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August 6, 1980

United States Nuclear Regulatory Commission
Office of Inspection and Enforcement
Attn: Eldon J. Brunner, Chief
Reactor Operations and Nuclear Support Branch
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Reference: Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
I.E. Inspection No. 80-09

Dear Mr. Brunner:

In response to your letter dated July 8, 1980, and in accordance with 10CFR2.201, the attached reply addresses the Notice of Violation which was included as Appendix A of the referenced Inspection Report. The noted violations include three infractions and one deficiency.

The measures taken to correct the specific items of noncompliance, along with the necessary corrective actions taken to prevent similar occurrences in the future, will improve the implementation of the quality assurance program.

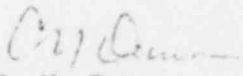
With respect to the discussion of certain unquantified deficiencies in engineering drawings and information as more fully discussed in the attachment hereto, it was alleged that these deficiencies may effect the quality of operation and ability to respond to emergency conditions. The operating drawings are revised to incorporate plant modifications by the operating staff as modifications are completed and are accurate to the best of our knowledge. The new procedures described in the attached reply direct the operating staff to use the final modification information to correct these drawings along with design conceptual information which did not happen in the cited instance. We do not believe that deficiencies which exist in the engineering drawings has any material effect on the quality of operation or the ability to respond to emergency conditions.

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If you have any questions concerning this response, please contact my office.

Very truly yours,


C. N. Dunn
Vice President, Operations

Attachment

cc: Mr. D. A. Beckman, Resident Inspector
U.S. Nuclear Regulatory Commission
Beaver Valley Power Station
Shippingport, Pennsylvania 15077

U.S. Nuclear Regulatory Commission
c/o Document Management Branch
Washington, D.C. 20555

DUQUESNE LIGHT COMPANY
Beaver Valley Power Station
Unit No. 1

REPLY TO NOTICE OF VIOLATION
Inspection No. 80-09
Letter Dated July 8, 1980

INFRACTION A

Description of Infraction (80-09-11)

Technical Specification 6.8.1.c states, in part, "Written procedures shall be established, implemented and maintained covering the activities referenced below:...c. Surveillance and test activities of safety related equipment. Technical Specification 3/4.3.3.1 specifies, in part, the Radiation Monitoring Instrument Surveillance Requirements for Containment Purge and Exhaust Monitors (RM-1VS-104A & B) and Fuel Building Gross Activity Monitors (RM-1VS-103A & B) and requires that monthly channel functional tests be performed in Mode 6 (Refueling) and with irradiated fuel in the storage pool or building.

Contrary to the above, on the dates specified:

1. Operating Surveillance Test (OST) 1.43.1, Technical Specification Required Area and Process Monitor Channel Functional Test, Revision 5 and OST 1.44.C1, Containment Purge and Exhaust Isolation, Revision 1, performed during the period January through April 1980, were inadequately maintained in that they did not reflect the actual system configuration resulting from recent modifications and did not provide for testing all required trip functions.
2. OST 1.43.1, Revision 5, performed on March 9, 1980, was inadequately implemented in that the tests for RM-1VS-103A & B were documented as having been satisfactorily completed without identification of either procedural or system deficiencies even though the procedure did not reflect the actual system configuration at the time of the test. Existing documentation is inadequate to verify the operability of the equipment with respect to the test performance.
3. OST 1.43.1, Revision 8, which was required, in part, to verify the operability of equipment modified by Design Change Packages 201/202 was improperly maintained; in that the procedure was not issued in a technically correct form until April 17, 1980, and the affected Fuel Building Ventilation and Containment Purge and Exhaust subsystems were placed in operation in January 1980 and required to be operable during fuel handling activities and refueling during the period of January 29 through February 23, 1980.

INFRACTION A (continued)

Description of Infraction (80-09-11) (continued)

4. OST 1.43.1, Revision 8, as issued originally on March 31, 1980, was further inadequately maintained in that it was reviewed, approved and issued in a form which failed to adequately test the operation of all damper/radiation monitor trip functions modified by Design Change Package 201/202. Specifically, the OST did not require verification of correct damper positions for dampers VS-0-4-1A and B, VS-D-4-1A and B and VS-D-5-2.

Corrective Action Taken

As noted in the report, corrective actions for items A(1), A(2) and A(4) have been completed and need not be addressed in this reply.

Also as noted in the inspection report, corrective action for item A(3) was completed on April 17, 1980, in that a technically correct procedure was issued at that time.

Action Taken to Prevent Recurrence

Station Engineering Procedure 2.3, Design Change Coordination, has been revised to ensure adequate coordination of all station activities related to design changes. The revised procedure includes provisions for maintaining a controlled file of design change information at the station for use by station personnel in procedure preparation and revision and for ensuring completion of all necessary procedure preparation and revision prior to the station's operational acceptance of design changes.

