U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report Nos. 50-456/88008(DRP); 50-457/88009(DRP)

Docket Nos. 50-456; 50-457 License Nos. NPF-72; NPF-75

Licensee: Commonwealth Edison Company
Post Office Box 767
Chicago, IL 60690

Facility Name: Braidwood Station, Units 1 and 2

Inspection At: Braidwood Site, Braidwood, Illinois

Inspection Conducted: February 14 through April 9, 1988

Inspectors: T. M. Tongue
T. E. Taylor
T. Tella
J. M. Ulie
A. Dunlop, Jr.
P. Kaufman
R. Sutphin
W. Grant

Approved By: J. M. Hinds, Jr., Chief
Reactor Projects Section 1A

4.18.88
Date

Inspection Summary

Inspection from February 14 through April 9, 1988 (Report Nos. 50-456/88008(DRP); 50-457/88009(DRP))
Areas Inspected: Routine, unannounced safety inspection by the resident inspector of licensee action on previously identified items; confirmatory action letters; regional requests; followup on TMI action items; operators' use of measuring and test equipment (M&TE); control room log entries; startup test observation; initial criticality witnessing; operational safety verification; radiological protection; engineered safety feature systems; sustained control room and plant observations; physical security; monthly maintenance observation; monthly surveillance observation; training effectiveness; report review; and meetings and other activities.
Results: Of the nineteen areas inspected, no violations were identified in seventeen. In the remaining areas two violations were identified regarding operators' use of M&TE (Paragraph 6) and control room log entries (Paragraph 7).

8805030333 880426
PDR ADOCK 05000456
Q DCD

DETAILS

1. a. Persons Contacted

Commonwealth Edison Company (CECo)

+ K. L. Graesser, General Manager PWR
+ T. J. Maiman, Vice President
D. Shamblin, Project Manager
+ E. E. Fitzpatrick, Station Manager
W. E. Vahle, Construction Superintendent
D. E. O'Brien, Station Services Superintendent
+*K. Kofron, Production Superintendent
*L. E. Davis, Assistant Superintendent - Technical Services
B. Byers, Assistant Construction Superintendent
M. Lohman, Project Startup Superintendent
P. Cretens, Station Startup Assistant Superintendent
+ S. C. Hunsader, Nuclear Licensing Administrator
+ D. Elias, Engineering Superintendent
F. Willaford, Security Administrator
+*D. E. Paquette, Maintenance Assistant Superintendent
+*G. R. Masters, Operations Assistant Superintendent
E. L. Martin, Quality Assurance Superintendent
R. Benn, Assistant Security Administrator
+*P. L. Barnes, Regulatory Assurance Supervisor
*M. Takaki, Regulatory Assurance
*J. Gosnell, Quality Control Supervisor
R. E. Aker, Radiation/Chemistry Supervisor
J. Jasnoz, Technical Staff AR/PR Coordinator
R. Lemke, Technical Staff Supervisor
E. R. Netzel, Quality Assurance Supervisor
+ F. G. Lentine, Licensing Supervisor
+ R. W. Stobert, Quality Assurance Director
G. M. Orlov, Staff Assistant to Project Manager
*P. G. Holland, Regulatory Assurance
*T. W. Simpkin, Regulatory Assurance Operating Experience Group
R. C. Bedford, Regulatory Assurance
+ R. D. Kyrouac, Quality Assurance Supervisor
L. Kline, Regulatory Assurance Industry Group
+ L. W. Raney, Nuclear Safety Supervisor
R. J. Ungeran, Operating Engineer Unit 1
R. Yungk, Operating Engineer
R. J. Legner, Lead Operating Engineer
T. O'Brien, Technical Staff
S. Hedden, Master, Instrument Maintenance
R. Hoffman, Master, Mechanical Maintenance
J. Smith, Master, Electrical Maintenance
W. McGee, Training Supervisor
A. Iturrieta, POAD Field Supervisor
B. Tanouye, Project Construction Department

A. J. D'Antonio, Quality Control
D. H. Schavey, Training
E. Carroll, Regulatory Assurance
*J. R. Phillips, Instrument Maintenance Department
*T. M. Bandura, Quality Assurance Senior Inspector
+ D. J. Skoza
+ P. R. Donavin, Mechanical Supervisor
+ B. R. Shelton, Engineering Manager
+ S. M. Gaitonde, Material Analysis Department
+ R. A. Flessner, Operating Staff Engineer
+ J. F. Cook, Byron Regulatory Assurance
+ N. J. Mares, Systems Materials Analysis Department
+ S. A. Stapp, Quality Assurance

