DCS No. 840511

U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Report No. 50-334/84-12

Docket No. 50-334 License No. DPR-66

Licensee: Duquesne Light Company
One Oxford Center
301 Grant Street
Pittsburgh, PA 15279

Facility Name: Beaver Valley Power Station, Unit 1

Inspection At: Shippingport, Pennsylvania

Inspection Conducted: May 5 - June 1, 1984

Inspectors: W. M. Troskoski, Senior Resident Inspector — 6/6/84 date signed

D. M. Johnson, Resident Inspector — 6/6/84 date signed

Approved by: J. E. Tripp, Chief, Reactor Projects Section No. 3A, Reactor Projects Branch 3 — 6/8/84 date signed

Inspection Summary: Inspection No. 50-334/84-12 on May 5 - June 1, 1984.

Areas Inspected: Routine inspections by the resident inspectors (140 hours) of licensee actions on previous inspection findings, plant operations, housekeeping, fire protection, radiological controls, physical security, surveillance program, maintenance activities, engineered safety features verification, valve setpoint control and containment integrity verification.

Results: Three potential safety issues were identified (control room annunciators inadvertently disabled during ERF tie-in work - detail 6d, component cooling water heat exchanger tube degradation - detail 6e, and discrepancies between the containment isolation valve closure times contained in the FSAR and Technical Specifications - detail 8).

DETAILS

1. Persons Contacted

J. Carey, Vice President, Nuclear Group
M. Coppula, Superintendent of Technical Services
K. Grada, Superintendent of Licensing and Compliance
T. Jones, Manager, Nuclear Operations
W. Lacey, Station Superintendent
J. Sieber, Manager, Nuclear Safety and Licensing
N. Tonet, Manager, Nuclear Engineering

The inspector also contacted other licensee employees and contractors during this inspection.

2. The NRC Outstanding Items (OI) List was reviewed with cognizant licensee personnel. Items selected by the inspectors were subsequently reviewed through discussions with licensee personnel, documentation reviews and field inspection to determine whether licensee actions specified in the OI's had been satisfactorily completed. The overall status of previously identified inspection findings were reviewed, and planned and completed licensee actions were discussed for those items reported below.

(Closed) Unresolved Item (79-02-07): Testing of dual purpose check valves in both directions. Technical Specification 4.0.5 requires the inservice testing of ASME Class I, II, and III Pumps and Valves be performed in accordance with ASME Boiler and Pressure Vessel Code, Section IX Subsection IWV-3520 requires that dual purpose check valves, such as pump discharge check valves in systems with parallel pump arrangements that are sometimes normally opened and sometimes normally closed, be exercised to verify that they can fulfill their function in both directions. The inspector verified that the licensee has revised or is in the process of revising various surveillance tests (OSTs) that are performed on systems that contain the subject check valves. OSTs 1.7.4, (5), and (6), have been revised to verify that check valves 1CH-22, -23, -24 and 1CH-152, 153, 154, function in both open and closed positions. The proposed revisions to other OSTs that test dual purpose check valves were reviewed at OSC meeting BV-OSC-32-84 on May 23, 1984. Additionally, the licensee is reviewing the surveillance test for the auxiliary feedwater pumps and has yet to provide appropriate procedure changes to test the check valves in this system. The remaining action on the auxiliary feedwater pump surveillance tests will be carried as Unresolved Item (84-12-01).

(Closed) Unresolved Item (79-02-08): Failure to perform the check of remote valve position indicators on valves that are inaccessible for direct observation during plant operations. Section 4.0.5 of the BVPS Technical Specifications and ASME Section IX (Subsection IWV-3300) requires that valves with remote position indicators should be observed to verify that remote position indication agrees with Control Room indication at least once every two years. The inspectors verified that the reactor coolant system valves listed in Unresolved Item 79-02-08 have been included in appropriate surveillance tests that require remote position indication verification. The inspectors verified that safety related valves in selected systems were also included in appropriate tests, specifically, OSTs 1.1.10, and 1.47.3A. The licensee is currently committed as a result of corrective action for Violation 84-06-01, to develop administrative procedures and manuals for the BVPS Unit 1 Inservice Testing Program for pumps and valves, to specify that all testing be performed in accordance with the ASME Section IX requirements. The inspectors had no further concern at this time.

