

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-456/86016(DRP); 50-457/86014(DRP)

Docket Nos. 50-456; 50-457

Licenses No. CPPR-132; CPPR-133

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

Facility Name: Braidwood Station, Units 1 and 2

Inspection At: Braidwood Site, Braidwood, IL

Inspection Conducted: March 30 through May 31, 1986

Inspectors: T. M. Tongue
W. J. Kropp
T. E. Taylor
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Approved By: *P. R. Pelke for*
R. N. Gardner, Chief
Reactor Projects
Section 3A

7/1/86
Date

Inspection Summary

Inspection on March 30 through May 31, 1986 (Report No. 50-456/86016(DRP); 50-457/86014(DRP))

Areas Inspected: Routine, unannounced safety inspection of licensee action on previously identified items; regional request; in-process deficiencies; events occurring during the inspection; preoperational testing; integrated hot functional test; plant tours and independent assessments; plant procedures; release to operations; meetings, training and other activities; and INPO near term operating license audit.

Results: No violations or deviations were identified. One area of potential concern was identified relating to the quality of the Release to Operations (RTO) process (Paragraph 10).

DETAILS

1. Persons Contacted

Commonwealth Edison Company (CECo)

Corporate Personnel

*A. Miosi, Nuclear Licensing Administrator

Braidwood Personnel

*M. J. Wallace, Project Manager
*C. W. Schroeder, Station Services Superintendent
*D. L. Shamblin, Project Construction Superintendent
*P. L. Barnes, Regulatory Assurance Supervisor
*G. E. Groth, Assistant Construction Superintendent
M. E. Lohmann, Assistant Construction Superintendent
*E. E. Fitzpatrick, Station Manager
*L. M. Kline, Regulatory Assurance Group Leader
*C. J. Tomashek, Project Startup Superintendent
H. Zimmerman, Project Startup Testing Supervisor
*D. E. Paquette, Maintenance Assistant Superintendent
*D. E. O'Brien, Operations Assistant Superintendent
*S. C. Hunsader, Quality Assurance Supervisor
R. Legner, Senior Operating Engineer
G. Masters, Operating Engineer
R. Ungren, Operating Engineer
F. Willaford, Security Administrator
M. Andrews, Station Chemist
R. Lemke, Technical Staff Supervisor
G. Nelson, Assistant Technical Staff Supervisor
R. E. Aker, Radiation-Chemistry Supervisor
T. Keith, Lead Health Physicist
*T. W. Simpkin, Regulatory Assurance
R. Mertogul, Assistant Technical Staff Supervisor
T. E. Quaka, Site Quality Assurance Superintendent
*R. D. Kyroutac, Station Quality Assurance Supervisor
T. Meyer, Station Fire Marshall
*D. A. Boone, Construction Field Engineer
*G. F. Marcus, Assistant to Manager Quality Assurance
*L. E. Davis, Assistant Superintendent - Technical Services
*D. L. Cecchett, Regulatory Assurance
*A. J. D'Antonio, Regulatory Assurance
*J. K. Jasnosz, Regulatory Assurance
*E. Wendorf, Project Field Engineer
*M. R. Dougherty, Project Field Engineer
*D. J. Skoza, Project Field Engineer
*B. M. Peacock, Integrated Leak Rate Test Coordinator
*S. H. Stapp, Quality Assurance (Operations)

Nuclear Installation Services Company (NISCO)

B. Allen, Lead Engineer

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

*Denotes those attending one or more exit interviews conducted on April 17, May 8, 22, and 29, 1986, and informally at various times throughout the inspection period.

2. Licensee Action on Previously Identified Items

The inspector reviewed the licensee actions on the following items and the results are as stated:

a. Violations

(Closed) 456/84042-11; 457/84038-11: Failure to control activities pertaining to the cleaning of the diesel fuel oil piping. Several documents were issued to resolve the licensee's failure to clean the diesel fuel oil piping in accordance with the requirements of Sargent & Lundy (S&L) Specification L-2739. The following is a summary of these documents which includes a description of their disposition:

- NCR 720 (Unit 1 only) - This Nonconformance Report (NCR) was issued by the licensee to identify that the Unit 1 diesel fuel oil piping was sandblasted instead of being cleaned by acid pickling as required by Specification L-2739. The disposition included revising Specification L-2739 (Field Change Request (FCR) No. 17028) to allow sandblasting as an acceptable method of cleaning the diesel fuel oil piping. The justification for revising the specification to allow sandblasting included: (1) sandblasting is acceptable to the diesel manufacturer, (2) the design of the system is such that the diesel oil piping in question is in line with four transfer suction filters which are capable of filtering out particles to five microns in size, (3) the diesel generator sets also are equipped with fuel filters, and (4) the Unit 1 diesels have completed over 40 hours of run time without a failure due to plugged fuel filters. This NCR was closed March 5, 1986.
- FCR No. 17028 (Units 1 and 2) - this FCR was issued to revise Specification L-2739 to allow diesel fuel and lube oil piping to be cleaned by one of the following methods:
 - (1) Sandblasting followed by blowing out the pipe with compressed air. However, digital thickness measurements shall be recorded at elbows and curvatures to verify that minimum wall thickness requirements have been maintained.

- (2) Interior surface rust in fuel oil piping systems may be cleaned by brushing followed by high pressure water flushing, hot oil flushing, or blowing out with compressed air.

This FCR was dispositioned by S&L on April 4, 1985, with the above revision incorporated into Specification L-2739 by Amendment No. 9, dated October 18, 1985.

- Phillips Getschow (PGCo) NCR No. 6213 (Unit 1) - As a result of the digital thickness measurements performed at the elbows of installed Unit 1 diesel fuel oil piping which had been sand-blasted, PGCo identified three minimum wall violations. These violations were identified on PGCo NCR No. 6213. These violations were dispositioned "USE-AS-IS" based on S&L calculations 1SA64-PNCR6213, 1D026-PNCR6213, and 1SA06-PNCR6213. This NCR was closed February 20, 1986.

The inspector reviewed the supporting documentation pertaining to the closure of the above documents and noted no problems. This item is considered to be closed.

(Closed) 456/84044-04; 457/84040-04: Fasteners utilized in Class 1E seismic cable tray hangers and battery racks did not always meet the requirements of ASTM A307 in regard to the manufacturer's identification marking. Some of the corrective actions were previously reviewed in Inspection Reports No. 456/85032; 457/85031 and No. 456/85058; 457/85054. The only remaining corrective action to be reviewed was the closure of NCR No. 783. This NCR was issued by the licensee to identify unmarked A307 bolting in vendor supplied equipment. The resident inspector, assisted by a regional specialist, reviewed the disposition of NCR No. 783 and noted no problems. The disposition was "USE-AS-IS" based on engineering review and testing. This item is considered to be closed.

