25, 1982 and found that the response appears to be prudent and should prevent reoccurrence.

(Closed) Noncompliance (409/81-23-02): March 16, 1981, event of operation on the main steam bypass valve while at power.

The inspector reviewed the licensee corrective action as specified in the licensee letter of response LAC-8525, dated August 25, 1982, and found that the response appears to be prudent and complete.

(Closed) Noncompliance (409/81-23-03): Modification of Operating Procedures without the proper review.

The licensee response letter LAC-8525, dated August 25, 1982, indicated that all Operations Memoranda have been cancelled as of July, 1982, after being incorporated into formal procedures, as necessary. The

licensee also indicated that any future use of Operations Memorandum will be solely to provide information and will not be used to carry out an evolution.

(Closed) Noncompliance (409/82-07-01): Failure to conduct the required followup sampling as required by Technical Specification.

The inspector reviewed the licensee response as described in letter LAC-8584, dated September 10, 1982. This review verified that the Health Physics Technicians were entering the Technical Specification limits on the Analysis Report as specified in the licensee response.

(Closed) Noncompliance (409/82-07-02): Both core spray pumps inoperable while the Low Pressure Core Spray sub-system was inoperable.

The inspector reviewed the licensee response as described in letter LAC-8584, dated September 10, 1982. This review verified that the licensee has modified Administrative Control Procedure (ACP) 04.1 Section 4.19 to require shift supervisors be made aware of the scope of all facility modifications prior to authorizing any work on those modification packages.

3. Operational Safety Verification

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the months of September and October 1982. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of the reactor building and turbine building were conducted to observe plant equipment conditions, including potential fire hazards, fluid leaks, and excessive vibrations and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector by observation and direct interview verified that the physical security plan was being implemented in accordance with the station security plan.

The inspector observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. During the months of September and October 1982, the inspector walked down the accessible portions of the Shutdown Condenser, Alternate Core Spray and Emergency Diesel Generator systems to verify operability. The inspector also witnessed portions of the radioactive waste system controls associated with liquid radwaste discharges.

These reviews and observations were conducted to verify that facility operations were in conformance with the requirements established under technical specifications, 10 CFR, and administrative procedures.

On or about September 1, 1982, a test was being performed on the High Pressure Core Spray (HPCS) system to verify proper flow reading after the installation of a new core spray flow and pressure transmitter.

This test indicated that higher than normal pressures were being developed at the discharge of the positive displacement HPCS pumps indicating a possible restriction in the core spray piping. After extensive trouble shooting and flow testing, it was determined that the blockage was in the core spray assembly that is internal of the reactor vessel. During cleaning and flushing operations, the licensee speculated that the blockage was being caused by river silt that was injected during the June 2, 1982 event of inadvertently injecting river water into the core spray system while testing valves that connect the HPCS system to the High Pressure Service Water system (HPSW).

The inspector's review of the events described above indicated that the river water backup system may not be a reliable source of water. The foreign materials that this system might transport could block the core spray nozzles or the suction strainer which is upstream of the core spray pumps resulting in the High and Low Pressure Core Spray systems not being capable of supplying the necessary water spray to the fuel. Because of the potential loss of HPCS and the Low Pressure Core Spray sub-system due to injection of river water from this backup system a single failure, as defined in 10 CFR, Part 50, the opening of HPSW valve 53-25-004 could be postulated and this failure was not addressed in the single failure analysis of the LACBWR Emergency Core Cooling system.

On September 17, 1982, a memorandum was sent to NRR requesting an expedited review of the inspector's concerns prior to allowing plant startup.

NRR reviewed the events described above and determined that system redundancy at LACBWR was sufficient and that the HPSW cross-connected to the HPCS system should be removed from service by closing the manual isolation valves or by electrically disabling valve 53-25-004. The licensee elected to electrically disable valve 53-25-004.

The licensee actions and the safety analysis that were modified by the licensee actions were identified to NRR in the September 22, 1982, letter from Linder to Crutchfield, IAC-8601.

On October 13 and 14, 1982, the inspector noted an item of noncompliance dealing with the use of the explosive detector. Details of this noncompliance is described in Appendix "B" and are considered Safeguards Information as defined in 10 CFR, Section 73.21 (409/82-18-01).

No additional items of noncompliance or deviations were noted.

4. Monthly Maintenance Observation

Station maintenance activities of safety related systems and components listed below were observed/reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides and industry codes or standards and in conformance with technical specifications.

The following items were considered during this review: the limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; radiological controls were implemented; and, fire prevention controls were implemented.

Work requests were reviewed to determine status of outstanding jobs and to assure that priority is assigned to safety related equipment maintenance which may affect system performance.