L. K. Comstock (LKC)

I. DeWald, Quality Control Manager
P. Sheppard, Project Manager
L. Szumsk, Project Engineer
C. Hart, Senior Quality Assurance Engineer

NRC

+A. B. Davis, RIII, Regional Administrator
+D. R. Muller, NRR Project Director
+E. G. Greenman, RIII, Director, Division of Reactor Projects
+H. J. Miller, RIII, Director, Division of Reactor Safety
+W. L. Forney, RIII, Chief, Reactor Projects Branch 1
+G. C. Wright, RIII, Chief, Operations Branch
+J. M. Hinds, Jr., RIII, Chief, Reactor Projects Section 1A
+R. D. Lanksbury, RIII, Operational Readiness Inspection Team Leader

+Denotes those attending the Pre-Full Power Licensing Status Operational Readiness Inspection Problem Resolution meeting at Region III on February 29, 1988.

*Denotes those attending the exit interviews conducted on February 25, March 25, and April 7, 1988, and at other times throughout the inspection period.

The inspectors also talked with and interviewed several other licensee employees, including members of the technical and engineering staffs, startup engineers, reactor and auxiliary operators, shift engineers and foremen, and electrical, mechanical and instrument maintenance personnel; as well as contractor personnel, including security personnel, construction personnel, and startup engineers.

b. Attendees at the Public Officials Meeting on April 5, 1988

Public Officials

P. Schak, City of Kankakee, Department of Water Pollution Control
F. Harvey, City of Kankakee, Department of Water Pollution Control
B. Weidling, City of Wilmington, Mayor
R. Bell, City of Wilmington, Alderman
G. Fisher, Editor-Publisher, Wilmington Free Press

Commonwealth Edison Attendee

P. Barnes, Regulatory Assurance Supervisor

NRC Attendees

C. Paperiello, RIII, Deputy Administrator
E. Greenman, RIII, Director, Division of Reactor Projects
R. Lickus, RIII, Chief, State and Government Affairs
W. Forney, RIII, Chief, Reactor Projects Branch 1
J. Hinds, RIII, Chief, Reactor Projects Section 1A
T. Tongue, Senior Resident Inspector, Braidwood
T. Taylor, Resident Inspector, Braidwood
G. VanSickle, RIII, Project Inspector, Section 1A

2. Licensee Action on Previously Identified Items

a. Open Items

(Closed) 457/87031-02: This item concerned check valves 2SI8905A, 2SI8905B, and 2SI8905C exceeding their one gpm leak rate limit as specified by BwPT SI-53, "Safety Injection Check Valve Operability and Leakage Test (IHF)." The licensee has reworked the valves and successfully tested the valves per BwVS 4.6.2.2-1 on February 19, 1988. This item is closed.

(Closed) 457/87035-01: This item concerned the demonstration of secondary sample collection and the operation and calibration of in-line monitors for the secondary sampling panel of Unit 2. This item was reviewed and addressed in inspection report 456/87046(DRS); 457/87047(DRS), where installation of equipment was verified. However, steam was required to demonstrate operability. On February 18, 1988, while Unit 2 was in Mode 3, the operability and calibration was verified to be acceptable by a Region III inspector. This item is considered closed.

(Closed) 457/87039-05: This item concerned BwPT CV-57, Acceptance Criterion 4.3, which could not be met with the reactor makeup controls in the auto-makeup mode. BwPT CV-50, Retest 32, was performed, and the acceptance criteria could not be met. The licensee will continue to investigate a resolution to the control problem of 2CV110B with Action Item Record (AIR) #20-87-337. Since

the makeup system can be operated in manual, there is no immediate operational concern. In addition, the licensee has issued AIR #20-88-129 to ensure that the operating department is aware of the operating restrictions on the reactor makeup control system and that procedures are reviewed and revised accordingly. Since the licensee has taken adequate measures to correct the immediate and long-term actions required to resolve this concern, this item is closed.