(Closed) Unresolved Item (79-16-04): Licensee to perform reliability and performance evaluation for emergency power systems. As a result of several failures in emergency power systems resulting in operational problems during plant operation, the licensee committed to an in-house review of emergency power systems reliability and performance. The results of this review are contained in DLC Engineering Memorandum 30035. The inspectors reviewed the subject EM which contained a summary of the operating history of emergency power systems and a tabulation of design changes made to correct various problems. The results of the study by the licensee show that the reliability and performance of emergency power systems have improved substantially as evidenced by the marked decrease in LERs in this area over the past several years. Emergency power systems have been modified extensively over the 8 year review period, and it appears that while a direct cause - effect relationship cannot be made between modification and reliability, the overall effect of those modifications has achieved the desired results. This item is closed.

(Closed) Violation (79-08-01): Calibration of electrical heat treat controllers used to monitor feedwater line repairs not traceable to the National Bureau of Standards. The inspector reviewed the Certificates of Calibration (No. 1462 thru 1464) that are traceable to the NBS for the subject recorders, thermocouples and extension wires supplied by Cooper Heat, Inc. This item is closed.

(Closed) Violation (79-08-02): Heat treatment nonconformance report not properly dispositioned. A July 26, 1979, NSQC General Quality Control Inspection Report, detailed a violation of the heat treatment temperature for a weld in the RC-E-1A line of the feedwater system. The report stated that a temperature of 1160 F was maintained for 15 to 20 minutes before it was brought into the required range of 1125, plus or minus 25 F. The rejectable item had not been documented, evaluated, or transmitted by use of a Nonconformance Report to the appropriate levels of management for proper resolution. By letter dated September 20, 1979, DLC stated that its NCAR 182 was issued to document the violation of the post weld heat treatment procedure. The inspector verified that the NCAR was dispositioned and that the post weld stress relief as performed was determined to be acceptable because ANSI B31.1 requires a soak time of one hour between 1100 and 1200 F when post weld heat treating a P1 to P1 weld as in the case with feedwater line weld. Since this is not a design related technical non-conformance, the inspector has no further questions at this time.

(Open) Unresolved Item (84-04-04): Identify inspection method used to ensure auxiliary feedwater pipe in the feedwater tie-in is not degrading below original ANSI B31.1 standards. Through discussions with cognizant Quality Control personnel, the inspector determined that a visual inspection was conducted with acceptable results. The licensee committed to perform a dimensional verification by the fourth refueling outage to verify that a less than 10% metal loss has occurred. This item has been entered into the QC tracking system and is being left open pending review of the dimensional verification.

(Closed) Unresolved Item (84-01-01): Reinstall diesel generator No. 1 air start line support. The inspector reviewed Engineering Memorandum No. 61019 performed to document the results of NED's analysis of the 1-1/2" air start line ASC-69. Through a review of this EM and discussions with the cognizant engineer who performed the analysis, the inspector determined that the arrangement is correct according to the latest isometric drawings which show a difference between the two diesel generator air start line arrangements. The analysis performed indicated that there is no need to reinstall the missing pipe support or to remove the pipe support from the existing line. This satifies the inspector's concern and the item is closed.

3. Plant Operations

a. General

Inspection tours of the plant areas listed below were conducted during both day and night shifts with respect to Technical Specification (TS) compliance, housekeeping and cleanliness, fire protection, radiation control, physical security and plant protection, operational and maintenance administrative controls.

