

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-334/82-21

Docket No. 50-334

License No. DPR-66 Priority -- Category C

Licensee: Duquesne Light Company

435 Sixth Avenue

Pittsburgh, Pennsylvania 15219

Facility Name: Beaver Valley Unit No. 1

Inspection at: Shippingport, Pennsylvania

Inspection conducted: August 16-20, 1982

Inspectors:

N. Blumberg
N. Blumberg, Reactor Inspector

9/16/82
date signed

P. Bissett
P. Bissett, Reactor Inspector

9/16/82
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Approved by:

D. L. Capton
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9/23/82
date signed

Inspection Summary: Inspection on August 16-20, 1982 (Inspection Report No. 50-334/82-21)

Areas Inspected: Routine unannounced inspection of licensee action on previous inspection findings; administrative controls for safety-related maintenance; safety-related maintenance activities; maintenance program; housekeeping and cleanliness program; surveillance testing program; and surveillance calibration program. The inspection involved 96 inspector hours by three region based inspectors.

Results: No violations were identified in the seven areas inspected.

DETAILS1. Persons Contacted

- * J. Baumler, Quality Assurance Engineer
- D. Brown, Mechanical Training Instructor
- E. Cohen, Shift Technical Advisor
- M. Coppola, Technical Services
- R. Felix, Instrument Foreman
- * S. Fenner, Director, Operations Quality Control
- J. Forney, Instrument and Control Engineer
- * K. Grada, Superintendent, Licensing
- * R. Hansen, Station Maintenance Supervisor
- * J. Indovina, Station Instrument and Control Supervisor
- F. Lipchick, Senior Compliance Engineer
- F. Pajak, Senior Calibration Engineer
- * L. Schad, Station Operations Supervisor
- F. Schuster, Operations Coordinator
- B. Sepelak, Safety and Licensing Engineer
- * T. Stansburg, Maintenance Support Engineer
- J. Turner, Shift Supervisor

USNRC

W. Troskoski, Resident Inspector

The inspectors also interviewed other licensee personnel including reactor operators, technicians and clerical personnel.

*denotes those present at exit interview.

2. Licensee Action on Previous Inspection Findings

Note: This paragraph is divided into three sections - Performance Appraisal Section (PAS) findings, SALP review findings, and Region I inspection findings. For purposes of computer tracking, licensee responses to PAS and SALP items were assigned inspector follow item identification numbers. Since some PAS and SALP items have their basis in previous Region I inspection findings, some of the previous inspection findings discussed in paragraph 2.C are similar to or the same as PAS and SALP items discussed in paragraphs 2.A and 2.B respectively. Such items cross reference each other.

A. Performance Appraisal Section (PAS) Inspector Follow Items (IFI) (Inspection 334/81-29)

1. The licensee is to review and revise administrative procedures to accomplish the following:

-- (Closed) IFI (334/81-29-17):

- a. Reflect the current practice of reviews by Operations and Quality Control of each Maintenance Work Request (MWR) to determine special observation or other QC or testing requirements prior to the MWR being performed.
- b. Provide for a fire hazard review related to MWRs.
- c. Require that a new MWR be issued when preliminary work on an existing MWR indicates a substantial change in scope.
- d. Require that appropriate descriptive information be provided in the "work instructions" section of an MWR.

The inspector reviewed recent revisions to BVPS-MM, Chapter 1, Conduct of Maintenance, Section A, "General Rules for Implementation" and determined that it has been revised to include the above items.

This item is closed.

-- (Closed) IFI (334/81-29-18):

- e. Provide that a safety evaluation, conducted pursuant to 10 CFR 50.59, be accomplished prior to placing equipment in service when the maintenance work on Category I systems results in a change to the system as described in the Final Safety Analysis Report.

The inspector observed that BVPS-1-AP, Chapter 10, "Onsite Safety Committee, (OSC)" requires documented safety reviews and that a new form has been developed to document such reviews. BVPS-MM, Chapter 1, Section A, requires an additional review of MWR's for which the scope of work has significantly increased. Any such changes will receive OSC review. Based on the above, this item is closed.

-- (Closed) IFI (334/81-29-19):

- f. Provide that jumpers and lifted leads installed for maintenance must be approved under the requirements of Operating Manual Chapter 48.

The inspector verified that BVPS-MM, Chapter 1A, now requires that any jumper or lifted leads

which are the result of written procedures or trouble shooting which are in effect for more than one shift must be logged in accordance with BVPS-OM, Chapter 48. Base on the above, this item is closed.

-- (Closed) IFI (334/81-29-20):

- g. Provide that applicable portions of Section A of the Maintenance Manual will be reviewed by maintenance workers.

The inspector verified that BVPS-MM, Chapter 1A, Table 1 has been revised to state applicable portions of Chapter 1A which must be reviewed by maintenance workers. This item is closed.