(Closed) 457/87039-09: This item concerned the the testing required on ventilation fans after the incorporation of Engineering Change Notice (ECN) 36932 to ensure that the fans automatically restart when power is restored after a loss-of-offsite-power event. The inspector has reviewed BwPT VD-55, Retest 29, "Diesel Generator Misc. Electric and SWGR Room Ventilation," which successfully tested the above function on all the fans changed by the ECN. This item is closed.

(Closed) 457/87045-02: As a result of the inspector's review, the CO_2 fire suppression systems of four plant areas, including three upper cable spreading rooms and one lower cable spreading room, were determined to have not met all the acceptance test criteria. A retest was conducted by the licensee in each of these upper and lower cable spreading rooms; each subsequently passed the demonstration test acceptance criteria. The retest of certain of these plant area systems was witnessed by an NRC regional inspector.

b. Unresolved Items

(Closed) 456/87032-01; 457/87031-04: This item concerned BwVS 7.1.1.1 and BwMP 3305-T033, in that the acceptance criteria specified in the procedures for the lift setpoints of the main steam safety valves were outside the one percent tolerance allowed by Technical Specification 3.7.1.1 for the "A" and "B" valves. In addition, the lift pressure of valve 2MS017A did not satisfy the Technical Specification tolerance and required retesting. The licensee has updated BwVS 7.1.1.1, Revision 2, and BwMP 3305-T033, Revision 1, to ensure that the surveillances are consistent with the Technical Specifications. 2MS017A has been satisfactorily retested with the revised procedures. This item is closed.

(Closed) 456/87045-01; 457/87046-01: The licensee's quality control (QC) department did not identify the unacceptable backlog of incomplete evaluations of out-of-tolerance (OOT) measuring and test equipment (M&TE). The inspector reviewed several OOT M&TE evaluation reports and the review backlog. The backlog of 70 outstanding evaluations at the last inspection has now been reduced to 21. The backlog in the instrumentation department has been reduced from 62 to 12. The backlog of outstanding evaluations for over 180 days has been reduced from 20 to 1. The QC department has been identifying and reporting this backlog to the station management and other departments on a daily basis. The OOT instruments, effective Technical Specification requirements, or the station operability are being handled as deviation reports.

Two additional contract personnel knowledgeable in meteorology are being added to the station instrumentation department, where most of the OOT M&TE evaluation exists. This indicates the management attention and involvement in solving this problem. This item is closed.

c. Violations

(Closed) 456/87030-01; 457/87029-01: Procurement documentation failed to identify specific requirements, such as material specifications, to be met by the procured items. The licensee verified that the valve discs furnished were made of SA 516-70 material and that this material was acceptable for the intended use. The inspector reviewed the current documentation associated with these valve discs and then examined the discs in stock. The Discrepancy Record, the drawings, the Sargent & Lundy Engineers letter of January 16, 1987, the Stores Item Record, Procurement Information, the Deviation Report, and the Training Records documentation had been prepared and/or revised as necessary to show the correct information. The identification tags on the items in stock had also been corrected in an appropriate manner. Training of quality assurance and quality control personnel was completed to help preclude a repetition of this problem. This violation is closed.

(Closed) 456/87030-03; 457/87029-03: The licensee did not establish measures to adequately control the use of OOT M&TE and to evaluate the effects on operating equipment.

The corrective action described in the licensee's October 30, 1987 letter to the NRC was to revise Procedure BwAP 400-4T2 to specify how evaluations of M&TE are to be performed and documented. The inspector reviewed the revised procedure and noted a more defined evaluation process in comparison to the previous procedure.

The inspector reviewed several evaluations of OOT measuring and test equipment, and noted that the new procedure is being implemented. The backlog of outstanding (over 30 days) evaluations for OOS measuring and test equipment has been reduced from 70 to 21. This item is closed.

(Closed) 457/87045-03: Failure to provide instructions of a type appropriate to the circumstances for plant emergency operations. On March 3, 1988, the inspector reviewed the licensee's emergency procedures to determine whether implementation of corrective actions for the violation had been completed. The licensee has implemented a temporary procedure change for the "Operator Action Summary for 2BwEP-0 Series Procedures"; a permanent change was expected to have been completed by March 31, 1988. This item is considered closed.

No violations or deviations were identified.

