

May 1, 2000

Mr. G. Rainey, President
PECO Nuclear
Nuclear Group Headquarters
Correspondence Control Desk
P.O. Box 195
Wayne, Pennsylvania 19087-0195

SUBJECT: NRC INTEGRATED INSPECTION REPORT 05000277/2000-001,
05000278/2000-001

Dear Mr. Rainey:

On April 1, 2000, the NRC completed an inspection at the Peach Bottom Atomic Power Station. The enclosed report presents the results of that inspection. We concluded that your staff continued to operate both units safely.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room (PDR).

We appreciate your cooperation.

Sincerely,

/RA/

Curtis J. Cowgill, Chief
Projects Branch 4
Division of Reactor Projects

Docket Nos.: 05000277, 05000278,
License Nos.: DPR-44, DPR-56

Enclosure: NRC Inspection Report No. 05000277/2000-001, 05000278/2000-001

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REGION I

License Nos.	DPR-44 DPR-56
Report Nos.	2000-001 2000-001
Docket Nos.	05000277 05000278
Licensee:	PECO Energy Company Correspondence Control Desk P.O. Box 195 Wayne, PA 19087-0195
Facility:	Peach Bottom Atomic Power Station Units 2 and 3
Inspection Period:	February 15, 2000 through April 1, 2000
Inspectors:	A. McMurtray, Senior Resident Inspector M. Buckley, Resident Inspector B. Welling, Resident Inspector J. Caruso, Operations Engineer C. Sisco, Operations Engineer
Approved by:	Curtis J. Cowgill, Chief Projects Branch 4 Division of Reactor Projects

EXECUTIVE SUMMARY

Peach Bottom Atomic Power Station
NRC Inspection Report 05000277/2000-001, 05000278/2000-001

This inspection report included aspects of PECO operations, surveillance and maintenance, engineering and technical support, and plant support areas.

Operations:

- PECO was effectively providing requalification training for licensed operators. Written and operating exams content met regulatory requirements. The licensee's simulator evaluations during the annual operating exam for both individuals and the crew were unbiased, detailed, and appropriate for observed operator performance. (Section O5.1)
- The licensed operator requalification training program content was balanced and met the needs of the operators overall. All other areas reviewed were found to be acceptable with no weaknesses identified. (Section O5.1)

Maintenance:

- Following maintenance activities on the E4 emergency diesel generator, several problems were encountered with emergency diesel generator components during restoration and post-maintenance testing. Nuclear Maintenance Division personnel initiated appropriate corrective actions to address these maintenance performance issues. (Section M1.2)

Engineering:

- A second occurrence of thermal binding of the Unit 2 high pressure coolant injection (HPCI) steam admission valve during alignment for post-maintenance testing was due to a procedure revision that was not effective. (Section E2.1)
- Engineering personnel took appropriate actions to investigate the causes and corrective actions for potentially recurring problems with auxiliary contacts on DC motor-operated valves in the high pressure coolant injection system. Several auxiliary contact failures have occurred in safety and non-safety related valve breakers over the past few years. (Section E2.2)
- Engineering personnel appropriately analyzed and evaluated leakage of reactor coolant system water into the reactor building closed cooling water system due to thermal cracking in the 2'B' recirculation pump seal cooler. (Section E2.4)

Executive Summary

Plant Support:

- Security force personnel and management took acceptable corrective actions to address the inattentiveness of a security force member who was providing continuous observation of a degraded vital area access. (Section S1.1)

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Report Details

Summary of Plant Status

PECO operated both units safely over the period of this report.

Unit 2 began this inspection period at 100% power. On March 4, 2000, Unit 2 load was reduced to approximately 65% power for condenser water box cleaning. Unit 2 was returned to 100% power on March 6, 2000. On March 22, Unit 2 load was reduced to less than 20% power to allow personnel to enter the drywell and repair an instrument nitrogen leak. All Unit 2 inboard main steam isolation valves DC solenoids were replaced during this load drop. Unit 2 was returned to 100% power on March 23. On March 25, Unit 2 load was reduced to approximately 66% power due to problems with the 4'C' feedwater heater level control. Unit 2 was returned to 100% power on March 28, and remained at that level for the rest of the period.

Unit 3 began this inspection period at 100% power. On February 25, 2000, Unit 3 load was reduced to approximately 63% power to perform a control rod pattern adjustment, scram time and primary containment isolation system testing and replacement of the outboard main steam isolation valve DC solenoid valves. Unit 3 was returned to 100% on February 28, and remained at that level for the rest of the period.