-- (Closed) IFI (334/81-29-21):

- h. The Station Administrative Procedures, Chapter 8 and the Maintenance Manual, Section A will be reviewed and revised as necessary to eliminate duplication and assure completeness.

BVPS-AP, Chapter 8, "Maintenance," and BVPS-MM, Chapter 1A have been revised to reduce duplication. However, some duplication still exists. A concern, expressed in Inspection 81-29, is that audits were not being conducted to the requirements of the BVPS-MM hence, some important requirements may be overlooked. The inspector verified that audits are being conducted to the requirements of the BVPS-MM as well as BVPS-AP, Chapter 8. This concern appears to be resolved. Based on the above this item is closed.

2. The licensee stated that programs will be developed by June 30, 1982 to trend failures of safety-related equipment by trending Licensee Event Reports.

-- (Closed) IFI (334/81-29-22):

The inspector verified that an incident report (IR)/licensee event report (LER) tracking system is in effect and that a monthly report is issued. A procedure TAG-3.0, "Incident Report, Preparation and Processing," has been established and Station Advisory Engineering has been assigned the task of reviewing IR and LER trends. Based on the above, this item is closed.

3. To reduce and gain control of the backlog of maintenance work, the licensee stated that a review of backlog maintenance work will be performed quarterly to keep the backlog list current and accurate.

-- (Closed) IFI (334-81-29-23):

The inspector observed that the maintenance work request (MWR) backlog is now monitored frequently and included in the monthly trend status report. The Maintenance Department MWR backlog has been reduced considerably in recent months. The I&C Department MWR backlog has leveled off. The licensee has demonstrated considerable improvement in the tracking, trending, and disposition of outstanding MWR's. Based on the above, this item is closed.

B. Systematic Assessment of Licensee Performance (SALP)
Inspector Follow Items (IFI) (Inspection Report 334/82-07)

1. (Closed) IFI (334/82-07-01):

The Maintenance Department staff is undermanned at both supervisory and non-supervisory levels and that engineering support/review of maintenance problems appeared inadequate. The licensee's response to this item was as follows:

"The revised maintenance organization includes electrical and mechanical maintenance with the instrumentation and control responsibility being placed under a new senior supervisor reporting directly to the Station Superintendent.

The maintenance organization previously included seven foremen reporting to four maintenance engineers who in turn reported to the Station Maintenance Supervisor. The revised organization (maintenance and I & C) doubles the number of foremen and maintenance engineers which permits increased attention and involvement in a reduced area of responsibility. The establishment of a completely separate instrument and control section has relieved the Station Maintenance Supervisor of this workload and thereby enables him to maintain greater control of the balance of the on-going maintenance activities.

Increased staffing in the engineering organization has resulted in more timely and thorough engineering support of station problems.

While the new organization is not completely staffed, the additional manning has produced benefits in the identification and response to instances of repetitive equipment failures and in management of the maintenance work load."

The inspector verified that the above organizational changes have been accomplished. The effectiveness of the changes will be the subject of future NRC:RI inspections. During this inspection, the areas of maintenance and calibration were reviewed and no violations were identified. Additionally, increased control and reduction of MWR backlog was observed. Based on the above, this item is closed.

2. (Closed) IFI (334/82-07-04):

Difficulty was observed in the management control of maintenance and calibration programs and a significant backlog of MWR's existed. The licensee's response to this item was as follows:

"Management control of the maintenance workload was improved by assigning additional staff to the maintenance organizations. This enabled the station staff to better define the workload and associated problems.

- a. A new position of Senior Instrument and Control Calibration Engineer with two Instrument and Control Foremen reporting to him was created. This allowed one branch of the new instrument and control group to devote full time to reviewing and scheduling instrument calibrations. This work was previously done by the Instrument Engineer on a low priority basis.
- b. To provide management with a more accurate and up-to-date status of maintenance and control work, it was necessary to improve the Computer Backlog Report. The method of reporting completion information for updating the backlog report was changed and backlog updates are now performed on a weekly basis.

Use of the backlog report by management as a means to periodically assess maintenance and instrument and control progress has been implemented to provide better control of maintenance work load. The backlog report is reviewed on a quarterly basis to assess performance. During extended outages the backlog report is reviewed by each discipline with planning and scheduling on a weekly basis.

Increased emphasis on completion of maintenance tasks has resulted from use of the backlog reports."

The inspector verified that licensee's staff has been changed as stated in 2.B.2.a above and that the MWR backlog was being evaluated on at least a monthly basis. Based on the above, this item is closed.

3. (Closed) IFI (334/82-07-02):

Repetitive equipment failures were identified indicating a continuing need for additional engineering, technical and management support. The licensee's response is given below. The response was to several individual items which were collectively assigned IFI No. 334/82-07-04. For ease of followup action, since the items are unrelated and may not be completed concurrently, IFI 334/82-07-02 is administratively closed and separate IFI numbers are assigned to each item in the licensee's response.