The following maintenance activities were observed/reviewed:

- a. Repair of faulty cable on the delayed detector on the mobile monitor (MR 720)
- b. Repair to gaseous waste flow element (MR 788)
- c. Repair to Power Range Nuclear Instrument Channel No. 7 (MR 821)
- d. Repair of leaking N₂ supply line to Manual Depressurization System (MDS) valve No. 1A (MR 740)

Following completion of maintenance on the MDS valve and Nuclear Instrument Channel No. 7, the inspector verified that these systems had been returned to service properly.

The inspector noted that documentation of the testing performed after repairs per Maintenance Requests (MR) 720, 788 and 821 was sketchy and difficult to follow. The inspector discussed this problem with the Plant Superintendent who immediately ordered a QA audit of MR testing. The inspector will review the audit results during the next monthly inspection and will followup on any discrepancies which may be noted. This item is considered to be an Unresolved Item (409/82-18-02) and will be reviewed during a subsequent inspection.

No items of noncompliance or deviations were noted.

5. Monthly Surveillance Observation

The inspector observed technical specifications required surveillance testing on the Channel No. 1 Safety System (monthly test) and the yearly test of the High Pressure Core Spray System and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that limiting conditions for operation were met, that removal and restoration of the affected components were accomplished, that test results conformed with technical specifications and procedure requirements and were reviewed by personnel other than the individual

directing the test, and that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

The inspector also witnessed portions of the following test activities: the biweekly test of radiation monitors and the monthly test of the No. 1A Emergency Diesel Generator.

During a review of the Technical Specification required surveillance testing for the No. 1A and 1B Emergency Diesel Generator, the inspector noted the following:

Technical Specification 5.2.10.1.1.2.c.3 (18 month surveillance requirement for the Emergency Diesel Generators) requires that the diesel generators be tested by simulating a loss of offsite power in conjunction with an Emergency Cooling System (ECCS) test signal. Step (b) of this Technical Specification requires a verification that the diesel starts from ambient condition on the auto-start signal, energizes the essential buses with permanently connected loads, energizes the auto-connected loads and operates while its generator is loaded with the emergency loads. The licensee surveillance test procedures, Sections 23.4.3 and 24.4.3 of Volume IV of LACBWR Operating Manuals, which implemented these Technical Specification requirements do not require that the emergency diesel generators be loaded with all of the emergency loads (ie., core spray pumps are not started). The licensee surveillance test procedures also test the auto-start by ECCS signal independent instead of in conjunction with the loss of offsite power test.

The inspector reviewed the past three tests performed June 3, 1982; December 30, 1980 and May 10, 1979, and verified that these tests were performed using the licensee's test method as described above in lieu of the test method described in the Technical Specification. This item is considered to be an item of noncompliance (409/82-18-03).

No other items of noncompliance or deviations were noted.

6. Licensee Event Reports Followup

Through direct observations, discussions with licensee personnel, and review of records, the following event reports were reviewed to determine that reportability requirements were fulfilled, immediate corrective action was accomplished, and corrective action to prevent recurrence had been accomplished in accordance with technical specifications.

- a. (Closed) LER 82-14 (High alpha activity in the primary coolant).
- b. (Closed) LER 82-15 (Personnel error that resulted in both High Pressure Core Spray Pumps and the Low Pressure Core Spray system being inoperable simultaneously).

The events described in the LER's above were reviewed by the inspector in June 1982 and items of noncompliance were issued in Inspection Report No. 50-409/82-07.

- c. (Open) LER 82-05 (Discrepancy discovered in the seismic and stress analysis of the HPCS discharge piping). The licensee has not provided the additional information as committed to in the LER. The licensee states that it has not received from its contractor the complete analysis for all systems which were determined to need reanalysis.
- d. (Open) LER 82-16 (Unmonitored and uncontrolled release of radioactive liquid to the Mississippi River. This item is being held open along with LER 80-12 that addressed the plugging of the floor drains that may have attributed to the occurrence described in LER 82-16. An item of noncompliance for this event was issued by Region III Health Physics division in Inspection Report 50-406/82-14.

No additional items of noncompliance or deviations were noted.

7. IE Circular Followup

For the IE Circulars listed below, the inspector verified that the Circular was received by the licensee management, that a review for applicability was performed, and that if the circular were applicable to the facility, appropriate corrective actions were taken or were scheduled to be taken.

- a. (Closed) IEC 81-11 (Inadequate Decay Heat Removal During Reactor Shutdown).
- b. (Closed) IEC 81-14 (Main Steam Isolation Valve Failures to Close).

The licensee took an extremely long time to address these two items (ie., fifteen months for IEC 81-11 and eleven months for IEC 81-14), this untimely response was discussed with the Plant Superintendent who subsequently indicated that he has established an internal requirement of requiring new items be entered into a tracking system and this will ensure a more timely response.