(Closed) 456/85038-07; 457/85037-05: Documented instructions did not exist at Pullman to assure that NCRs identified as potentially reportable (50.55(e)) are submitted to the licensee. The licensee's corrective action consisted of Pullman reviewing all their NCRs issued after December 5, 1984 to determine if the licensee had been notified of all NCRs that were considered potentially reportable. Pullman NCRs issued prior to December 5, 1984 were not reviewed by Pullman since, due to an unrelated issue, these NCRs had previously been reviewed by the licensee for reportability.

The review of these Pullman NCRs by the licensee resulted in no NCRs that had not been previously reported being considered reportable. The inspector evaluated Pullman's results of their review of NCRs issued after December 5, 1984 and noted no problems. The corrective action to avoid further violations consisted of revising Pullman Procedure B16.1.F, "Nonconformance," to include a requirement to notify the licensee of any NCR deemed potentially reportable. The inspector reviewed Revision 8 of Procedure B16.1.F and verified that

Paragraph 6.6.4 required the notification of the licensee in writing of an NCR that is deemed potentially reportable. The effective date of this procedure was October 21, 1985. The inspector selected several NCR issued after October 21, 1985, and noted no problems. This item is considered to be closed.

(Closed) 456/85038-08; 457/85037-06: Pullman CAR 002 and CAR 005 were closed without verifying that the corrective action was implemented and effective. The licensee's corrective action consisted of Pullman's Quality Assurance organization performing surveillances to verify that all corrective actions required by CAR's 002 and 005 were properly implemented and effective. The inspector reviewed Pullman Surveillances QA-S-85-111, QA-S-85-092, and QA-S-85-093. These surveillances addressed the implementation and effectiveness of the corrective actions associated with CARs 002 and 005. The licensee's corrective action to avoid further violations consisted of revising Pullman Procedure B16.2.F, "Corrective Action," to enhance the requirements for verifying the completion and effectiveness of corrective actions prior to closure of a CAR. The inspector reviewed Revision 2 of Procedure B16.2.F and verified that the procedure was enhanced. This enhancement included the requirement of attaching to the CAR copies of documentation that supports the verification of the implementation and effectiveness of completed corrective actions. The effective date for Procedure B16.2.F, Revision 2, was January 10, 1986. The inspector reviewed the closure of CARs 001 and 006 and determined that the documentation of the closures were in accordance with Procedure B16.2.F, Revision 2. This item is considered to be closed.

(Closed) 456/85048-03; 457/85047-03: Wiring in compartment C3 of Motor Control Center (MCC) 131X2 was not in accordance with Drawings No. 20E-1-4663C and 20E-1-4663F. In addition, a jumper not shown on Drawing No. 20E-1-4663C, Revision M was found terminated in the field between Points 3 and 3A.

The inspector reviewed the licensee's response dated March 11, 1986. The licensee determined that the jumper between Points 3 and 3A was correct. The inspector verified that this jumper was in accordance with Internal Wiring Diagram No. 20E-1-4659A, Revision G, Figure 2, which is referenced on No. 20E-1-4663C. L. K. Comstock (LKC) issued ICR No. 12,253 on October 4, 1985, to document no terminations at Points 1, 3A, X2, 9, 15, 16, 17, and 18. LKC Rework Requests (RWRs) No. 11596 and 11597 were issued on February 25, 1986, to complete the internal wiring. The work was completed and QC inspected on February 28, 1986. The ICR was subsequently closed on March 5, 1986. The inspector reviewed the revisions of LKC Procedure 4.3.16, which controls RWR activities, from October 1980 to present and determined that the procedure has been significantly enhanced since the deficient installation occurred in August 1983. This item is considered to be closed.

b. Open Items

(Closed) 456/84042-03; 457/84038-03: Instrumentation Retrofit Verification (IRV) Program identified numerous deficiencies in the three inch clearance requirement. A review of several IRV packages revealed that deficiencies in the three inch clearance requirement were properly noted on the IRV drawings. The inspector reviewed IRV packages for instruments 1FT-AF011-1, 1FT-AF015-1 and 1FT-CS011-2. The IRV drawings were submitted to S&L on FCRs. The FCRs associated with these instruments were FCR 20248 (1FT-AF011-1), FCR 19405 (1FT-AF015-1), and FCR 18893 (1FT-CS011-2). This item is considered to be closed.

(Open) 456/85008-11(DRS): Verification of proper installation of containment spray pump impellers. The inspector reviewed Field Change Orders (FCO) 1CS-20891 and 1CS-20024 where measurements showed that the A pump impeller was smaller than the B pump, as required. The inspector also reviewed a November 5, 1985 memorandum which outlined three action items to ensure that the impellers are not switched in the future. The items are as follows:

- (1) A letter, identifying the A pump as having a smaller impeller and cautioning against switching impellers, was to be entered in the pump instruction manuals.
- (2) A similar caution was to be entered in the pumps' Maintenance History files.
- (3) Identification tags were to be affixed to each pump.

Upon review the inspector determined that Item (3) had not been completed. This item will remain open pending completion of Item (3).

(Closed) 456/85015-02: While inspecting the shims on the steam generator inner frame support connections, identified on Drawings No. S-1102, the inspector noticed that the nuts on the threaded rod that held the shims in place were not tight. Subsequent review of the documentation, including process Control Checklist No. 3009-CCE-126, identified that the required tightness or torque value for the half inch diameter nuts had not been established. During Inspection No. 456/85032, the inspector stated that the nuts were loose because the shimming would be completed during Hot Functional Testing. S&L determined that there is no design requirement to tighten the bolts in that the shims cannot fall out whether or not the nuts are tight. However, S&L recommended that once shimming operations are complete, the contractor should tighten the nuts snug tight. Hot Functional Testing was completed for Unit 1 on April 21, 1986. During this inspection, the inspector observed that the half inch nuts were tight on the four Unit 1 steam generators. The inspector reviewed the NISCO Process Control Sheets for the steam generator inner to outer frame hot shimming. As an example, Process Control Sheet No. 3009-CCE-461 documents that the Loop 4 1/2" nuts were snug tightened, which QC had verified on April 9, 1986. This item is considered to be closed for Unit 1.