The licensee's response stated the following:

- a. To provide better evaluation of repetitive equipment failures, trend analysis of safety-related equipment failures will be performed by the technical advisory group.
- b. As a result of increased technical staffing in the maintenance section, it has been possible to obtain a more indepth review of specific equipment failures during maintenance activities to insure proper corrective action has been taken.
- c. The following actions have been taken in regards to the repetitive failures identified in the draft report.

- (1) Vital bus inverters #3 and #4 are being replaced during the second refueling outage. Their performance will be compared with the older inverters and appropriate action taken (334/82-21-02).
- (2) A new motor was installed on the motor driven fire pump (FP-P-1) to increase reliability.
- (3) Duquesne Light Company Engineering is presently re-evaluating the design and materials utilized in the underground fire system piping to preclude line breakage. (334/82-21-03).
- (4) Deficiencies in the degasifier system heat exchangers will be corrected by Design Change Package 539 which has determined the method of repair. Final engineering will be started this month (334/82-21-04).
- (5) The RCS Loop 1 flow instrument malfunctions were caused by a single faulty transmitter. The transmitter was replaced and satisfactory surveillance has been performed on RCS Loop 1 instrumentation (334/82-21-05).
- (6) The RWST level instrument drift problem appeared to have been caused by improper venting of the transmitters low pressure process connection. The proper vent plug was installed. The transmitters were calibrated satisfactorily and appear to be operating properly. These transmitters will be monitored to determine if the problem has been corrected (334/82-21-06).
- (7) Velan check valves were experiencing binding of the discs. A design change was initiated and is being worked at this time. The design change will be completed by the end of the 1982 outage (334/82-21-07).
- (8) The out-of-service indicators and annunciators in the control room were given a higher priority by I & C supervision. The number of indicators and annunciators out-of-service has been significantly reduced (334/82-21-08).

Items a and b are related to other open items concerning trend analysis and increased staffing which are discussed elsewhere in paragraph 2.B. These items are closed. For item c(2), the inspector reviewed MWR 82-246 and determined that this item had been completed February 7, 1982.

The status of items 334/82-21-02, 03, 04, 05, 06, 07 and 08 were not determined during this inspection and remain open pending review during future NRC:RI inspections.

C. Previous Inspection Findings

1. (Closed) Deficiency (334/79-04-01):

Records of several completed maintenance surveillance procedures (MSP's) completed in 1978 could not be located. The inspector determined that the system for controlling and maintaining records has improved considerably since this finding. During this inspection, the licensee was able to provide all requested records, including completed MSP's. Based on the above, this item is closed. See also deviation, 334/79-20-01.

2. (Closed) Deviation (334/79-20-01):

In response to item 334/79-04-01 the licensee stated that to preclude recurrence, a checklist to document transmittal and accountability would be established and implemented. The licensee's representative stated that this response was due to a misunderstanding by station personnel and should have applied to MWR records only.

The inspector determined that MSP records are currently controlled by BVPS-MM, Chapter 1A, and by document transmittal. Several of these transmittal forms were reviewed with no discrepancies noted. Based on the above, this deviation is closed.

3. (Closed) Deficiency (334/80-05-01):

Meteorological instrumentation was being calibrated by an outside contractor using a procedure not approved by the licensee; and records of these calibrations were not being maintained by the licensee. The inspector verified that calibration procedure MSP 45.17, "Meteorological Monitoring Instrumentation Calibration Test" is now reviewed by the OSC and approved by the licensee; and that records of this test are being maintained by the licensee. Based on the above, this item is closed. See also discussion of related noncompliance (334/81-03-03).

4. (Closed) Unresolved Item (334/80-14-01):

Appropriate licensee procedures concerning storage and calibration of measuring and test equipment to be revised to more clearly delineate the following:

- environmental requirements during the calibration of generic/specific items
- environmental requirements during storage of generic/specific items
- calibration methods for generic/specific items
- system of controls for the storage of items
- documentation requirements for the above four activities

The inspector verified that procedures BVPS-MM, Chapter 1F, "Control and Calibration of Measuring and Test Equipment" and Station Administrative Procedure (SAP)-8, Section 2, "Control and Calibration of Measuring and Test Equipment" have been revised to more clearly delineate the above items. Based on the above, this item is closed.

5. (Closed) Unresolved Item (334/80-27-23):

Operating, abnormal or emergency, calibration and test procedures must be established for the power operated relief valve (PORV) Accoustic Monitor System. The inspector verified the following procedures have been issued concerning the Accoustic Monitoring System:

- Operating OP-1.6.3, Power Supply and Control Switch List for Reactor Coolant System
- Emergency E-0, Immediate Actions and Diagnostics for Safety Injection; and E-1, Loss of Reactor Coolant
- Test OST-1.6.7, Accident Monitoring Instrumentation Channel Checks
- Calibration MSP-6.18, Pressurizer and Safety Valve Indication Monitoring System Calibration

Additionally, the inspector reviewed data for MSP-6.18 calibration performed June 20, 1982 with no discrepancies observed.