-- Control Room
-- Primary Auxiliary Building
-- Turbine Building
-- Service Building
-- Main Intake Structure
-- Main Steam Valve Room
-- Purge Duct Room
-- East/West Cable Vaults
-- Emergency Diesel Generator Rooms
-- Containment Building
-- Penetration Areas
-- Safeguards Areas
-- Various Switchgear Rooms/Cable Spreading Room
-- Protected Areas

Acceptance criteria for the above areas included the following:

-- BVPS Technical Specifications (TS)
-- BVPS FSAR
-- BVPS Operating Manual (OM), Chapter 48, Conduct of Operations
-- OM 1.48.5, Section D, Jumpers and Lifted Leads
-- OM 1.48.6, Clearance Procedures
-- OM 1.48.8, Records
-- OM 1.48.9, Rules of Practice
-- OM Chapter 55A, Periodic Checks - Operating Surveillance Tests
-- BVPS Maintenance Manual (MM), Chapter 1, Conduct of Maintenance
-- BVPS Radcon Manual (RCM)
-- 10 CFR 50.54(k), Control Room Manning Requirements
-- BVPS Site/Station Administrative Procedures (SAP)
-- BVPS Physical Security Plan (PSP)
-- Inspector Judgement

b. Operations

The inspectors toured the Control Room regularly to verify compliance with NRC requirements and facility technical specifications (TS). Direct observations of instrumentation, recorder traces and control panels were made for items important to safety. Included in the reviews were the rod position indicators, nuclear instrumentation systems, radiation monitors, containment pressure and temperature parameters, onsite/offsite emergency power sources, availability of

reactor protection systems and proper alignment of engineered safety feature systems. Where an abnormal condition existed (such as out-of-service equipment), adherence to appropriate TS action statements was independently verified. Also, various operation logs and records, including completed surveillance tests, equipment clearance permits in progress, status board maintenance and temporary operating procedures were reviewed on a sampling basis for compliance with technical specifications and those administrative controls listed in paragraph 3a.

During the course of the inspection, discussions were conducted with operators concerning reasons for selected annunciators and knowledge of recent changes to procedures, facility configuration and plant conditions. The inspectors verified adherence to approved procedures for ongoing activities observed. Shift turnovers were witnessed and staffing requirements confirmed. Except where noted below, inspector comments or questions resulting from these daily reviews were acceptably resolved by licensee personnel.

(1) During performance of OST 1.13.10B, Chemical Addition System - Valve Position and Pump Operability Check - Train B, on May 10, 1984, pump QS-P-4B failed to meet the minimum recirculation flow rate of 31 gpm. With an indicated rate of 30 gpm on F1-QS-107, the surveillance test was terminated and an MWR was issued to check the calibration of the flow indicator. The inspectors verified that the flow rate of other chemical addition pump on the B train, QS-P-4D was within its limits, indicating that relief valve RV-QS-100B (common to both 4B and 4D) was not lifting to render the ESF train inoperable.

Because of difficulties encountered with the calibration of F1-QS-107, completion of the surveillance test had to be post-poned past the 31 day period specified in Technical Specification 4.6.2.3. The inspectors reviewed the past three surveillances and verified that the system was returned to service within the 25% extention allowed by Technical Specification 3.0.5, on May 18, 1984. This was accomplished after a defective instrument circuit card was replaced with a certified one provided by the vendor. The inspectors noted that from the review of past surveillances, it appears that the difficulties with F1-QS-107 have been a recurring problem.

From a review of OM Chapter 1.13.2, Containment Depressurization System Setpoints, the inspectors noted that although relief valve RV-QS-10CB had been listed in the appropriate table, the actual setpoint was omitted. RV-QS-100B had been recently installed under Design Change Package 575 during the third refueling outage (September, 1983). Through discussions with cognizant licensee personnel, it was determined that the proper relief valve setpoint (150 lbs.) was determined after a partial system turnover occurred, and was inadvertently omitted from the design change package turnover list. Procedure update to include the setpoint is scheduled for the next revision.

(2) On May 18, 1984, the inspectors were informed by the Operations Supervisor that quench spray manual valves 38 and 39 were not cycled on an 18 month basis as required by Technical Specification 4.6.2.3d.1. These valves are manual isolation valves on the suction side of chem addition pumps QS-P-4 A and B, and are normally locked open during operation. They were apparently omitted from the 18 month valve stroke procedure due to personnel error after a design modification removed the ruptured discs on the chem addition pump discharge lines and replaced them with relief valves. Since this item was identified by the licensee as part of a quality verification of the surveillance program, it meets the enforcement guidance contained in 10 CFR 2 Appendix C, and no violation will be issued. Addition of these valves to the 18 month OST is Unresolved Item (84-12-02).