(Closed) 456/85032-04; 457/85031-04: IE Information Notice No. 84-52, Supplement 1, dated May 8, 1985, identified two vendors, Phoenix Steel and LTV Steel Company, which had hardware deficiencies. The hardware deficiencies pertained to the production and shipment of seamless carbon steel pipe. Portions of this pipe did not meet the required minimum wall thickness because of inadequate manufacturing process controls and inadequate inspection methods. To assure that piping received at Braidwood which was furnished by the two vendors identified in Supplement 1 of Information Notice No. 84-52 was acceptable, the licensee directed PGCo to perform thickness examinations on this piping. A review of material traceability computer logs and receipt records revealed that 174 pieces of pipe (approximately 3100 feet) were received at Braidwood from Phoenix Steel and LTV. PGCo measured the wall thickness at four intervals (every 90° on each end of each section of pipe). The inspector reviewed the results of these measurements and no problems were noted. This item is considered to be closed.

(Closed) 456/85038-02; 457/85037-02: PGCo NCR No. 5337 identified Essential Service Water (ESW) spools with base metal weld repairs which were not subsequently radiographed as required by ASME Section III. The portion of NCR No. 5337 which pertained to this open item was dispositioned "USE-AS-IS" by S&L. The justification for the disposition was documented on S&L Design Information Transmittal (DIT) No. BR-EMD-0060-0. The DIT identified that the Summer 1975 Addenda of ASME Section III, Subsection ND, required radiography for final inspection of base metal weld repairs whose repair cavity exceeded 10% of the wall thickness. However, the DIT further stated that the Winter 1976 Addenda and later editions of ASME Section III Subsection ND allowed magnetic particle examination for these types of weld repairs provided: (a) the welded joints did not require radiography, and (b) the welded repair does not exceed 10 square inches of surface area. S&L issued ECN No. 30317 to adopt the Winter 1976 Addenda of ASME Section III. The weld repairs in question had a magnetic particle examination. This item is considered to be closed.

(Closed) 456/85053-01: The FSAR requires a white monitor light on the Main Control Board (MCB) to alert the operator that the ESW suction valves are not fully open. The inspector reviewed proposed Amendment No. 47 to the Braidwood FSAR. This amendment deletes Item b. under FSAR Section 10.4.9.2.2.2, which identifies the white monitor light on the MCB. The deletion of this white monitor light does not diminish the operator's ability to determine that the ESW suction valves (1AF06 A&B, 1AF017 A&B) are not fully open. There are colored indicating lights to show that the valves are closed and other indicating lights to indicate the valves are open. Both lights will be energized when a valve is in an intermediate position. This item is considered to be closed.

(Closed) 456/85053-02: Procedure BwOP AF-4, "Draining the AFW System," requires unlocking and closing valve SX205 (Recirculation Return to SX for the AFW pumps). This procedure did not address reopening and locking valve SX205 after draining the AFW systems. Procedure BwOP AF-1, "Fill and Vent of the Auxiliary Feedwater System," Revision 1, was reviewed by the inspector. The inspector verified that a step was added to verify valve SX205 was locked open. Also, the inspector verified that BwOP SX-M1 and SX-M2, "Essential Service Water System Mechanical Lineups," have proposed revisions to identify valve SX205 as "locked open" instead of "open." This item is considered to be closed.

(Open) 456/85053-04: The procedures reviewed for lining up the AFW system for standby operation and for emergency operation does not address the diesel AFW pump battery selector switch. The inspector verified that BwOP AF2, "Alignment for Standby Operation of Auxiliary Feedwater Systems," Revision 0, Step C.2 requires that BwOP AF-1 be completed as a prerequisite. BwOP AF-1, "Fill and Vent of the Auxiliary Feedwater System," Revision 1, Step C.2 requires that the AFW system to be aligned in accordance with BwOP E1/E2. BwOP E1/E2, "Auxiliary Feedwater System Electrical Lineup," lists the position required for the battery selector switch as No. 1/No. 2 (Position No. 1 or Position No. 2). These procedural controls adequately address the battery switch for the standby operation of the AFW systems. The inspector reviewed the procedures for the emergency operation of the AFW system. Procedure 1BWOA PRI-5, "Control Room Inaccessibility Unit 1," Revision 1, Step 8.a.6 did address selecting the other battery bank and repeating the start sequence if the diesel AFW pump fails to crank during a local start. However, Procedure BwCA-0.0, Revision 1, "Loss of AC Power - Unit 1," Step 3.a.1, does not address the steps for locally starting the diesel AFW pump in the same detail as Procedure 1BWOA PRI-5. It states that if the diesel AFW pump is not running, then manually or locally start the diesel AFW pump. There is no requirement for selecting the other battery bank if the diesel AFW pump does not crank. Discussions with the licensee revealed that a procedure will be written that will address the steps for locally starting the diesel AFW pump. Until this procedure is written and issued, this item will remain open.

(Open) 456/85053-09(DRP); 457/85051-04(DRP): Discrepancies with Safety Injection drawings and procedures. The inspector was informed by the licensee staff that at the time of inspection IAOVSI-0943 had been removed to allow other maintenance in the area and that it had been inadvertently deleted from the drawing. The inspector verified that the valve was reinstalled and that it was now shown on the current revision of the correct Safety Injection drawing. Deficiencies SI-12-227 and SI-12-228 were written to add missing valves to the appropriate drawings and valves missing from the Prestart Mechanical Lineup will appear on Revision 1 to the lineup, BwOP-SI-M1. This item will remain open pending closure of the deficiencies and issuance of the revised prestart mechanical lineup.

(Closed) 456/85057(DRP); 457/85053(DRP) Paragraph 14 - Fire Protection: A Potential Failure of Hoses on a Number of Fire Extinguishers. On April 16, 1986, the station Fire Marshall informed the Senior Resident Inspector - Operations that all of the affected hoses had been replaced and the removed hoses had been destroyed. This item is considered closed.