In addition, a letter was issued to all station personnel concerning their responsibilities when signing a document to verify the satisfactory completion of a prescribed activity. The duty to adequately record and verbally report abnormal conditions or procedural deficiencies was also addressed. We feel that this statement of Station Management position on this subject will eliminate any confusion in the future.

Date On Which Full Compliance Will Be Achieved

Full compliance has been achieved at this time.

INFRACTION B

Description of Infraction (80-09-12)

10CFR50, Appendix B, Criterion V states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures or drawings." The BVPS FSAR,

INFRACTION B (continued)

Description of Infraction (80-09-12) (continued)

Appendix A.2, Operations Quality Assurance Program, Attachment, endorses the guidance of ANSI N45.2.8, Draft 3, Revision 3, September 1973, Supplementary Quality Assurance Requirements for the Installation, Inspection, and Testing of Mechanical Equipment and Systems for the Construction Phase of Nuclear Power Plants. ANSI N45.2.8 provides requirements for the temporary use of equipment which is to become part of the permanent facility but has not been completely turned over from construction and/or testing. The standard requires that authorization for usage be provided via a written approval which shall include: (1) conditions for use or operation; (2) maintenance requirements; (3) inspections and tests required to maintain operability and quality during the period of temporary use. QA Procedure No. OP-11, Control of Maintenance and Modification, Revision 3, Section 11.4 requires, in part, "11.4.1 The station administrative directives and detailed implementing procedures shall establish the necessary measures to adequately identify the status of inspections, tests and operability... 11.4.2 The measures described in the station administrative directives and detailed implementing procedures shall provide means for assuring that required inspections and tests are performed and that the acceptability of systems and equipment with regard to inspections and tests performed is known throughout operations, maintenance, modification or refueling..." Station Administrative Directive No. 5, Equipment Turnover, issued August 1, 1974, requires that Beaver Valley Proof Test Manual Procedure 1-4 be the official detailed administrative procedure for equipment turnover.

Contrary to the above, the transfer of responsibility (turnover) for the temporary use (operation) of the systems modified by Design Change Packages 201/202 took place on January 19, 1980, via a "conditional system release" in order to support the Technical Specification requirements for refueling and associated activities. Neither Procedure 1-4 nor any other procedure was utilized to control the transfer of responsibilities with respect to the requirements of ANSI N45.2.8.

Corrective Action Taken

Following the identification of the problems concerning the turnover of Design Change Package (DCP) 201/202, personnel from the Power Stations Department and the Construction Department Nuclear (CDN) met to evaluate the station design control program and determine what improvements were required to ensure adequate station control of the transfer of responsibilities during equipment turnovers. Subsequently, the station design control program was revised as described below under "Action Taken To Prevent Recurrence."

Since the scope of DCP 201/202 has been expanded to include additional modifications, specific actions regarding this DCP will be performed upon completion of the modifications presently being performed.

INFRACTION B (continued)

Action Taken To Prevent Recurrence

On May 20, 1980, the Construction Department issued procedure CDN 3.7.3 titled, "System Release Turnover Procedure," to amplify the instructions for system release. This procedure clarifies the system release interface requirements between the Construction Department, the Onsite Engineering Group and the Power Stations Department.

On May 23, 1980, the station issued Revision 2 to Station Engineering Procedure 2.3 titled, "Design Change Coordination," to control the transfer of responsibilities during equipment turnover.

Date On Which Full Compliance Will Be Achieved

Full compliance has been achieved at this time.

INFRACTION C

Description of Infraction (80-09-13)

10CFR50, Appendix B, Criterion VI, states, in part, "Measures shall be established to control the issuance of documents such as instructions, procedures and drawings, including changes thereto, which prescribe all activities affecting quality. These measures shall assure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed." The BVPS FSAR, Appendix A.2, Section A.2.2.6, Document Control, states, in part, "The Operations Quality Assurance Program includes provisions for assuring that documents, including changes are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed prior to the onset of work"... "Quality Assurance Procedure OP-8, Document Control, Revision 0, Section 8.3, states, in part, "8.3.1 Measures shall be established to control the issuance, review, approval, distribution and use of documents such as instructions, procedures and drawings which prescribe activities affecting quality. Changes to these documents shall be controlled in the same manner as the original documents. 8.3.2 These document control measures shall include provisions for: ... (b) identifying the proper documents to be used in performing the activity. (c) Coordination and control of interface documents. (d) Ascertaining that proper documents are being used... 8.3.3 The following requirements are to be included to assure effective implementation of the document control system: ... (c) Release and distribution of information will be controlled so that cognizant groups are always provided with the current information... (d) Obsolete or out-dated information must be removed to prevent its inadvertent use or application..." QA Procedure OP-4, Station Design Control, Revision 5, Section 4.6.2, states, in part, "...When pre-operational testing is complete and test results are approved, the Station Superintendent shall update the station file with the as-built drawings and document..."