(3) A reactor trip from full power occurred at 2:40 a.m., on May 24, 1984, due to a generator trip/turbine trip. Investigation revealed that a failed resistor in the main generator exciter firing circuit drawer initiated the event. Inspector review of critical parameter charts indicated that plant response was as expected. The sequence of events recorder indicated that the reactor trip breakers (DB-50) opened in four cycles,within the 10 cycle maximum specified in vendor documents. During the transient, the No. 1 diesel generator automatically started but did not connect the AE emergency 4 KV bus. Through discussions with licensee personnel, it was determined that the relay used to auto start the emergency diesel generator will activate on an undervoltage condition of a shorter duration than the relays used to open the main feeder breakers. Inspector review of relay calibration data for the diesel start and loss of voltage functions indicated this to be correct. The inspectors had no further questions on this item.

c. Plant Security/Physical Protection

Implementation of the Physical Security Plan was observed in the areas listed in paragraph 3a above with regard to the following:

-- Protected area barriers were not degraded;

-- Isolation zones were clear;

-- Persons and packages were checked prior to allowing entry into the Protected Area;

-- Vehicles were properly searched and vehicle access to the Protected Area was in accordance with approved procedures;

-- Security access controls to Vital Areas were being maintained and that persons in Vital Areas were properly authorized;

-- Security posts were adequately manned, equipped, and security personnel were alert and knowledgeable regarding position requirements, and that written procedures were available; and

-- Adequate lighting maintained.

No inadequacies were observed.

d. Radiation Controls

Radiation controls, including posting of radiation areas, the conditions of step-off pads, disposal of protective clothing, completion of Radiation Work Permits, compliance with Radiation Work Permits, personnel monitoring devices being worn, cleanliness of work areas, radiation control job coverage, area monitor operability (portable and permanent), area monitor calibration, and personnel frisking procedures were observed on a sampling basis.

The inspectors identified no deficiencies.

e. Plant Housekeeping and Fire Protection

Plant housekeeping conditions including general cleanliness conditions and control of material to prevent fire hazards were observed in areas listed in paragraph 3a. Maintenance of fire barriers, fire barrier penetrations, and verification of posted fire watches in these areas was also observed. No inadequacies were noted.

4. Engineered Safety Features (ESF) Verification

The operability of the Chemical Addition System was verified by performing a walkdown of accessible portions that included the following as appropriate:

(1) System lineup procedures match plant drawings and the as-built configuration.

(2) Equipment conditions were observed for items which might degrade performance. Hangers and supports are operable.

(3) The interior of breakers, electrical and instrumentation cabinets were inspected for debris, loose material, jumpers, etc.

(4) Instrumentation was properly valved in and functioning; and had current calibration dates.

(5) Valves were verified to be in the proper position with power available. Valve locking mechanisms were checked, where required.

(6) Technical specification required surveillance testing was current.

Other selected ESF trains were inspected on a weekly basis to verify operability of major flowpaths and components. ESF trains so inspected were:

-- Low Head Safety Injection; May 8, 1984.

-- Outside Recirculation Spray System; May 8, 1984.

-- AC Electric Power Distribution; May 11, 1984.

During the walkdown of the Quench Spray System, the inspectors noted the extensive use of carbon steel bolts on stainless steel components. Through discussions with Regional NRC specialists, it was determined that this condition was not counter to code requirements. No other concerns were identified.

5. Surveillance Activities

To ascertain that surveillance of safety-related systems or components is being conducted in accordance with license requirements, the inspector observed portions of selected tests to verify that:

a. The surveillance test procedure conforms to technical specification requirements.

b. Required administrative approvals and tagouts are obtained before initiating the test.

c. Testing is being accomplished by qualified personnel in accordance with an approved test procedure.

d. Required test instrumentation is calibrated.

e. LCOs are met.

f. The test data are accurate and complete. Selected test result data was independently reviewed to verify accuracy.

g. Independently verify the system was properly returned to service.

h. Test results meet technical specification requirements and test discrepancies are rectified.

i. The surveillance test was completed at the required frequency.

The following surveillance activities were observed:

- MSP 6.50, T-423 Reactor Coolant Loop Wide Range Temperature Protection Channel I Calibration, May 7, 1984.