(Closed) 456/84023-02: Termination of instrument IFT-0657 (Reactor Coolant Pump 1C Bearing CCW Flow). The inspector reviewed wiring Diagram No. 20E-1-4109N, Revision K which provides for a splice between Cable No. 1CC300 and IFT-0657. Note 80 to 4109N requires a Raychem NPKV-2-14 splice kit at the termination. The termination was made on February 9, 1986. The inspector reviewed the LKC QC Inspection Checklist for the termination which did not document the use of the splice kit. However, the in-process inspection of the splice was documented on the termination card. The inspector reviewed the LKC QC Inspection Checklist for similar transmitter IFT-0660 which correctly documented the use of the splice kit (inspection of the IFT-0660 and IFT-0657 terminations was performed by the same inspector). The QC inspector stated that the checklist for IFT-0657 was in error and he committed to field verify and correct the inspection checklist. The inspector reviewed the revised checklist and it was found to be acceptable. This item is considered to be closed.

c. Unresolved Items

(Closed) 456/83009-03; 457/83009-03: PGC records did not indicate that bends were made in accordance with the ASME Code or PGC Procedure PGCP-11, "Cold Bending of two inch and Under Pipe and Tube." To evaluate the bending process, a total of 64 pipe bends were checked for ovality and wall thickness. Two instances of minor wall thinning were reported and both cases were deemed acceptable by S&L. These wall reductions were not specifically due to the pipe bending process because the reductions extended into straight portions of the pipe. Six instances of slightly excess ovality were reported. Three of the six were just over the ASME Section III eight percent criteria. Based on a reasonable field measurement accuracy of plus or minus 1/64", these three quality valves were considered to be in compliance with the ASME code requirement. The other three ovality values ranged from 9.6% to 10.36%. S&L calculations have confirmed ovality values up to 16% are acceptable. Based on the 100 bends sampled in the Braidwood Construction Assessment Program (BCAP) and the 64 bends specifically sampled for this unresolved item, S&L concluded that the results of both samples clearly demonstrated that: (1) the degree of ovality problems were only slightly above the ASME criteria, and (2) the number of bends with excess ovality is reasonably low (approximately five percent) and consistent with expected measurement accuracies. Based on these conclusions, S&L determined that the quality of pipe bending activities was adequate to meet system design requirements. The inspector reviewed S&L's evaluation, which was documented in DIT No. BR-PMDF-0212-0, and noted no problems. This item is considered to be closed.

(Closed) 456/84006-03; 457/84006-03: MTV program included a requirement that installed quantities be reviewed in relation to requisitioned quantities for safety-related pipe. The inspector reviewed the PGC0 Procedure QCP B31, Revision 2, "Material Traceability Verification," and determined that Paragraph 10.4 required a material usage check. This check consisted of a comparison between the quantity or footage of material requested on the PGC0 Stores Request and the quantity of footage of material identified in the PGC0 installation drawing. The MTV program implementation was evaluated by Regional Specialists with the results documented in Inspection Reports No. 456/85061; 457/85057. This item is considered to be closed.

(Closed) 456/84009-11(DRP); 457/84009-11(DRP): Auxiliary Feed Minimum Flow Lines. The inspector reviewed the licensee's file for this item which contained a memorandum which explained that the flow restricting orifices in the minimum flow lines would prevent the diversion of flow from the steam generators. These orifices are located such that a potential missile from the diesel would not damage them. During pump operation these orifices control recirculation flow to the condensate storage tank which is at atmospheric pressure. In the event that the minimum flow recirculation lines were to be damaged, the flow orifices would limit the flow to the same amount as to the condensate storage tank since the discharge is to atmospheric pressure. This item is considered closed.

(Closed) 456/84041-01 (DRS): Clarification of ANSI 19.7 Controls for Preoperational Activities. A meeting was held on January 23, 1986, in which those activities controlled by either ANSI 18.7 or N45.2 were identified. This meeting was followed up by an A. Miosi letter to J. G. Keppler dated January 23, 1986, which clearly identified those preoperational activities which are controlled by ANSI 18.7 and those which are controlled by N45.2. This item is considered to be closed.

(Closed) 456/85052-01; 457/85050-01: A pneumatic controller was stored by the Unit 1 motor driven Auxiliary Feedwater Pump without the necessary identification to determine its construction status and five ASME Section III, Class I valve bonnet and discs were stored in an undesignated storage area. The licensee revised Procedure PGCP-1, "Control of FCOs," to require when practical, all valve internal parts to be bagged and tagged when valves are disassembled for an extended period of time. The revision also required parts to be stored in a manner which will preclude damage and provide ready access for reassembly. These requirements were incorporated into Revision 15 of PGCP-1 and the inspector verified that the appropriate training of PGC0 personnel was conducted. The inspector has not identified any further instances where parts of valves have been improperly stored. This item is considered to be closed.

(Closed) 456/85028-05: It was previously identified that conduits of redundant divisions were observed to be routed next to each other with less than one inch separation. Instrument ESF cables 1AR227 and 1AR228 in Division I conduit CIA5334 violated the cable separation criteria with cables 1AR229, 1AR230, 1AR231, and 1AR232 in Division II conduit CIA5351. The above configuration had been installed per S&L Drawing No. 20E-1-3353, D01, Revision P, which required that the two conduits CIA5334 and CIA5351 enter a junction box from the top. Revision R of Drawing No. 20E-1-3353, D01 revised the routing of the Division II conduit. On June 29, 1985, LKC RWR No. 2243 was issued and required that conduit CIA5351 be installed per the new design. The inspector observed the as-built installation of conduit CIA5351 and noted that it enters the junction box from the bottom in accordance with Drawing No. 20E-13353, D01, Revision R. In addition, it was observed that the separation criteria between redundant divisions was met in the junction box. This item is considered to be closed.

d. 10 CFR 50.55(e) Reports

The inspector reviewed the following reports and the findings are as stated:

(Closed) 456/83-11-EE; 457/83-11-EE: On July 29, 1983, the licensee reported a deficiency per 10 CFR 50.55(e) regarding anchor bolt installations for the Diesel Oil Storage and Recycle Holdup tanks. The tanks involved were 1D01TA, B, C, D; 2D001TA, B; and 0AB01TB. The licensee issued NCR No. 555 to track this deficiency. CECO QA conducted Surveillances No. 4538 and 4548 to verify that NCR No. 555 was properly resolved. This deficiency is the same as Unresolved Item No. 456/83008-01; 457/83008-01 which was closed in Inspection Report No. 456/85017; 457/85018. This item is considered to be closed.

(Closed) 456/85-03-EE; 457/85-03-EE: Deficiencies identified during the conduct of the Instrumentation Installation Reverification (IRV) Program. The initial scope of the IRV program was judged by the licensee as not reportable in August 1983. As a result of subsequent licensee audits and NRC inspections, deficiencies in the PGCo QC inspections of instrumentation installations were identified. Therefore, the scope of the IRV program was expanded such that upon reevaluation by the licensee, it was deemed reportable per 10 CFR 50.55(e). In January 1984, PGCo's instrumentation installation and inspection procedures were revised to include the required specification criteria. Previously installed instrumentation was reinspected and the associated documentation was reviewed to ensure that these installations were in accordance with the specified requirements (design and revised procedures). The inspector selected four instruments reinspected under of the IRV program to verify that the installation and documentation are acceptable. This item is considered to be closed.