Based on the above, this item is closed.

6. (Closed) Noncompliance (334/80-30-11):

Volume Control Tank (VCT) Level Indicator (LI-CH-115) was calibrated one month after its calibration due date had expired. The inspector verified that LI-CH-115 is now calibrated as part of LCP-7-L115, "Volume Control Tank (VCT) Level Loop L-115 Calibration" which requires a nominal 18 month calibration frequency for VCT loop instruments.

Additionally, the inspector reviewed data for calibrations performed January 3, 1981 and March 25, 1982 noting that the calibrations were within the required frequency. Based on the above, this item is closed.

7. (Closed) IFI (334/81-03-01):

Many outstanding MWR's existed. The licensee is to develop a method for periodically reviewing MWR's. The inspector verified that the MWR backlog has been significantly reduced and that MWR status is reviewed on at least a monthly basis. Based on the above, this item is closed. Refer also to related PAS item 334/81-29-23, paragraph 2.A.3 and SALP items 334/82-07-01 and 334/82-07-04, paragraphs 2.B.1 and 2.B.2.

8. (Closed) Unresolved Item (334/81-03-02):

Neither corrective nor preventive maintenance procedures provided a signoff to verify procedure completion. The licensee agreed to revise MWR instructions in BVPS-MM, Chapter 1A to state that leadman and maintenance foreman signatures certifying completion of the MWR would also certify completion of the procedure. The inspector verified that BVPS-MM, Chapter 1A has been satisfactorily revised. Based on the above, this item is closed.

9. (Closed) Noncompliance (334/81-03-03):

Corrective actions for noncompliance 334/80-05-01 were inadequate in that:

- changes were made to procedure MSP 45.17 "Meteorological Monitoring System Instrumentation Calibration" without licensee review or approval;
- licensee authorized the contractor to make "non-intent" changes to procedure without licensee approval; and
- copies of data maintained by the licensee were incomplete.

The inspector reviewed MSP 45.17 and data for quarterly tests performed March 29, 1982 and June 28, 1982 and determined the following.

- Procedure revisions were being reviewed and approved by the licensee

- All data was being maintained by the licensee. Unused data sheets were clearly marked as not applicable
- Data reviewed on a sampling basis was acceptable
- Completed data was being reviewed by licensee personnel

Additionally the inspector toured the meteorological tower area offsite and verified that:

- general housekeeping was acceptable;
- instrumentation was operable;
- adequate security was provided; and
- the working copy of MSP 45.17 maintained at the tower was up to date.

Based on the above, this item is closed.

9. (Closed) IFI (334/81-03-04):

A backlog of completed MSP's existed awaiting final review. Since this item was identified, a separate I&C Department with increased staffing has been established. Shift Technical Advisors are performing reviews of completed MSP's and, based on the results of this inspection, the review backlog has been eliminated. This item is closed. Refer also to related SALP items 334/82-07-01 (paragraph 2.B.1) and 334/82-07-04 (paragraph 2.B.2).

10. (Open) Unresolved Item (334/81-20-03):

Non-safety related instruments which provide either a post accident monitoring function or direct control of NSSS parameters were not being calibrated. The inspector verified that the examples of instruments identified in this item and others have been identified and calibrated. However, a calibration program has not been established to formally identify the instruments and assure periodic recalibration. The licensee stated that such a

program would be established by June, 1983.
This item remains open pending completion
of licensee action and subsequent NRC:RI
review.

3. Administrative Controls for Safety-Related Maintenance

Administrative Controls were inspected to determine the licensee's program for compliance to the implementing requirements associated with the conduct of safety-related maintenance as specified in Technical Specification Section 6; Regulatory Guide 1.33-1972, Quality Assurance Program Requirements; and ANSI 18.7-1972, Administrative Controls for Nuclear Power Plants. The following procedures were reviewed:

- Quality Assurance Procedures; OP-9, Technical Procedure Control for Operations and Maintenance, Revision 4, May 1, 1982
- OP-10, Maintenance and Modification Planning, Revision 4, May 1, 1982
- OP-11, Control of Maintenance and Modification, Revision 5, May 1, 1982
- (NDD) Nuclear Department Directives (NDD)-4, Corrective Action System, Issue 1, October 12, 1981
- Beaver Valley Power Station (BVPS), Operating Manual Chapter 48, Conduct of Operations; (Section 7, Operating Schedules and Coordination Procedure, Revision 12, February 16, 1982)
- Station Administrative Procedures (SAPs) SAP-5B, Test Group, Revision 2, July 22, 1981
- SAP-8, Maintenance, Revision 4, July 13, 1982
- SAP-9B, Housekeeping Program, Revision 1, February 1, 1981
- SAP-10, Onsite Safety Committee, Revision 2, June 17, 1982
- SAP-11, Procedure Preparation, Review and Approval, Revision 4, July 26, 1982
- SAP-12, Qualification of Inspection and Testing Personnel, Revision 0, September 1, 1980