3. Confirmatory Action Letters

On March 23, 1988, Region III issued two Confirmatory Action Letters (CAL RIII-88-05 for Unit 1 and CAL RIII-88-06 for Unit 2) to Braidwood for equipment qualification (EQ) issues. In summary, the CALs relate to identification of grease in motor operators for motor-operated valves and contamination of the calcium-based grease with lithium-based grease. In addition, the CALs stipulate that the reactors would not be started up until resolution of the concern is concurred in by the Region III Administrator or his designee. The resident inspectors have been cognizant of the activities and progress in this area.

These issues, in addition to others, were identified by an EQ team inspection conducted between March 4 and March 11, 1988, with followup, and are addressed in Inspection Report 456/88005(DRS); 457/88006(DRS).

4. Regional Request

a. By a memorandum dated January 28, 1988, Region III requested information related to main steam safety valves (MSSVs) in PWRs. It also requested a followup of the licensee's response to I.E. Information Notice 86-05, "Main Steam Safety Valve Test Failures and Ring Seating Adjustments," and Supplement 1 to I.E. Information Notice 86-05.

The information requested was provided to Region III, Division of Reactor Safety, via a memorandum dated February 23, 1988.

b. On April 4, 1988, Region III requested the resident inspectors to determine the number of limitorque motor-operated valves, type H3BC, installed at Braidwood. The following information was provided on April 5, 1988. There are 17 such valves installed in the Braidwood essential service water system; Unit 0 has three and Unit 1 and Unit 2 have seven each. All are safety-related, and none are part of the EQ program.

This was a followup of a preliminary 10 CFR 21 notification, in which some casting porosity was identified in the worm gear in several valves in another facility.

5. Followup on TMI Action Items

I.C.6 Verify Correct Performance of Operating Activities

The inspector reviewed the licensee's program for compliance with NUREG-0737 for this item. The licensee uses procedures BwAP 330-1, "Braidwood Equipment Out-Of-Service," BwAP 330-2, "Temporary Alterations," and BwAP 340-2, "Use of Mechanical and Electrical Lineups," to implement the NUREG-0737 requirements for this item. In a previous inspection period this item was reviewed for Unit 1. The item remained open pending review of BwAP 330-1 and 340-2 implementation. These procedures are now implemented adequately, and the same administrative controls are used for Units 1 and 2. This item is considered closed for Units 1 and 2.

I.C.8 Pilot Monitor of Selected Emergency Procedures for NTOLs

Section 13.5.2 of the Braidwood Safety Evaluation Report (SER), Supplement 2, describes the staff's review of Emergency Operating Procedures (EOPs). The staff's review covered EOP requirements to assure that licensee procedures would contain the required information for proper utilization of resources (manpower and equipment) during emergency conditions. Also, personnel training guidelines to assure familiarization with procedure content were reviewed. The staff has concluded that the licensee's EOPs are acceptable relative to the requirements of NUREG-0737 presented by Generic Letter 82-33. In addition, regional based inspectors have also reviewed the EOPs and operator training. The results identified the EOPs to be acceptable in scope and content, with some minor deficiencies that the licensee has resolved. This item is considered closed for Units 1 and 2.

I.A.1.3 Shift Manning

Prior to and during the Unit 2 fuel load, the inspector reviewed the licensee's program implementation for minimum shift crew coverage and overtime. The licensee's administrative programs are described in BwAP 320-1, "Shift Manning," and BwAP 100-7, "Overtime Guidelines for Personnel Performing Safety-Related Functions." The inspector identified by review of shift records and direct observation that the implementation of shift manning requirements is in compliance with licensee administrative and NRC regulatory guidelines. The inspector also found that overtime administrative controls for on-shift personnel required by BwAP 320-1 are correctly implemented in accordance with BwAP 100-7. During the Operational Readiness Inspection (ORI), a concern was raised regarding radchem technicians involving the interpretation of personnel affected by the overtime administrative controls. These concerns are addressed in the ORI inspection report. This item is considered closed for Unit 2.