(Open) 456/85-05-EE: High Energy Line Breaks in the Auxiliary Building. The licensee has developed modifications which require installation of temperature detectors in the affected spaces that will cause automatic isolation of the steam generator blowdown and auxiliary steam systems. This will include installation of some additional valves and controls. This will also require development of associated procedures as committed. Design change submittals have been sent to Office of the Nuclear Reactor Regulation (NRR) for review and are waiting approval pending answers to some additional questions. This item will remain open until the modifications are installed and tested; and the procedures are developed, approved, and implemented.

(Closed) 456/85007-EE; 457/85007-EE: Degradation of diesel generators, faulty rpm reading. The inspector reviewed completed LKC RWR Travelers No. 11436, 11445, and 11738, written to install the DC/DC Converter identified as the solution to the problem in CECO's final 10 CFR 50.55(e) report. The inspector verified that the DC/DC Converters were installed as stated, that the Material Requisition Request (MRR) on the converters was the same as that on the RWR, and that the diesel generator tachometer indicated zero when the diesel was secured. This item is considered closed.

(Closed) 456/86-01-EE; 457/86-01-EE: Misoriented Burnable Poison Assembly. Through receipt inspections, the licensee identified a new fuel assembly with the burnable poison rodlets misoriented by 90° rotation as viewed from the top of the fuel assembly. The licensee, with Westinghouse, conducted a safety analysis and found that if the assembly had been used, peaking factors would have been less than technical specification limits even if it had been moved closer to the center of the core in a later fuel cycle. The licensee also conducted a reinspection of all asymmetric burnable poison assemblies onsite and found no further deficiencies. The affected burnable poison assembly was returned to the fuel supplier for repair. Subsequently, the assembly was assembled correctly and returned to the site. The licensee has committed to continue inspecting new fuel for similar discrepancies. In addition, the fuel supplier, Westinghouse, has committed to institute changes in their manufacturing and inspection practices to prevent recurrence. This item is considered to be closed.

e. IE Bulletin Followup

The following IE Bulletin was reviewed by the inspector to determine if: (1) the licensee's written response was submitted within the time limitations stated in the bulletin, (2) the written response included all information required to be reported, (3) the written response included adequate corrective action commitments based on information presented in the bulletin and the licensee's response, (4) licensee management forwarded copies of the written response to the required onsite management representatives, (5) information discussed in the licensee's response was accurate, and (6) the corrective action taken was as described in the response.

(Closed) Bulletin 75-03: Abnormal occurrences in which safety-related solenoid air-pilot valves manufactured by Automatic Switch Company (ASCo) failed to operate properly due to an incorrect lower disc spring and/or improper lever to lower disc stem clearance. The licensee has determined that there are no ASCo valves of the affected model number presently installed in safety-related systems as of January 28, 1985. The Primary Process Sampling (PS) system has valves that are not yet installed. These valves will be inspected after installation. Braidwood Commitment 20-85-010 has been issued to verify the model numbers of the ASCo valves in the PS system. The PS system is not classified as a safety-related system. This item is considered to be closed.

f. Allegation Followup

(Closed) RIII-86-A-0008: On January 7, 1986, two individuals contacted the resident inspector and provided concerns they had with the S&L disposition of Midway NCRs Nos. 31 and 32. Midway is the site coatings contractor. The NCRs documented that the coatings in the Units 1 and 2 containments were reworked in 1978 using a coating system not qualified to a Design Basis Accident (DBA) in accordance with ANSI N101.2. S&L's disposition was "USE-AS-IS." This disposition was based on a test program using pull tests which are described in ANSI N5.12. The two individuals did not believe that there is a correlation between pull tests and the actual testing of the coating system to DBA standards. The two individuals had previously discussed their concerns with S&L, CECo, Midway and Quality First personnel. An interim review of this allegation is documented in Paragraph 7 of Inspection Report 456/85058; 457/85054 dated February 10, 1986.

On January 23, 1986, a meeting was held by the licensee to discuss the disposition of the NCRs. The licensee presented their position as to why pull tests, used as a basis for dispositioning the NCRs, was acceptable in lieu of performing DBA testing in accordance with ANSI 101.2. As a result of this meeting the licensee committed to submit data which supports their position to NRR for review. In a letter dated January 31, 1986 from Charles E. Norelius to T. M. Novak, Region III transferred lead responsibility for the concerns to NRR. CECo provided technical data to NRR in a letter from D. H. Smith to H. R. Denton dated January 28, 1986, and a letter from A. D. Miosi to H. R. Denton dated February 10, 1986. On February 4, 1986, a meeting was held in Bethesda, Maryland between members of the NRC staff, CECo, S&L, and Carboline Company (paint coatings manufacturer). This meeting is documented by J. A. Stevens (NRR) in a Meeting Summary dated April 4, 1986.

The Braidwood containment liner coating system consists of a prime coat of Carbo Zinc 11 (3 to 6 mils dry film thickness (DFT)) over the entire surface and a finish coat of Phenoline 305 (4 to 6 mils DFT) from Elevation 377'-0" to 436'-0". The prime coat was applied in the shop with the exception of plate edges which were coated after the liner seam welding was completed.

The prime coat of Carbo Zinc 11 had become aged and weathered; therefore, it was restored prior to applying the finish coat of Phenoline 305. The restoration consisted of light sand blasting the original coat of Carbo Zinc 11, which reduced the DFT by approximately 50%, and applying a second coat of Carbo Zinc 11 to restore the original thickness of the prime coat.

During a review of coating records, an inspector identified a concern regarding the interpretation of the coating manufacturer's application instruction relative to the field application of Carbo Zinc 11. Note (a) of the instructions recommends that to recoat Carbo Zinc 11 - thin 50%. The field application was performed at normal thinning of 0 to 12%, as described in the manufacturer's application instructions. Midway NCRs Nos. 31 and 32 and CECO NCR No. 748 were written to address this concern. Various adhesion tests were performed which demonstrated that Carbo Zinc 11 behaves monolithically, regardless of the thinning ratio used for the second application. Carboline has reviewed the application method and adhesion test results. They concluded that the 50% thinning recommendation provided in their application instruction does not apply, but rather the normal thinning provisions of their instructions do apply to the conditions of the Braidwood Station containment liner.