- Beaver Valley Power Station (BVPS) - Maintenance Manual - BVPS-MM Chapter 1A, General Rules for Implementation, Revision 15, March 8, 1982
- BVPS-MM, Chapter 1B, Corrective Maintenance Procedures, Revision 7, February 1, 1982
- BVPS-MM, Chapter 1E, Preventive Maintenance, Revision 5, February 1, 1982
- BVPS-MM, Chapter 1H, Cleaning and Maintenance Cleanliness, Revision 2, June 11, 1982
- BVPS-MM, Chapter 1J, Housekeeping, Revision 9, February 17, 1981
- BVPS-MM, Chapter 1K, Equipment History File, Revision 0, March 6, 1975
- BVPS-MM, Chapter 1L, Maintenance Planning and Scheduling, Revision 0, March 6, 1975
- BVPS-MM, Chapter 1P, Control of Design Changes, Revision 2, March 19, 1982
- BVPS-MM, Chapter 1T, Special Administrative Control and Rules, Revision 2, April 2, 1978
- BVPS-MM, Chapter 1W, Maintenance Procedure for Procedure Control, Revision 2, March 2, 1979
- BVPS Training Manual, Section 6, Maintenance Training, Revision 2, May 22, 1980

4. Review of Implementation of Safety-Related Maintenance Activities

- a. Safety-related maintenance was inspected on a sampling basis to determine that:
 - technical Specification requirements were satisfied while equipment was out of service;
 - selected maintenance activities had been performed in accordance with administrative procedures as detailed in Paragraph 3;
 - an approved procedure was used for those maintenance activities which could be considered beyond the skills normally possessed by qualified maintenance personnel;
 - inspections of maintenance activities as required by administrative procedures were performed; and

- records to substantiate quality of work and parts used were available (this includes documentation associated with procurement, inspections, and test results) for a sample of parts that were listed on Maintenance Work Requests as detailed in paragraph 4.b.

The inspection included a review of maintenance work requests (MWRs) as detailed in paragraph 4.b and their associated maintenance procedures (where applicable).

b. Documentation of the following maintenance activities were reviewed:

- MWR 810564, Troubleshoot and repair "B" train lights and relay K642 in Solid State Protection System, completed March 15, 1981
- MWR 811684, Repair and calibrate Rod Bottom Light J9, completed July 22, 1981
- MWR 816035, Troubleshoot and repair logic "B" test switch, completed on March 20, 1982 and post maintenance surveillance test, (MSP) 1.05, Reactor Protection Logic System Train "B" Bi-monthly Test, Revision 15, March 1, 1982
- MWR 811126, Troubleshoot and repair incore movable detector "A" completed May 23, 1982 and associated Corrective Maintenance Procedure (CMP) 1-3II-ND-B-1I Repair and Replacement of Flux Mapping System Components, Revision 2, April 15, 1982
- MWR 810704, Seal Water Injection filter leaking, completed April 3, 1981 and associated CMP 1-75-123, Commercial Liquid Filter Cartridge Replacement Using Spent Filter Removal Shield or Portable Hoist, Revision 1, December 4, 1980
- MWR 812008, Repair small hydrogen leak at local VCT hydrogen pressure gauge, completed September 16, 1981
- MWR 810524, Packing leak on Hi Head Safety Injection throttle valve, completed March 8, 1981
- MWR 812675, Troubleshoot and repair refueling water storage tank (RWST) level detector channel II, completed October 29, 1981 and post maintenance calibration MSP-13.02, L-100B RWST level loop channel IV calibration, Revision 2, September 1, 1981
- MWR 816522, Repack "A" hot leg sample valve, completed March 22, 1981
- MWR 811010, Repair "B" header Main Steam Trip Valve, completed May 9, 1981
- MWR 810059, Repair "A" Steam Generator feedwater isolation valve, completed January 9, 1981 and associated CMP's 1-75-17

Valve Operator Motor Removal and Installation, Revision 1, February 29, 1980; 1-75-49, Removal and Installation of Limetorque Motor Operators Revision 0, A November 12, 1976; 1-75-16, Adjustment of Limitorque Operator Limit Switch, Revision 0, November 15, 1975 and 1-75-79, Limitorque Motor Operator Repair, Revision 0, April 11, 1977