- OST 1.30.3, River Water Pump 1B Test, May 16, 1984.

- OST 1.21.4, (5), (6), Main Steam Trip Valve Full Closure Test, May 24, 1984.

(1) During observation of MSP 6.50, P-423 Reactor Coolant Loop Wide Range Temperature Protection Channel I Calibration, on May 7, 1984, the inspectors noted that all three T-Hot channels on the remote shutdown panel were taken out of service simultaneously. Technical Specification 3.3.3.5, Remote Shutdown Instrumentation, required at least one of the three T-Hot channels to be operable when in Modes 1 thru 3. All three channels are allowed to be out of service for a maximum of 30 days before entry into hot shutdown is required. This was immediately brought to the attention of the Shift Supervisor and the three channels were returned to operable status. Although an action statement was entered, no limiting condition for operation was violated.

Under the initial conditions of the MSP, there is a note to the effect that a redundant channel verification is not required. This apparently misled the Operations and the Instrument and Control personnel into performing a simultaneous channel calibration on the three reactor coolant loops. The inspectors verified that the MSPs were modified to preclude simultaneous removal of all three channels, and the MSPs surveillance critique highlighted the problem for additional management reviews. About one week later, the inspectors asked to see a copy of the incident report that was prepared in accordance with the instructions contained in the Station Administrative Procedures, Chapter 13, Preparation of Draft Incident Reports and Conduct of Critiques, and was informed that no incident report had been prepared on this item due to a breakdown in communications. As this event was due to a combination of operating error and problems caused by inaccurate information in an approved procedure, the inspector stated that such a critique would be appropriate to formally track corrective action. The licensee's representative acknowledged the inspector's comments. The report was subsequently issued.

(2) Portions of the main steam trip valve full closure tests (OST 1.21.4, -5, -6) were witnessed by the inspectors from the Control Room on May 24, 1984. Technical Specification 4.7.1.5d requires that each isolation valve travel to the full closed position within five seconds on any closure actuation signal while in hot standby with T-average greater than or equal to 515 F. Initial test results for TV-MS-101 B and C were unsatisfactory with closure times of about 5.1 to 5.4 seconds. After observing Operations personnel stroke the valves several additional times, the inspector noted that they were still attempting to measure a satisfactory closure time. This was discussed with the on-duty Shift Supervisor and it was pointed out that the FSAR assumes a 5.0 second closure time in its safety analysis for containment isolation without the benefit of prior valve operation to assure correct isolation functions. The inspector discussed this item further with the Operations Supervisor and raised a concern that other valve stroke tests used to prove the containment isolation function might also be susceptible to such a misinterpretation by Operations personnel performing the test. The inspectors comments were acknowledged, and the Operations Supervisor committed to providing additional guidance in appropriate procedures. This is Unresolved Item (84-12-03).

Followup on the problems encountered with TV-MS-101B indicated that the reason for valve failure was probably a bad solenoid switch. The inspectors observed portions of the maintenance activity associated with cleaning a switch and successfully restroking the valve prior to declaring it operable. The licensee additionally issued an Operating Manual Change Notice to specify that the timing would no longer be done from light indications in the Control Room, but would be performed in the field by an operator observing valve stem travel. The inspectors determined that measurement of the full closure time in the field is an acceptable way of demonstrating technical specification compliance.

(3) During performance of OST 1.30.3, RW-P-1B Functional Test, on May 16, 1984, MOV-RW-102 B1, failed to open automatically to supply the B river water header. An MWR was issued and the A and the C river water pumps were aligned to this system. Followup on the corrective maintenance action indicated that a limitorque problem existed and the valve would open only about 3/4 of the way and stop. The licensee replaced the limitorque with a spare one and the system was satisfactorily tested and returned to service. The Technical Advisory Group is currently formulating a program to upgrade the preventive maintenance program in the area of limitorque valve failures. This area will receive further inspection as part of the routine inspection program.

6. Maintenance and Modification Activities

The inspectors observed portions of selected maintenance activities on safety-related systems and components to verify that those activities were being conducted in accordance with approved procedures, technical specifications and appropriate industrial codes and standards. The inspector conducted record reviews and direct observations to determine that:

-- Those activities did not violate a limiting condition for operation.