In a memorandum from T. M. Novak to Charles E. Norelius dated April 14, 1986, NRR concluded that the original protective coating system at Braidwood was qualified for the postulated design basis accident conditions. In subsequent recoating operations at Braidwood, the Carbo Zinc 11 was thinned up to 12%. Laboratory tests conducted at Oak Ridge National Laboratory have shown that Carbo Zinc 11 coating systems, when recoated with 12.5% and 30% thinning, successfully withstood the DBA condition tests. Furthermore, adhesion tests on Carbo Zinc 11 recoating systems, with thinning of up to 50%, indicate that multiple coatings act as a monolithic layer. Consequently, the staff has concluded that differing thinning ratios for Carbo Zinc 11 recoating do not adversely influence its behavioral characteristics. The existing containment liner coating system at Braidwood Station, Units 1 and 2, should provide protection essentially equivalent to that of the original coating system, and is, therefore, acceptable.

Based on the above, the inspector concluded that the allegor's concern that the Braidwood coating system is not qualified is not substantiated and this allegation is considered to be closed.

Closed (RIII-86-A-0057): In a deposition of an LKC QC inspector before the Atomic Safety & Licensing Board on February 25, 1986, he alleged that he had overheard an LKC supervisor direct a document reviewer to alter a drawing revision on an inspection record. The QC inspector perceived this action as possible intimidation.

The inspector interviewed the document reviewer identified by the QC inspector and asked him if he was intimidated into revising inspection records. He stated that there were discussions between

himself and LKC supervision concerning inspection records. However, he stated that these discussions were not intimidating but rather were discussions that would have been expected during document reviews. He knew of no document reviewers who had been intimidated into revising inspection records. Subsequent to the deposition, the QC inspector submitted a letter listing his concerns to the licensee's Quality First organization. The letter did not identify the intimidation of document reviewers to alter records as one of his concerns. Additionally, the licensee's investigation of his concerns did not identify any examples of reviewers being intimidated to alter records.

Based on the above, this allegation is not substantiated and is considered to be closed.

No violations or deviations were identified.

3. Regional Request

By memorandum, dated March 27, 1986, Region III requested that the resident inspector gather pertinent information related to the licensee's action on IE Information Notice No. 86-03, "Potential Deficiencies in Environmental Qualification of Limitorque Motor Valve Operator Wiring," and Generic Letter 85-15, "Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants." The information in the licensee review packages and a related 10 CFR 50.55(e) report (81-01) were forwarded to Region III on April 10, 1986.

No violations or deviations were identified.

4. In-process Deficiencies

The inspector reviewed over 50 deficiency documents issued by the site mechanical contractor, PGCo. The documents (9006's) reviewed were issued by PGCo QC for deficiencies identified during in-process inspections. The 9006's selected pertained to deficiencies in concrete expansion anchors (CEA). The inspector reviewed approximately ten 9006's to verify proper close out. These 9006's identified deficiencies such as: no torque, slippage, improper depth, etc. In all cases, there were inspection records traceable to the appropriate 9006 substantiating that these deficiencies were properly repaired and reinspected. There was no evidence that CEA deficiencies identified on a 9006 were being dispositioned "USE-AS-IS" without proper review by the appropriate organizations.

No violations or deviations were identified.

5. Events Occurring During the Inspection

Security Events

On May 20, 1986, the licensee informed the resident inspectors of an event where a security post was improperly attended. The resident inspectors and

the licensee contacted the Region III Chief, Safeguards Section and the licensee submitted a written report. This matter will be reviewed by a Region III security specialist during a future inspection.

No violations or deviations were identified.

6. Preoperational Testing

During the inspection period, the inspector observed portions of preoperational tests. The observation included verification that properly approved procedures were available and being followed, that data was properly recorded and within the allowable band specified in the procedure, that out-of-service tags were properly applied as necessary, procedure entries and exits were properly executed, instruments were properly calibrated, deficiencies identified were properly resolved and/or recorded for resolution, and that applicable regulatory requirements were met. The inspector also reviewed applicable portions of the FSAR and draft technical specifications for comparison.

During the inspection, the inspector observed portions of the following tests:

- BwPT-DG-10, "Diesel Generators"
- BwPT-RY-17, "Pressurizer"
- BwPT-VP-12, "Containment Ventilation"
- BwPT-EF-12, "EF Logic and Time Response"
- BwPT-PC-11, "Integrated Leak Rate Test (ILRT)"
- BwPT-EF-11, "ECCS Full Flow"

While conducting the ECCS full flow tests, the licensee encountered some difficulties with leakage past the boot seal (reactor vessel to reactor cavity seal) and the cover gaskets for the nuclear instrument wells. The licensee conducted an evaluation of the problem and has come up with several corrective actions, such as using a new boot seal (less than or equal to the age recommended by the manufacturer) for each outage plus redesign of the NIS cover gaskets and machining the seal surfaces. The licensee has agreed to keep the resident inspectors informed of any further developments on this matter.

No violations or deviations were identified.

7. Integrated Hot Functional Test (IHF)

On April 19, 1986, the licensee completed the IHF testing on Unit 1. Through observations of records, witnessing tests, and interviews with licensee personnel, the inspectors evaluated the conduct of the tests, acceptability of results, and performance of personnel. The inspectors observed shift crew personnel and management control, verified that properly approved procedures were available and used, crew requirements were met, test prerequisites were met, proper plant systems were in service, special test equipment was calibrated and in service as needed, crew actions were timely and correct, that deficiencies and test problems

were documented, test changes were processed in an approved manner, and data was collected for final analysis by proper personnel. Test results indicated that acceptance criteria were met. These inspections were done concurrently with regional inspectors from the Division of Reactor Safety - Test Programs Section (TPS).

The inspectors noted that the licensee had taken extra effort to assure proper access control in the control room and other affected spaces in the plant. In addition, special attention and actions were taken to control the chemistry of water used in the testing.

On April 1, 1986, the licensee conducted the first of a series of Main Turbine rolls up to the final roll and paralleling the generator to the grid on April 10, 1986. On several of the tests the inspectors observed activities including crew briefings prior to the test. The inspector also monitored the licensee's limiting parameters during the tests, e.g., pressurizer level and pressure, reactor coolant temperature, and steam generator level to verify that they did not exceed the predetermined administrative limits. The turbine rolls were well planned. The IHF testing was accomplished by well qualified personnel, the licensee stayed close to the planned schedule, and activities in general were accomplished in a professional manner.

No violations or deviations were identified.

8. Plant Tours and Independent Assessments

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 inspector reviewed various logs, daily orders, interviewed personnel, attended shift briefings, witnessed various construction work activities, and independently determined equipment status. During the shift changes, the inspector observed operator and shift engineer turnovers and panel walkdowns.