6. Operators' Use of M&TE

While monitoring startup test RP-70, "Reactor Protection Logic," on February 7, 1988, the inspector observed nuclear station operators (NSOs) using a fluke multimeter to measure voltages and electrical grounds. On February 9, 1988, during performance of surveillance 2BwOS 3.2.1.1a-2, two inadvertent auto starts of the 2A auxiliary feed pump occurred. An investigation of the auto pump starts by the cognizant Tech Staff engineer identified that the auto starts resulted from incorrect use of the multimeter used for data acquisition for the test. The test data was obtained by an NSO using a multimeter. A check by the Regulatory Assurance group, at the request of the Resident Inspector, of NSO training records revealed that the NSOs do not receive any documented training or instruction on the proper use of a multimeter. This practice of allowing personnel to use test equipment, for which they receive no documented training to assure that suitable proficiency is achieved and maintained, to perform activities which affect the operation of safety-related equipment is considered a violation of 10 CFR 50, Appendix B, Criterion II (456/88008-01(DRP); 457/88009-01(DRP)).

7. Control Room Log Entries

During observation of startup test 1BwSU RP-70, "Reactor Protection Logic," on February 7, 1988, the inspector noted that the Unit 2 NSO's log did not have an entry for RP-70 initiation. Additionally, during the Operational Readiness Inspection (ORI) for Unit 2 (February 16-19, 1988), the inspectors noticed that the NSO's log contained only infrequent notes (one) over about a two-week period on when the boric acid transfer pumps (BATPs) were run to recirculate the boric acid storage tanks, even though the BATPs were run once every several days. BwAP 350-1, "Operating Logs and Records," states that all operation logs will be kept current with clear, concise, complete, and legible entries. BwAP 350-1 further states that control room log entries prefaced by the time of occurrence shall be made for, but not limited to, such activities as reactivity changes, equipment status changes, and performance of surveillance tests.

Due to the noted missing log entry and ORI inspectors' concerns, the resident inspectors performed an inspection to evaluate the licensee's adherence to BwAP 350-1. The inspection consisted of observation of control room activities and a review of the NSOs' control room logs. The following are examples of the items which were found to be contrary to the requirements of BwAP 350-1.

a. Illegible log entries: On February 4, 23, 24, 25, 1988, and on March 7, 1988, several illegible entries were noted in the Unit 2 control room log.

b. Incomplete and inconcise entries:

(1) On February 23, 24, and 25, 1988, the log contained entries for "manually opened Rx trip breakers." The entries are incomplete in that they do not tell why the breakers were opened. Other observed entries which document reactor trip breaker operation identify the reasons for opening or closing the breakers.

(2) The inspectors' observation of control room activities identified examples of control room activities for which log entries should have been made, but were not. Some of the activities for which log entries were not made include a valve stroke test of the 1B main steam isolation valve (MSIV) on February 24, 1988, several reactivity changes made on Unit 2 (rods moved in or out, and boration) during the first hour of March 9, and operator action to maintain steam generator (SG) level above the reactor trip setpoint after water levels in the Unit 2 A and C SGs decreased to the low level alarm point at about 9:28 a.m. on March 10. In addition, on March 16, at about 5:00 a.m., a problem with the Unit 2 P-8 control rod position indication occurred, but no log entry was made by the Unit 2 NSO; similarly, on the following dates, startup test activities for Unit 2 were conducted, but no log entries were

made: on February 7, 1988, at 9:50 a.m. for RP-70, on February 24, 1988, for RY-70 and PI-70, on March 9, 1988, at 3:18 a.m. for RD-75, on March 10, 1988, for IT-70.

This failure to document control room activities in the manner prescribed by BwAP 350-1 is considered a violation of 10 CFR 50 Appendix B, Criterion V (456/88008-02(DRP); 457/88009-02(DRP)).

8. Startup Test Observation (72302)

The inspectors witnessed performance of portions of the following Unit 2 startup test procedures in order to verify that testing was conducted in accordance with the operating license and procedural requirements, that test data was properly recorded, and that performance of licensee personnel conducting the tests demonstrated an understanding of assigned duties and responsibilities:

NR-71, Initial Criticality
NR-72, Initial Criticality and Low Power
IT-70, ISO Temp. Coefficient
RD-74A, Rod Worth Measurement - Dilution
RD-74B, Rod Worth Measurement - Boration
RY-70, Pressurizer Spray, Heaters, and Bypass Flow
IC-71, Full Core Flux MAP

No violations or deviations were identified.

9. Initial Criticality Witnessing (72592)

The Unit 2 initial criticality was achieved on March 8, 1988 at 11:50 a.m. The resident inspectors continually monitored the preparation for, approach to, and achievement of criticality. The inspectors verified that the licensee was in conformance with license and technical specification requirements prior to control rod withdrawal, that administrative and procedural requirements were met, and that results were properly recorded prior to and after criticality.