-- Redundant components were operable.

-- Required administrative approvals and tagouts had been obtained prior to initiating work.

-- Approved procedures were used or the activity was within the "skills of the trade."

-- The work was performed by qualified personnel.

-- The procedures used were adequate to control the activity.

-- Replacement parts and materials were properly certified.

-- Radiological controls were properly implemented when necessary.

-- Ignition/fire prevention controls were appropriate for the activity.

-- QC hold points were established where required and observed.

-- Equipment was properly tested before being returned to service.

-- An independent verification was conducted to verify that the equipment was properly returned to service.

Activities inspected were:

-- Troubleshooting NIS Power Range Monitor, May 8, 1984

-- ERF Safety Parameter Display System Tie-in, May 14, 1984.

-- Preventive Maintenance on Charging Pump 1B, May 16, 1984.

-- Component Cooling Water Heat Exchanger Tube Repair, May 30, 1984.

(a) During observation of maintenance troubleshooting to correct spurious alarms from the NIS power range comparitor on May 8, 1984, per MSP 2.01, NI Rate and Comparitor Drawer N37/N46 Calibration, the inspectors noted that Revision 6 was being used with an out-of-date approval stamp on it. Discussions with the MCR Instrument Foreman indicated that Revision 7 had been issued which incorporated a change notice that was attached to the out-of-date Revision 6 notice. Since the procedures were identical, the inspectors had no further concern.

(b) During a routine tour of the switchgear room, the inspectors met an I&C technician who sustained a minor cut on his hand when he accidentally completed a ground in one of the protection cabinets. No equipment damage or inadvertant relay operation resulted. In light of this event and the ERF tie-in experience (discussed below), the inspector asked the Instrument and Control Supervisor to review the current safety practices for work on electrically "hot" cabinets, especially those containing protection and ESF instrumentation, and ensure that the possibility of personnel injury and equipment damage due to unintentional grounding is minimized as much as practical. The licensee's representative acknowledged the concern and agreed to conduct a review. This is Unresolved Item (83-12-04).

(c) Following routine preventive maintenance of CH-P-1B, the system was returned to service per Operating Manual Procedure 1.7.4 A.N., Returning a Charging Pump to Service Following Mechanical Maintenance. The system was successfully tested per OST 1.7.4 as observed by the inspectors on May 16, 1984. It was noted that the Control Room ESF status board had not been updated per the ESF checklist to reflect the return of CH-P-1B to service. The Shift Supervisor was informed and this item was corrected.

(d) On May 14, 1984, a clearance was posted on selected valves in the B Safety Injection (SI) train for work per DCP 296-366, ERF Safety Parameter Display System Tie-ins. While performing a continuity check on cable run from the B SI pump to the ERF annunciator circuit, one of the construction personnel connected up his head set to ground and inadvertently removed the annunciator cable for the A SI pump which caused two of the field contact power supplies of Bay 4 to deenergize due to blown fuses. This effectively removed the capability of about 50 Control Room annunciators to function for a period of 40 minutes. The operability of the safety injection system, including its ability to automatically initiate, was unaffected. However, further work on the DCP was suspended by Operations personnel until an investigation and corrective action could be completed. The inspectors reviewed the corrective actions in the field which included a construction pre-work walkdown that marked each lead to be checked for continuity with a yellow plastic tag to prevent future misidentification. Additionally, since the work involved electrically hot cabinets, the hot terminals were temporarily taped over to prevent an inadvertent short should a tool slip. Licensee action was satisfactory.

(e) On May 30, 1984, the inspectors observed portions of the C Component Cooling Water (CCR) heat exchanger tube replacement being conducted under CMP 1-15CC-E-1A-1M, Tube Leak Test and Repair of Reactor Plant CCR Heat Exchangers. Through discussions with maintenance personnel, the inspectors determined that the eddy-current tests performed to aid in determining the extent of tube degradation (originally discussed in Detail 6 of NRC Inspection Report 50-334/84-09), indicated that extensive tube pitting from the ID (river water side) had occurred. The Maintenance Supervisor informed the inspectors that the extent of the pitting was such that all three component cooling water heat exchanger tube bundles were going to be scheduled to be replaced. Additionally, a program is currently under development to review all heat exchangers served by the river water system and identify other inspection techniques that would enable detection of this problem in a timely manner.