While on a tour of the Unit 2 work areas, the inspectors noted various pieces of containment spray and residual heat removal (RHR) pipe which did not have their ends properly protected. In addition, carbon steel bolts were being stored in the RHR suction pipe. This situation was brought to the attention of the licensee's management personnel. The licensee took immediate action to resolve these conditions. The Unit 2 housekeeping will be closely monitored in the future by the inspectors to evaluate the effectiveness of the licensee's actions.

No violations or deviations were identified.

9. Plant Procedures

General

An inspection was conducted to confirm that the plant procedure system is adequate to control safety-related operations within applicable regulatory requirements and to determine the adequacy of management controls in implementing and maintaining a viable procedure system.

The inspector verified that the licensee has or is developing administrative controls for review, approval, and periodic updating of all station procedures. The inspector verified that the licensee's system had responsibilities in writing to assure that procedures are reviewed, updated, and approved as required, including 10 CFR 50.59 considerations. The inspector verified that the licensee had established controls in writing (administrative procedures) for preparation of procedures, including format and content, issuing new and revised procedures, control and disposal of outdated procedures, issuing and controlling temporary procedures and temporary procedure changes, that the onsite review of procedures is consistent and that there exists a means to assure training on the above. Regarding standing orders or Special orders, the licensee has administrative controls for Operating orders, Operating memorandum, and Daily orders that are issued with appropriate reviews and approvals.

The licensee's procedure system was compared to the requirements of the following documents and was found to be acceptable:

Reg. Guide 1.33, "Quality Assurance Program Requirements"
ANSI N18.7, 1972 and 1976 as appropriate
Commonwealth Edison Quality Assurance Manual, Quality Requirement
No. 5 and Quality Procedure QP No. 5-51
Proposed Technical Specifications - Section 6, "Administrative
Controls"
FSAR Section 13.0 Conduct of Operations, Subsection 13.6, "Plant
Procedure"

The following Braidwood administrative procedures were reviewed as part of this inspection:

BwAP 300-1	Conduct of Operations	Revision 0
BwAP 350-1	Operating Logs and Records	Revision 0
BwAP 350-2	Daily Order Log	Revision 1
BwAP 350-3	Special Operating Orders	Revision 0
BwAP 360-101	Operating Department Procedure Validation	Revision 0
BwAP 1205-1	Selection and Authority of Onsite Review Committee	Revision 2
BwAP 1205-2	Onsite Review of Procedures	Revision 3
BwAP 1205-3	Onsite Review and Investigation Function	Revision 3
BwAP 1205-4	Onsite Review Notice	Revision 0
BwAP 1205-5	Signature Alternatives for Procedure Content and Technical Review	Revision 1
BwAP 1300-1	Station Procedure Manuals	Revision 3

BwAP 1300-3	Preparation and Approval of Temporary Procedures and Temporary Changes to Permanent Procedures	Revision 2
BwAP 1300-4	Periodic Review of Permanent Procedures	Revision 0
BwAP 1300-5	Station Procedure Distribution	Revision 3
BwAP 1300-6	Use of Procedure Omission Sheets	Revision 2
BwAP 1300-7	Procedure for Using Request for Notification to Implement Procedures	Revision 0
BwAP 1800-1	Byron/Braidwood Operating Commitment Standardization Program	Revision 1

Through an interview with the station training supervisor, the inspector was informed that the licensee is developing and implementing a program whereby the training organization is made aware of new and modified procedures. The plan will provide for training appropriate personnel on new and modified procedures through required reading and licensing preparation classes. Since the first group of station personnel recently completed their licensing exams, the plan will be implemented such that there is continuity for those people.

The inspector randomly selected the following recently issued procedures and verified that review, approval and updating were conducted in accordance with the licensee's applicable administrative procedures; that the issue of the new procedures and control of superseded procedures were completed as prescribed in the licensee administrative procedures; and that working copies of the procedures in various plant locations were the same as the current approved revision in the master file:

BwAP 1600-1	Maintenance Work Request Procedure	Revision 9	4/11/86
BwAP 1205-10	Area Turnover for Operation	Revision 3	3/24/86
BwAP 1300-2	Permanent Procedure Preparation, Revision, and Approval	Revision 5	2/27/86
BwAP 1300-3	Preparation and Approval of Temporary Procedures and Temporary Changes to the Permanent Procedures	Revision 2	2/7/86
BwAR 1-15	Annunciator Alarm Responses (55 Safety-Related Alarm Responses)	Revision 51	4/28/86
BwHP 4002-06	Clean and Inspect Station Battery Chargers	Revision 0	4/24/86
BwHP 4002-030	General Inspection and Cleaning of Electrical Switch Gear Cubicles and Cabinets	Revision 0	2/4/86
BwIP 2400-021	Repair of Instrumentation	Revision 1	4/24/86
BwIS 3.2.1-201	Surveillance Calibration of the Steam Generator Steam Flow/Feed Flow Mismatch Protection Set II	Revision 3	2/14/86

BwMP 3305-01.0	Disassembly/Reassembly of Codes-Vulcan Air Operated Sampling Valves Hold Points Safety-Related/Rebuilding	Revision 1	2/27/86
BwOP AF-1	Fill and Vent of Auxiliary Feedwater System	Revision 1	2/19/86
1BwOS 2.1.1.a-1	Axial Flux Differences - Weekly Surveillance	Revision 52	3/17/86
1BwOS 2.1.1.b-1	Axial Flux Difference AFD Monitor Alarm Inoperable Surveillance	Revision 52	3/17/86

The inspector reviewed all of the temporary procedure changes and temporary procedures in effect (in excess of 30) during the inspection and verified that they were controlled and implemented as stated in BwAP 1300-3, "Preparation and Approval of Temporary Procedures and Temporary Changes to Permanent Procedures," Revision 2. The inspector interviewed several shift supervisors and Shift Control Room Engineers/Shift Technical Advisors (SCRE/STA) and verified that they were aware of and understood the systems established for temporary procedures.

While conducting reviews of temporary procedures and temporary procedure changes, the inspector noticed several temporary procedures where the documentation of the 10 CFR 50.59 review gave the impression of a questionable review. Several examples are answers to the question: "Is the possibility of an accident or malfunction of a different type than any previously evaluated in the FSAR created?" Answers varied from, "No, because Tech Specs are not applicable to this procedure," or "Not addressed in the FSAR." In each case, the answers could lead one to believe that the review was inadequate in that the change could raise an issue that was not addressed in the past. However, the inspector confirmed that the subject of these specific procedure changes was not affected by the 10 CFR 50.59 regulation. To assure more concise 10 CFR 50.59 reviews in the future, the inspector found through discussions with licensee personnel that CECO is developing a generic program at the corporate level for use at all CECO nuclear stations. The program will be made up of EPRI, NSAC, and INPO recommendations, and will provide guidance on what to look for in 10 CFR 50.59 reviews and related training. Followup on this program is considered an open inspection item (456/86016-02(DRP); 457/86014-01(DRP)).