- MWR 817959, Inspection of 1E11 circuit breaker for CH-P-1A, completed October 31, 1981 and associated Preventive Maintenance Procedure (PMP) 1-36SS-1E11-E1 and CMP-1-75-33
- MWR 817141, Provide support for Radcon's calibration of the Atmospheric Steam Relief Monitors, completed August 19, 1981 and calibration procedure (CP) 2028
- MWR 810358, Repair Liquid Radwaste Monitor, completed on February 21, 1981 and post maintenance test procedure MSP 43.18, Radiation Process Monitor, RM-CW 104 Liquid Waste Effluent Calibration, Revision 1, February 4, 1981
- MWR 816561, Reset controllers for Heat Trace Boric Acid System (ANN-BR-03, 04, and 05), completed June 2, 1981
- MWR 810060, Replace target for undervoltage relay 1AE, completed January 9, 1981
- MWR 820205, Repair Diesel Fire Pump Voltage Regulator, completed March 3, 1982 and post maintenance testing
- MWR 820898, Repair No. 2 Diesel Generator Air Compressor, completed May 11, 1982
- MWR 820496, Repair No. 4 Battery Charger - completed on March 9, 1982

c. Findings

No violations were identified, however one unresolved item was identified.

During review of completed MWR packages, in the Document Control Center, the inspector determined that Quality Control (QC) Inspection Reports were not always contained in the completed MWR package. However file copies of these QC inspection reports were available in the Quality Control office. The inspector expressed concern over the lack of control of required QA documents as required by ANSI N45.2.9-1974, "Collection, Storage and Retention of QA records." The licensee's representative acknowledge the inspector's finding and committed to establishing a mechanism to control transmittal of QC Inspection Reports to the Document Control Center.

This item is unresolved pending licensee action and subsequent NRC:RI review (334/82-21-01).

5. Review of Safety-Related Maintenance Program

a. The licensee's overall program for the performance of corrective maintenance was inspected to determine the adequacy of equipment control and release for performance of maintenance, establishment of a preventive maintenance program, to determine that:

- administrative controls for these programs had been established;
- responsibilities for performing various aspects of the program had been designated;
- procedures for inspection and maintenance of records of maintenance activities had been established;
- preventive maintenance schedules had been established;
- control of special processes had been established;
- methods for equipment control during maintenance had been established; and
- maintenance program conformed to the following Regulatory Guides and ANSI Standards as specified in the Duquesne Light Company, Operations Quality Assurance Program and the Beaver Valley Unit No. 1 Final Safety Analysis Report, Appendix A, Quality Assurance.
 - (1) ANSI 45.2.8-1975, "Supplementary Quality Assurance Requirements for Installation, Inspection and Testing of Mechanical Equipment and Systems for the Construction Phase of Nuclear Power Plants"
 - (2) Regulatory Guide 1.33-1972, "Quality Assurance Program Requirements (Operation)"
 - (3) ANSI N18.7-1972, "Administrative Controls for Nuclear Power Plants"

No violations conditions were identified.

b. The inspector reviewed the BVPS Maintenance Planning and Scheduling System, Report No. 9-2, "Task Cross-reference Report by System" issued August 17, 1982 which is the current preventative maintenance (PM) schedule by department. In addition, several PM tasks, completed on safety related equipment, were reviewed (i.e., limit switch inspections, equipment checks and

lubrications, filter replacements, and circuit breaker inspection and testing).

c. Findings

From the BVPS Tread Monitoring Reports for June and July 1982, the inspector determined that a sizable preventative maintenance backlog exists. The licensee's representative acknowledged the inspector's finding and stated that due to the excessive corrective maintenance workload during the recent outage (i.e., Reactor Coolant Pump Seals), reduced emphasis was placed on the preventative maintenance program. This preventative maintenance backlog will be monitored in subsequent NRC:RI inspections.

6. Review of Housekeeping and Cleanliness Program

- a. The licensee's overall program for the maintenance of general plant housekeeping was inspected for adequate maintenance of cleanliness and protection of open safety related systems and components, and the cleaning of systems and components and to determine that:
- administrative controls of these programs have been established;
 - requirements and responsibilities for general plant housekeeping have been established;
 - requirements and responsibilities have been established for protection of previously cleaned systems and components and for protection of open safety related systems which require special cleanliness controls;
 - methods have been established for cleaning of systems and components which have special cleanliness requirements; and
 - housekeeping and cleanliness program conformed to the following Regulatory Guide and ANSI Standards as specified in the Duquesne Light Company, Operations Quality Assurance Program and the Beaver Valley Unit No. 1 Final Safety Analysis Report, Appendix A, Quality Assurance.
 - (1) Regulatory Guide 1.37, Revision 0, March 1973, "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants"
 - (2) ANSI N45.2.1-1973, "Cleaning of Fluid Systems and Associated Components During Construction Phase of Nuclear Power Plants"

- (3) Regulatory Guide 1.39, Revision 2, September 1977, "Housekeeping Requirements for Water-Cooled Nuclear Power plants"
- (4) ANSI N45.2.3-1973, "Housekeeping During the Construction Phase of Nuclear Power plants"

No violations were identified.