No items of noncompliance or deviations were noted.

8. IE Bulletin Followup

For the IE Bulletins listed below the inspector verified that the Bulletin was received by licensee management and reviewed for its applicability to the facility. If the Bulletin was applicable the inspector verified that the written response was within the time period stated in the Bulletin, that the written response included the information required to be reported, that the written response included adequate corrective action commitments based on information presented in the Bulletin and the licensee's response, that the licensee management forwarded copies of the written response to the appropriate onsite management representatives, that information discussed in the licensee's written response was accurate, and that corrective action taken by the licensee was as described in the written response.

(Closed) IEB 79-15, including supplement No. 1 (Deep Draft Pump Deficiencies). The inspector verified that the requested information was submitted to I & E Headquarters.

No items of noncompliance or deviations were noted.

9. Plant Trips

Following the plant scrams on September 26, 1982, caused by a short of Scram Relay Coil K103-2; October 12, 1982, caused by MSIV closure and the manual scram on October 15, 1982, caused by the operator response to Main Steam Bypass Valve operation, the inspector ascertained the status of the reactor and safety systems by observation of control room indicators and discussions with licensee personnel concerning plant parameters, emergency system status and reactor coolant chemistry. The inspector verified the establishment of proper communications and reviewed the corrective actions taken by the licensee.

All systems responded as expected, and the plant was returned to operation on September 26, 1982, October 13, 1982 and October 15, 1982 respectively.

No items of noncompliance or deviations were noted.

10. Fire Protection/Prevention Annual Inspection

The inspector conducted a plant tour on October 22, 1982, to verify that the fire fighting equipment specified in Fire Protection Procedure (FPP) 06.7 was in place and in good repair. The inspector noted that the standby breathing air bottles located throughout the plant were not being maintained at the "full" mark on the pressure gage. This item was discussed with the Fire Protection Supervisor who indicated that the bottles pressure varied greatly with ambient temperature changes and he committed to reviewing the inspection of these air bottles to determine if a weekly inspection would be more appropriate than the specified monthly inspection. This item will be reviewed during a subsequent inspection and is considered Unresolved Item (409/82-18-04).

No items of noncompliance or deviations were noted.

11. Implementation, Audit Program

The inspector witnessed portions of the 1982 Annual QA audits performed in the area of Fire Protection and Health and Safety. The inspector verified that the audits were performed by qualified personnel and in conformance with Technical Specifications and plant procedures.

The inspector also reviewed audit report 70-91-4 dated November 23, 1981, for the audit performed on the licensee emergency plan. The inspector noted that the response to this audit was not received within the thirty days as required by Administrative Control Procedure (ACP) 19.0. This

item was discussed with the Plant Superintendent who reemphasized to his staff the need to supply timely responses to audit findings. The Plant Superintendent has further imposed an internal fifteen day response to all audits and the inspector will verify conformance to this action during subsequent inspections. This item is Open Item (409/82-18-05).

No items of noncompliance or deviations were noted.

12. Part 21 Report Followup

As a followup to the 10 CFR Part 21 report dated April 29, 1982, regarding defects discovered in certain ASCO solenoid valves, the inspector reviewed all the correspondence between Dairyland Power Cooperative (DPC) and Automatic Switch Co. (ASCO) on the reported defect. The inspector forwarded the correspondence to Region III personnel for the determination if a generic problem exists and to determine if a followup inspection of the vendor should be performed.

No items of noncompliance or deviations were noted.

13. Regional Request

The Resident Inspector was requested by Region III to determine the manufacturer of LACBWR's electrical penetration assemblies and if it was determined that they were manufactured by Bunker Ramo, verify the specific type. The inspector reviewed licensee records and verified the penetrations were not manufactured by Bunker Ramo. The penetrations that are installed at LACBWR were manufactured by Chicago Bridge and Iron Co. with subassemblies manufactured by the Canon Co.

No items of noncompliance or deviations were noted.

14. Startup Testing Following Refueling

The inspector observed portions of the following tests performed subsequent to the refueling outage and verified that the evaluations were conducted in accordance with technically adequate and approved procedures:

- a. Control Rod Drive Scram Time Tests as specified in Section 6.4.1 of Volume IV to the LACBWR Operating Manual.
- b. Determination of Reactor Shutdown Margin as specified in Procedure No. 5, Revision 1 of (FC 31-82-2).
- c. NI response to Rod Movement and verification of negative temperature coefficient as specified in Procedure No. 5, Revision 1 of (FC 31-82-2).

No items of noncompliance or deviations were noted.

15. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Unresolved items disclosed during the inspection are discussed in Paragraph 4 and 10.

16. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) throughout the month and at the conclusion of the inspection and summarized the scope and findings of the inspection activities.