INFRACTION C (continued)

Description of Infraction (80-09-13) (continued)

Contrary to the above, with respect to Design Change Package 201/202, adequate document control measures were not implemented in that:

- Construction information, including design change output documents, was transmitted to the station staff but was not distributed, made reasonably available or used by personnel responsible for preparation review or approval of operating and surveillance procedures required to support post-modification safety related operations and testing. Operating Surveillance Test (OST) 1.43.1, Revision 8, was prepared without benefit of the controlled information formally transmitted to the station.

- Station and control room controlled drawing files contained obsolete drawings concerning systems modified and preoperationally tested as part of DCP 201/202 and which were required to be operable by Technical Specifications. The following elementary electrical diagrams are examples of such drawings which were transmitted to the station via Controlled Document Transmittal Sheet No. DCP 201/202-46, dated March 5, 1980, and not incorporated into station files:

8700-RE-21-MQ, Fuel Building Ventilation, Revision 1B-6

8700-RE-21-MS, Leak Collection Ventilation, Revision 1A-3

8700-RE-21-MH, Purge & Exhaust Ventilation, Revision 1B-4

On April 11, 1980, the control room controlled drawing files contained Revision 1, dated November 10, 1976, for each of the drawings above.

- The as-Built drawing for the modifications such as those listed above were not received by the station until March 17, 1980, and were not introduced into the station distribution/filing system until April 9, 1980.

- The Controlled Document Transmittal Sheet above was annotated to indicate that the drawings transmitted had not yet received final engineering checking.

Corrective Action Taken

Following the identification of the problems concerning the turnover of Design Change Package (DCP) 201/202, personnel from the Power Stations Department and the Construction Department Nuclear (CDN) met to evaluate the station design control program and determine what improvements were

INFRACTION C (continued)

Corrective Action Taken (continued)

required to ensure adequate station control of the transfer of responsibilities during equipment turnovers. Subsequently, the station design control program was revised as described below under "Action Taken to Prevent Recurrence."

Since the scope of DCP 201/202 has been expanded to include additional modifications, specific actions regarding this DCP will be performed upon completion of the modifications presently being performed.

Action Taken To Prevent Recurrence

On May 20, 1980, the Construction Department issued Procedure No. 3.7.3 titled, "System Release Turnover Procedure," to amplify the instructions for system release. This procedure clarifies the system release interface requirements between the Construction Department, the Onsite Engineering Group and the Power Stations Department. This procedure provides the requirement to turnover four (4) copies of type 1 as-built drawings (flow diagrams, elementaries, wiring diagrams and logic diagrams) for the Design Change Package.

Stations Engineering Procedure 2.3, Design Change Coordination, has been revised to ensure adequate coordination of all station activities related to design changes. The procedure now includes provisions for maintaining a controlled file of design change information at the station for use by station personnel in procedure preparation, etc. and for updating station drawings required to operate and maintain the station with as-built information prior to station acceptance of design changes.

Date On Which Full Compliance Will Be Achieved

Full compliance has been achieved at this time.

DEFICIENCY D

Description of Deficiency (80-09-01)

10CFR50, Appendix B, Criterion XII, states, "Measures shall be established to assure that tools, gages, instruments and other measuring and test devices used in activities affecting quality are properly controlled, calibrated and adjusted at specified periods to maintain accuracy within necessary limits." The BVPS FSAR, Appendix A.2, Section A.2, Section A.2.2.12, Control of Measuring and Test Equipment, states, in part, "The Operations Quality Assurance Program establishes measures to assure that tools, gages, instruments and other measuring and testing devices used

DEFICIENCY D (continued)

Description of Deficiency (80-09-01) (continued)

in activities affecting quality are properly controlled, calibrated and adjusted at specified periods or prior to use to maintain accuracy within necessary limits. Specific procedures shall include the identification of the calibration technique, the calibration frequency and the method established for the tagging of measuring devices to positively indicate their status..." QA Procedure No. OP-12, Control of Measuring and Test Equipment, Revision 3, states, in part, "12.2.1 Station administrative directives and/or detailed implementing procedures shall be prepared to assure that measuring and testing devices are properly identified, controlled, calibrated and adjusted within necessary limits. Such procedures shall include: (a) Calibration frequency. (b) Identification of calibration technique. (c) Method of tagging to indicate a devices status..."