The inspector reviewed all of the special operating orders in effect during the inspection and verified that they were issued in accordance with the controls stated in BwAP 350-3, "Special Operating Orders," Revision 0, and that they were not being used in place of procedures which should undergo appropriate reviews and approvals.

Byron/Braidwood Procedure Standardization

During the inspection, the inspector reviewed the licensee's plan for developing and implementing a procedure standardization program for Byron

and Braidwood. This will eventually result in almost all procedures being identical for both stations. Those procedures that have been properly approved and implemented for both stations are identified as Revision 51 and subsequent revisions will be numbered sequentially from 51. Braidwood has implemented a specific procedure, BwAP 1800-1, "Byron/Braidwood Operating Commitment Standardization Program," and a number of procedures have been implemented under the standardized program using this plan. The applicable Byron administrative procedure is: BAP 340-4, Byron/Braidwood Operating Procedure Standardization Form, Revision 20, February 13, 1986. The inspector reviewed that procedure and found that it is compatible with the Braidwood facility and the Braidwood administrative procedure: BwAP 1300-2, "Permanent Procedure Preparation, Revision and Approval," Revision 5.

The inspector reviewed a number of procedures designated as Revision 51 and found them to be acceptable.

In general, most of the technical procedures at Braidwood were developed using Byron approved procedures as a guide or pattern. In a number of cases, the Byron procedures were duplicated verbatim. In consideration of this and the extensive NRC inspection of Byron procedures (reference Inspection Reports No. 454/82015(DRP), 454/83061(DRP), 454/84015(DRP), 454/84019(DRP), 454/84028(DRP), and 454/84055(DRP)), most of the procedures at Braidwood have been pre-reviewed with the exception of site specific procedures. In addition, this is the initial NRC procedure review at Braidwood and is the first of an ongoing process whereby future inspections will evaluate procedure development, availability, use, and updating.

Emergency Procedures

The inspector reviewed the index of plant emergency procedures for completeness. The inspector also reviewed a significant sample of Emergency Operating Procedures/Event Specific, Contingency Actions Procedures, Functional Restoration/Status Trees, Operating Abnormal Procedures, General Operating Procedures, and numbers of Safety-Related Annunciator Response Procedures. The inspector verified that the procedures were in an appropriate format and technically adequate to accomplish their specific purpose. With regard to similar plant designs, concerns have been raised where the operator could manually reset a safety injection signal (SIS) prematurely and defeat the loss of offsite power protection. Through interviews with licensed operations personnel, the inspector found that the Braidwood design has a built in time delay relay that prevents the manual reset of the SIS for several minutes to prevent defaulting the ECCS load pickup. Further questions on this subject have been raised through IE Bulletin 80-06, "Engineered Safety Feature (ESF) Reset Controls," and will be addressed when the licensee response is appraised.

On April 9, 1986, the senior resident inspectors were afforded an opportunity to use the Byron/Braidwood simulator in conjunction with NRC licensing examiners. The simulator was used to exercise a number of abnormal and/or emergency conditions and use the present procedures for mitigation and recovery.

The following is a partial list of the procedures reviewed by the inspector and/or tested on the simulator:

BwAP 340-1	Use of Procedures for Operating Department
1BwEP-0	Reactor Trip or Safety Injection (Several Variations)
1BwEP-ES-0.0	Rediagnosis
1BwEP-ES-0.1	Reactor Trip Response
1BwEP-1	Loss of Reactor or Secondary Coolant
1BwEP ES-1.2	Transfer to Hot Leg Recirculation
1BwEP-3	Steam Generator Tube Rupture
1BwEP ES-3.1	Post SGTR Cooldown Using Backfull
1BwEP ES-3.3	Post SGTR Cooldown Using Steam Dump
1BwCA-0.0	Loss Of All AC Power
1BwCA-0.2	Loss of All AC Power Recovery With SI Required
1BwST-1	Subcriticality
1BwST-2	Core Cooling
1BwST-3	Heat Sink
1BwST-4	Integrity
1BwST-5	Containment
1BwST-6	Inventory
1BwFR-S.1	Response to Nuclear Power Generation/ATWS
1BwFR-Z.1	Response To High Containment Pressure
1BwFR-I.2	Response to Low Pressurizer Level

In summary, the licensee's emergency procedure system and those procedures that were reviewed and tested were found to be acceptable.

No violations or deviations were identified.

10. Release to Operations (RTO)

Prior to a system or component being considered acceptable for operation, it must be evaluated by a process referred to as RTO. The Braidwood Startup Manual states that the Project Turnover Group will review the following items for completeness; design changes, FCRs, NCRs, Followup Engineering Items (FUEIs), open punch list items as appropriate, and that test results are accepted by Project Engineering and the Project Startup Superintendent.

The inspectors are concerned about the potential quality of these RTO evaluations when considering the time and manpower required for the RTO, and the upcoming licensing date of Unit 1. In order to provide an opportunity for the inspectors to evaluate the RTO process, the licensee has agreed to inform the resident inspectors when each safety-related RTO package is complete. The licensee informing the inspectors of the availability of each completed RTO package is considered an open item (456/86016-03(DRP)).

11. Meetings, Training and Other Activities

On April 8, 1986, the Senior Resident Inspector (Operations) was dispatched to the LaSalle County Generating Station to participate in the planned emergency exercise.

12. Institute on Nuclear Power Operations (INPO) Audit

During the period of May 5 through May 16, 1986, a near term operating license (NTOL) audit was conducted at Braidwood by an INPO team. The station manager discussed the findings with the resident and regional inspectors, and the Braidwood Section Chief on May 22, 1986. INPO identified nine good practices and 34 areas where improvement is suggested. Not all of the areas identified are safety-related and the station will respond internally to all of the findings. The station manager will make the report available for NRC review.

13. Open Items

Open items are matters which have been discussed with the licensee, which will be reviewed by the inspector and which involve some action on the part of the NRC or licensee or both. Open items disclosed during the inspection are discussed in Paragraphs 2, 9, and 10.

14. Exit Interview

The inspector met with licensee and contractor representatives denoted in Paragraph 1 during and at the conclusion of the inspection on May 29, 1986. 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.