- b. The inspector reviewed the monthly "Housekeeping Tour Deficiency Lists" issued for Housekeeping inspections conducted March through July 1982. In addition, the inspector discussed plant housekeeping and the corrective action mechanisms available to correct housekeeping deficiencies with the site Safety Engineer. No deficiencies were identified.

7. Surveillance Testing Program

a. References

The following licensee's administrative controls were inspected for conformance to the requirements of the Technical Specifications, "Administrative Controls"; ANSI N18.7-1972, "Administrative Controls for Nuclear Power Plants"; and Regulatory Guide 1.33-1972, "Quality Assurance Program Requirements."

- Beaver Valley Power Station - Station/Site Administrative Procedures (BVPS-SAP) Plant Operations Group, Chapter 4, Revision 9, August 3, 1982
- BVPS-SAP, Test Group, Chapter 5B, Revision 2, July 22, 1981
- BVPS-SAP, Procedures Group, Chapter 5c, Revision 0, September 1, 1980
- BVPS-SAP, Maintenance, Chapter 8, Revision 4, July 13, 1982
- BVPS-SAP, Procedure Preparation, Review and Approval, Chapter 11, Revision 4, July 27, 1982
- BVPS-MM, Maintenance Surveillance, Section D, Revision 8, February 1, 1982
- BVPS-MM, General Rules for Implementation, Section A, Revision 15, March 8, 1982
- BVPS-OM 1.48.3.E, Review, Revision and Approval of Procedures and Logs, Revision 24, July 27, 1982
- BVPS-OM, 1.48.4, Qualification of Operating Personnel, Revision 6, July 27, 1982

- BVPS-OM 1.48.7, Operating Schedules and Coordination Procedures, Revision 12, February 16, 1982
- BVPS-OM 1.48.9.H, Station Startup After Extended Outage, Testing and Maintenance, Revision 22, March 19, 1982

b. Program Review and Implementation

The surveillance program and its implementation were inspected for conformance to those standards and appropriate plant administrative procedures detailed in paragraph 7.a. The following areas were verified:

- a master schedule had been developed and maintained for surveillance testing within each appropriate organizational group
- responsibilities had been assigned for performance of tests and assurance that test schedules are satisfied
- tests required by Technical Specifications were available and covered by properly approved procedures
- test format and technical content were adequate and provided satisfactory testing of related systems or components
- tests were performed within the required time frequencies specified by the Technical Specifications
- test data results met acceptance criteria and, if not, appropriate corrective action was taken
- completed tests had been reviewed as required by facility administrative requirements

c. The following surveillance tests and data for completed tests were reviewed:

- OST 1.13.8, Containment Depressurization System MOV's Exercise - Train A, Revision 26, September 11, 1981. Data reviewed for tests performed monthly May through July, 1982
- OST 1.13.9, Containment Depressurization System MOV's Exercise - Train B, Revision 26, September 11, 1981. Data reviewed for tests performed monthly September through December, 1981
- OST 1.24.1, S/G Auxiliary Feed Pumps Discharge Valves Exercise, Revision 30, July 6, 1982. Data reviewed for test performed July 29, 1982
- OST 1.30.4, River Water System Valve Test. Data reviewed for tests performed August 13 and July 16, 1982, with Revision 38,

- July 14, 1982; June 20 and May 25, 1982, with Revision 34, December 16, 1981
- OST 1.24.3, Motor Driven Auxiliary Feed Pump Test, Revision 30, July 6, 1982. Data reviewed for test performed July 29, 1982
 - OST 1.11.3 Boron Injection Flow Path Valve Position Verification, Revision 20, January 16, 1980. Data reviewed for verifications performed September 17, July 20, June 22, May 26 and April 28, 1982
 - OST 1.7.4, Centrifugal Charging Pump Test (1CH-P-1A). Data reviewed for tests performed September 16, July 19, and June 20, 1982, with Revision 28, May 31, 1982; May 24, 1982, with Revision 21, July 20, 1981
 - OST 1.7.5, Centrifugal Charging Pump Test (1CH-P-1B) - Data reviewed for tests performed August 2, July 9 and June 10, 1982, with Revision 28, May 31, 1982; May 23, with Revision 21, July 20, 1981
 - Operating Log 5-8, step 34, Surveillance verification of Boron Injection Tank (BIT) temperature and flow. Reviewed daily logs for July 4-31, 1982
 - Operating Log 5-11, steps 54 and 119, Surveillance verification of containment pressure. Reviewed daily logs for July 4 - 31, 1982
 - MSP 33.01, Diesel Engine Fire Pump Inspection and Maintenance, Revision 3, December 29, 1981. Data reviewed for tests performed July 28 and January 3, 1982; and July 15, 1981
 - MSP 33.02, Diesel Engine Driven Fire Pump Lubrication and Inspection, Revision 1, January 1, 1981. Data reviewed for inspection July 15, 1981 and January 3, 1982
 - MSP 36.23, No. 1 Emergency Diesel Generator 1A Fuel Oil Transfer Pumps Suction Strainer Inspection, Revision 1, September 17, 1981. Results reviewed for inspection performed January 20, 1982
 - MSP 36.37, No. 2 Emergency Diesel Generator 1B Fuel Oil Transfer Pump Discharge Filter Change, Revision 4, December 11, 1981. Data reviewed for procedure performed April 1, 1982
 - MSP 6.19 Pressurizer Safety Valve Setpoint Verification, Revision 5, May 7, 1982. Reviewed test reports from Wyle Laboratories, January 20, 1982 and Modification Work Package (MWP) 305-89 Rev 0