Because the river water provides cooling to the emergency diesel generator coolers, the high head safety injection pump lube oil coolers, the control room air cooler and recirculation spray heat exchangers, this course of action is appropriate. Followup on identifying the component cooling water heat exchanger failure mechanism and determining whether or not it could impact specific materials of the other system heat exchangers cooled by river water is Unresolved Item (84-12-05).

7. Valve Setpoint Control

The inspectors reviewed the licensee's method of controlling limitorque switch settings on motor operated valves to verify that they have not been changed to values below that necessary to perform its safety function under accident pressures. The licensee had previously performed a task force study which identified the field settings of some 290 MOVs used at BVPS Unit 1. Through discussions with cognizant licensee personnel, the inspector was informed that after any maintenance, the limitorque switch settings are returned to the as-found conditions. The only circumstances permitting a change would be specified under a maintenance work request after approval thru an engineering memorandum. The generic procedure used to control normal work is CMP 1-75-79, Limitorque Motor Operator Repair Maintenance. The inspector noted that this procedure did not record the as-found and as-left setpoints nor compare them with an approved setpoint schedule. Additionally, the inspector noted that post-maintenance testing of selected valves would not necessarily duplicate the exact conditions the valve was expected to encounter during performance of its design function under accident conditions. Because the correct limitorque setting could not be confirmed under actual conditions, the inspector stated that it would be appropriate to provide a double verification of the switch settings as part of the procedure. The inspector's comments were acknowledged by the licensee's representative. This item is Unresolved Item (84-12-06).

8. Containment Integrity

A. The following documents were reviewed to establish the assumptions and requirements used to ensure containment integrity during accident conditions:

- Technical Specifications
  1.8, Containment Integrity Definition
  3.6.1.1, Primary Containment Integrity
  3.6.1.3, Containment Air Locks
  3.6.3.1, Containment Isolation Valves
  Table 3.6-1, Containment Penetrations

- Updated FSAR, Section 5.0, Containment Systems

During a review of the containment isolation valve closure times, the inspector noted a disagreement between the values specified in TS Table 3.6-1 and FSAR Table 5.3-1. Specifically, the TS times appeared to be about 50% less conservative than the FSARs. Because release rates during a postulated LOCA are a consideration in meeting the requirements of 10 CFR 100, Reactor Site Criteria, the inspector asked the licensee to provide the bases for the selection of the TS isolation times used to ensure the applicable design assumptions are met. This is Unresolved Item (84-12-07).

B. The following procedures were reviewed to verify that required testing was conducted per technical specification requirements, within the frequency specified:

- OST 1.47.1, Containment Air Lock Door - Type B Leak Test.
- OST 1.47.2, Containment Integrity Verification.
- OST 1.47.84, Personnel Air Lock Door Interlock Verification.
- OST 1.1.10, Cold Shutdown Valve Exercise Test.
- OST 1.47.3A, Three Month Containment Isolation and ASME Section XI Test.

No discrepancies were identified between the OSTs and TS Table 3.6-1 requirements. In addition to the audit, the inspectors witnessed performance of OST 1.47.2 during a backshift tour. It was noted that penetration No. 24, Containment Air Ejector Suction Isolation Valve (HCV-1CV-151-1), had its position indicator broken. The only way of positively identifying the position of this butterfly valve is by an etch mark on the shaft. The operators (licensed ROs) performing the OST were unaware of this convention. The inspectors discussed this with the Operations Supervisor, and stated that it would be appropriate to provide explicit guidance in the procedure. The inspectors' concern was acknowledged.

9. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable, items of noncompliance or deviations. Seven new unresolved items were identified and are discussed in details 2, 3, 5, 6, 7 and 8. Followup on several previous unresolved items is discussed in Section 2.

10. Exit Interview

Meetings were held with senior facility management periodically during the course of this inspection to discuss the inspection scope and findings. A summary of inspection findings was further discussed with the licensee at the conclusion of the report period.