Contrary to the above, on March 24, 1980, dial indicators utilized in accordance with Corrective Maintenance Procedure No. CMP-1-44VS-E-4B-1M, 4B Control Room Air Conditioner Overhaul, Revision 0, were not calibrated and controlled in accordance with the above requirements. The instrument was utilized to make quantitative measurements subject to procedural acceptance criteria for coupling alignment on the safety-related compressors. Additionally, the BVPS Maintenance Manual, Chapter 1, Section F, Control and Calibration of Measuring and Test Equipment does not establish or implement calibration or control measures for dial indicator devices.

Corrective Action Taken

In general, dial indicators are not used to obtain data to be used as quantitative measurements subject to procedural acceptance criteria. These instruments are used, for the most part, in maintenance activities where acceptance criteria readings are subsequently made with other devices which are controlled in accordance with Section F of the Maintenance Manual.

In the future, when dial indicators are used for acceptance criteria measurements where failure to meet the acceptance criteria would render the equipment unable to perform its safety function, they will be calibrated prior to use.

Action Taken To Prevent Recurrence

Section F of the Beaver Valley Power Station Maintenance Manual will be revised to reflect the stated corrective action.

Date On Which Full Compliance Will Be Achieved

Full compliance will be achieved by August 29, 1980.

REQUEST FOR INFORMATION - (Unresolved item - Paragraph 10 of Report 80-09)

- Provide an assessment of past practices with regard to the quality of information utilized in the preparation of operating, maintenance, test, modification, etc., procedures with respect to the availability of accurate as-built information. Such an assessment should be based upon a systematic review of the potentially affected safety-related activities and should provide the bases for the conclusions drawn. The discussion should also include these activities or systems which can result in the radiation release to the environment.

- Provide an assessment of and the plans and schedules for correcting any deficiencies in issued drawings and engineering documents which have resulted from construction phase changes which are not currently reflected in controlled documents available at the station. This assessment should address the capability to perform safety-related operations, maintenance and engineering activities and respond to plant emergencies with currently available information.

Discussion of Unresolved Item (80-09-14)

The quality of information utilized in preparation of operating, maintenance and test procedures during the construction and initial plant startup period was very accurate. This information was verified by several different and independent formal programs which demonstrated by actual use and test that the safety-related systems were installed and operate as designed. Although emphasis was placed on Category I systems, these programs as described here were utilized for the test and acceptance of all systems in the plant.

The formal proof test and preoperational test programs for BVPS Unit 1 were quite extensive with participation by several independent groups. Proof Test Procedures were prepared by the Architect/Engineer (AE) which verified logic as designed. These tests were performed by an Advisory Operations Group consisting of AE and Duquesne Light Company personnel. The preoperational test program utilized test descriptions prepared by the AE and NSSS supplier to determine the objective of the individual tests, but the operating manual and information from the Operating Group supervisors was utilized in preparing the formal test procedures thus the preoperational test program served to verify the operating procedures.

During the initial construction and plant startup phase, activities were closely followed by the Operating Group supervisors who were assigned in 1971 to prepare the operating manual. These supervisors witnessed actual equipment installation and walked down the systems as they were being built. They were thus able to compare actual installation against the certified drawings, system descriptions and logic diagrams supplied by the AE. With this information, the system descriptions and operating procedures for the operating manual were prepared.

Discussion of Unresolved Item (80-09-14)

The formal equipment and systems turnover program utilized checklists prepared by the Operating Group which verified quality installation of equipment and systems prior to acceptance by the Operating Group. The schematic piping diagrams were certified by independent and joint walkdowns by representatives of the constructor, Advisory Operations and the Operating Group.

Maintenance Surveillance procedures were prepared from calibration procedures prepared by the AE and from drawings and instructions supplied from the NSSS. This information was used in the original calibration and checkout of the I&C equipment which was then verified during the test programs.

For the period from plant startup to the issuance of Station Engineering Procedure (SEP) 2.3 "Design Change Coordination," all the Category I design changes that have been incorporated into the Station are reflected in updates to both copies of the operating drawings. We will assess by means of a systematic review of all Category I design changes completed during this period to assure that the necessary information is available to all station groups to complete their applicable input to the activities described in SEP 2.3.

With the issuance of SEP 2.3, there are provisions for maintaining a controlled file of design change information at the station for use by station personnel in procedure preparation and for updating station drawings. This procedure also ensures completion of all necessary procedure preparation/revision prior to the station's operational acceptance of design changes.

We do not believe that the unquantified deficiencies in the accuracy of drawings which may exist will have an effect on the quality of operation and ability to respond to emergency conditions. We believe that the operating drawings needed for the safe operation of the plant and for emergency conditions are maintained by the operating staff and are accurate. Prior to maintenance and modification activities, any needed engineering drawings are checked out for accuracy prior to commencement of the work.