- BVT 1.1-1.60.-1 RCS Filter Efficiency Test, Revision 1, September 30, 1981. Data reviewed for test performed January 14, 1982

No violations were identified.

8. Surveillance Calibration Program

a. Administrative Controls

The inspector reviewed, on a sampling bases, the licensee's administrative procedures for calibration of safety related components and those components associated with safety related systems as required by ANSI 18.7-1972. In addition to those procedures listed in paragraph 7.a, the inspector also reviewed the following administrative procedures.

- BVPS - SAP, Chapter 12, Qualification of Inspection and Testing Personnel (ANSI N.45.2.6-1973), Revision 0, September 1, 1980
- BVPS-SAP, Test Group, Chapter 5B, Revision 2, July 22, 1981
- BVPS-MM, Control and Calibration of Measuring Devices, Section F, Revision 15, February 11, 1982
- BVPS-MM, Calibration Program, Section 0, Revision 8, February 1, 1982
- QAP, DC-12, Control of Measuring and Test Equipment, Revision 2, August 16, 1979
- QAP, DC-14, Inspection, Tests and Operating Status, Revision 3, September 8, 1980

b. Program Review and Implementation

The inspector reviewed calibration procedures and associated data sheets on a sampling basis to verify that the program had been implemented in accordance with applicable procedures detailed in paragraph 8.a. The following areas were verified:

- procedure format provided detailed stepwise instructions
- procedure review and approval were as required by Technical Specifications
- technical content of procedures was sufficient to result in satisfactory calibration
- calibration frequencies were met

- setpoints of calibrated components were in conformance with Technical Specification requirements
 - test data was satisfactory
- c. The following calibration procedures and data for completed tests were reviewed:
- ICP-7-PI151, 1A Charging Pump Discharge Pressure Indicator (PI-CH151), Revision 2, February 10, 1981. Data reviewed for test performed on February 22, 1982
 - ICP-7-PI152, 1B Charging Pump Discharge Pressure Indicator (PI-CH 152). Revision 2, February 10, 1981. Data reviewed for test performed on July 1, 1981
 - LCP-7-F130, Flow Transmitter Reactor Coolant Pump No. 1 Seal Water Injection. Data reviewed for test performed February 21, 1982
 - DLC Instrument Calibration Sheet, Volume Control Tank Pressure Transmitter, Loop P-CH-117 (Referenced Generic Procedure CP-501). Data reviewed for test performed on August 3, 1979
 - MSP 13.01, L-100A Refueling Water Storage Tank Level Loop Channel III Calibration, Revision 4, November 20, 1981. Data reviewed for test performed on February 22, 1981
 - MSP 6.40, T-RC432 Delta T Tavg Protection Instrument Channel III Calibration, Revision 7, May 7, 1982. Data reviewed for test performed on April 2, 1982
 - MSP 21.01, P-474 1A Steamline Pressure Protection (Loop 1) Channel II Test, Revision 7, June 25, 1981. Data reviewed for test performed July 22, June 25, and May 31, 1982
 - LCP-11-L922, Safety Injection Accumulator, Loop-L-SI 922, Level #1, Channel II, Revision 0, March 30, 1979. Data reviewed for test performed April 20, 1979
 - LCP-11-P929, Safety Injection Accumulator Tank 1C Pressure Loop, Revision 0, April 3, 1979. Data reviewed for test performed April 25, 1979

No violations were identified.

9. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable, deviations or violations.

One unresolved item was identified during this inspection and is detailed in paragraph 4.c.

10. Management Meetings

Licensee management was informed of the scope and purpose of the inspection at an entrance interview conducted on August 16, 1982. The findings of the inspection were periodically discussed with licensee representatives during the course of the inspection. An exit interview was conducted on August 20, 1982 (see paragraph 1 for attendees) at which time the findings of the inspection were presented.