The initial criticality was accomplished in a competent and professional manner. Activities were carried out without incident. The procedure followed was NR-71, "Initial Criticality."

No violations or deviations were identified.

10. Operational Safety Verification (71707)

The inspectors conducted routine plant tours during the inspection period to make an independent assessment of equipment conditions, plant conditions, construction activities, security, fire protection, general personnel safety, housekeeping, and adherence to applicable regulatory requirements. During the tours, the inspectors reviewed various logs and daily orders, interviewed personnel, attended shift briefings and plan of the day meetings, witnessed various construction work activities, and

independently determined equipment status. During the shift changes, the inspectors observed operator, shift control room engineer, and shift engineer turnovers and panel walkdowns.

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.

No violations or deviations were identified.

11. Radiological Protection (71709)

The inspectors selected portions of the licensee's radiological program for review to verify conformance with facility policies, procedures, and regulatory requirements. Observed aspects included the health physics managers' awareness of any unusual conditions or challenges, the implementation of the ALARA program, the use of Radiological Work Permits (RWPs), the control and monitoring of radiation exposures, including work in high radiation areas if applicable, and the control of radioactive material.

No violations or deviations were identified.

12. Engineered Safety Feature (ESF) Systems (71710)

During the inspection, the inspectors selected accessible portions of several ESF systems to verify their status. Consideration was given to the plant mode, applicable Technical Specifications, Limiting Conditions for Operating Action Requirements (LCOARs), and other applicable requirements.

Various observations, where applicable, were made of hangers and supports; housekeeping; whether freeze protection, if required, was installed and operational; valve positions and conditions; potential ignition sources; major component labeling, lubrication, cooling, etc.; interior conditions of electrical breakers and control panels; whether instrumentation was properly installed and functioning and significant process parameter values were consistent with expected values; whether instrumentation was calibrated; whether necessary support systems were operational; and whether locally and remotely indicated breaker and valve positions agreed.

During the inspection, the following ESF systems/components were walked down:

Unit 1

All Safety Injection Accumulators
Containment Prior to Mode Change

Unit 2

All Safety Injection Accumulators
Containment Prior to Initial Criticality

No violations or deviations were identified.

13. Sustained Control Room and Plant Observations (71715)

During the preparation for, approach to, and achieving of initial criticality of Unit 2, and for several days afterwards, during the period from March 7 through March 16, 1988, the resident inspectors conducted sustained control room and plant observations. This monitoring was on a 24-hours-per-day basis between March 7 and March 11, 1988, and on 12-hours-per-day basis from March 11 to March 16, 1988.

The purpose was to observe the preparation for, approach to, and achievement of the Unit 2 initial criticality, and activities during the period immediately afterward. In addition, it served to verify that any conflicts between the activities on Unit 1 and Unit 2 testing were resolved without confusion or incident. The inspector found that the activities were carried out in a logical, well planned, and professional manner.

No violations or deviations were identified.

14. Physical Security (71881)

At various times throughout the inspection period, the inspectors monitored compliance with the Physical Security Plan (PSP). Observations were made of selections of manning levels and collateral duties of assigned personnel; access control equipment and processes, such as x-ray machines, metal detectors, explosive detectors, and other search mechanisms; whether protected area (PA) and vital area (VA) barriers were properly maintained; whether procedures were properly followed; whether compensatory measures were appropriately used when required; whether persons in the PA and VA were properly badged and escorted if required; whether various detection/assessment aids such as fences and illumination of the PA, were operable, and whether TV monitors had sufficient clarity and resolution.

No violations or deviations were identified.

15. Monthly Maintenance Observation (62703)

Station maintenance activities affecting the 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 and restored to 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 the status of outstanding jobs and to assure that priority is assigned to safety-related equipment maintenance which may affect system performance.

Maintenance activities on the following equipment were observed and reviewed:

1B Auxiliary Feed Pump
1A, 1D, 1C Safety Injection Accumulators
1B MSIV (Post-Maintenance Stroke Test)
U-1 Reactor Coolant Pump O-ring Seals
U-1 HP Turbine Governor Valves

No violations or deviations were identified.

16. Monthly Surveillance Observation (61725)

The inspectors observed surveillance testing required by Technical Specifications for Unit 1 during the inspection period 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 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 inspectors also witnessed portions of the following test activities:

Unit 1

1B MSIV Stroke Test
Primary Containment Equipment Hatch Personnel Airlock Door Operability Test
Analog Channel Operability Test of Power Range Channel N42 Staggered

Unit 2

2A Diesel Generator Operability Surveillance

No violations or deviations were identified.

17. Training Effectiveness (41400, 41701)

The effectiveness of training programs for licensed and non-licensed personnel was reviewed by the inspectors during the witnessing of the licensee's performance of routine surveillance, maintenance, and operational activities and during the review of the licensee's response to events which occurred during the inspection period. During this inspection period licensee N-GET training was observed. Personnel appeared to be knowledgeable of the tasks being performed, and nothing was observed which indicated any ineffectiveness of training.

No violations or deviations were identified.

18. Report Review

During the inspection period, the inspector reviewed the licensee's Monthly Operating Report for February 1988. The inspector confirmed that the information provided met the requirements of Technical Specification 6.9.1.8 and Regulatory Guide 1.16.

The inspector also reviewed the licensee's Monthly Plant Status Report for January and February 1988.

No violations or deviations were identified.

19. Meetings and Other Activities (30702)

Commissioner Frederick M. Bernthal Onsite

Commissioner Frederick M. Bernthal, Dr. William Graham, Science Advisor to President Reagan, Dr. T. Murley, Director of NRR, and A. B. Davis, Regional Administrator were onsite on March 24, 1988. The purpose of the visit was to meet with the resident inspectors and members of the Region III staff, to meet with the licensee for an update on the status of Braidwood with respect to the forthcoming full-power licensing of Unit 2, and to tour various areas of the plant.

The subjects discussed were preventive and predictive maintenance, operator requalifications, fitness for duty, college degrees for senior reactor operators, and communication channels between corporate personnel and plant operators .

At the conclusion of the visit, Commissioner Bernthal commented that the physical condition of the plant was very good and was now not only a standard for the U.S. nuclear industry, but for the world's as well. The Commissioner also discussed technology differences between fossil and nuclear plants, encouraged developing diagnostic capability, discussed the ongoing evaluations of environmental qualification, and commented that, as a large nuclear utility, Commonwealth Edison should be an industry leader, and that he expected excellence in operations. Dr. Graham commented that Braidwood was an impressive plant.

Management Meeting

On February 29, 1988, Mr. A. B. Davis, Regional Administrator, and Mr. E. G. Greenman, Director, Division of Reactor Projects, were onsite with other Region III staff members and the resident inspectors for a management meeting with the licensee.

The subject matter covered was the Operational Readiness Inspection team findings (out-of-services and maintenance backlog), fire protection commitments, the crack identified in the 1D safety injection accumulator fill line, the FW-3 feedwater pipe elbow weld resolution, lessons learned from Byron, and the status of Braidwood for the Unit 2 full-power license.

Systematic Appraisal of Licensee Performance (SALP) Meeting

On April 5, 1988, a public meeting was held at the Braidwood site between members of the Region III staff and the licensee staff for the purpose of discussing the SALP 7 report. The details of the assessment are contained in the SALP 7 Board Report (456/88001; 457/88001) and in related correspondence.

Public Officials Meeting (94600)

On April 5, 1988, at 6:00 p.m. an open meeting was sponsored by the NRC Region III for local public officials with an interest in the Braidwood facility. The meeting was held at the Booth Central School in Wilmington, Illinois, and the attendees are listed in Paragraph 1. The meeting was scheduled to coincide with the Braidwood SALP presentation held earlier that day at the Braidwood site. The purpose of the meeting was to present information concerning the NRC's origin and regulatory responsibilities, the SALP process, the resident inspector program, and current activities at the plant. Toward the end of the meeting, the NRC staff members fielded questions from the public attendees.

20. Exit Interview (30703)

The inspectors met with the licensee and contractor representatives denoted in paragraph 1 during the inspection period and at the conclusion of the inspection on April 7, 1988. The inspectors summarized the scope and results of the inspection and discussed the likely content of this inspection report. The licensee acknowledged the information and did not indicate that any of the information disclosed during the inspection could be considered proprietary in nature.