I. Operations

O1 Conduct of Operations¹

O1.1 General Comments

The inspectors observed good operator performance during backshift observations of the scheduled Unit 2 load drop on March 21 through 23, 2000. Load was reduced to allow drywell entry to facilitate repair of an instrument nitrogen leak. The inspectors noted good pre-job briefings and communications in the main control room. Operators performed evolutions in a deliberate, methodical manner, using effective self-checking and peer-checking techniques.

O4 Operator Knowledge and Performance

O4.1 Unscheduled Unit 2 Load Reduction Due to an Isolation of the 4'C' Feedwater Heater

a. Inspection Scope (71707)

On March 25, 2000, the 4'C' feedwater heater high level alarm was received on Unit 2 and subsequently the 4'C' heater isolated. The inspectors reviewed station log entries and discussed this transient with operations personnel. The inspectors also reviewed and observed the performance of the special procedure used to restore the 'C' heater string to service at power and the subsequent unit power increase.

¹ Topical headings such as O1, M8, etc., are used in accordance with the NRC standardized reactor inspection report outline. Individual reports are not expected to address all outline topics.

b. Observations and Findings

Approximately two minutes after the 4'C' heater isolated, the Unit 2 reactor operator noted that the 'C' feedwater string temperature was less than the 'A' and 'B' strings. In accordance with procedures, Unit 2 power was lowered to approximately 66% and the 'C' feedwater heater string was isolated. The inspectors noted that the reactor operator responded well to the 4'C' feedwater heater isolation and took appropriate action to lower reactor power due to decreasing feedwater temperature.

On March 27, 2000, operations personnel performed a special procedure, with engineering support, to restore the 'C' feedwater heater string to service. Following restoration of the 'C' feedwater heater string, Unit 2 was increased to full power. The inspectors observed that operations performed well during the heater string restoration and subsequent power increase. Very good command and control, procedure awareness and adherence, three-part communications, and self/peer checking were observed. Engineering/reactor engineering personnel provided good support to operations personnel during these activities.

c. Conclusions

The Unit 2 reactor operator responded well to the isolation of the 4'C' feedwater heater and appropriately decreased reactor power to approximately 66% due to decreasing feedwater temperature. On March 27, 2000, operations and engineering personnel performed well during the restoration of the 'C' feedwater heater string and subsequent power ascension.

O5 Operator Training and Qualification

O5.1 Licensed Operator Regualification Training (LORT) Program Evaluation

a. Inspection Scope (71001)

The Peach Bottom Unit 2 and 3 LORT program was evaluated using Inspection Procedure (IP) 71001, during the week of March 20, 2000. The following areas were reviewed with respect to 10 CFR 55.59: facility operating history; LORT program content; written and operating test content; operating test administration; subjects covered in the 1998-2000 LORT cycle, including a sample of training on modifications and industry events; training feedback program; remedial training; attendance records; course grades; self-assessments; open training action requests; and conformance with license medical and training requirements.

b. Observations and Findings

LORT Program Content

The licensee utilized a training committee to review and develop the training schedule for the next two year training cycle. Appropriate topics were incorporated into their LORT program based on a review of operational events, identified operator exam weaknesses, industry operating experience, and recommended system, theory and procedure reviews, as well as operator and management feedback.

Written and Operating Test Content and Administration

The inspectors reviewed three of the five written exams for the current exam cycle. The exams met the guidance of the examination standards overall. However, for each written exam, a few example questions had the following problems: memory level used in an open book forum, direct lookup in procedures for answers, and/or level of difficulty. The operations training manager and principal LORT program instructor agreed with the inspectors' assessments and that this was an area for future improvement. Very little question overlap was noted from one exam week to the next and approximately 50% of the questions on each examination were newly developed. Overall, the inspectors concluded the exams were acceptable.

The inspectors also reviewed and observed the four scenarios administered during the week of the inspection and two other sets (i.e, one that had been previously administered and another that would be administered after the inspection).

The inspectors noted that individual licensed operators received a formal individual licensed operator evaluation during performance of simulator scenario exercises that evaluated individual competencies for individual operators. In addition, the individuals were evaluated together as a crew. The inspectors determined that the licensee's evaluations of the individuals and the crew were unbiased, detailed and appropriate for the observed performance. The inspectors noted that the operations manager was assigned as one of the lead evaluators and each licensed operator was evaluated by an assigned individual. The evaluator debriefs accurately addressed major strengths and weaknesses of the operators displayed during the scenarios.

The individual JPMs and JPM sets met the guidance of the examination standards and no discrepancies were noted during JPM exam administration. The inspectors noted that one in-plant JPM, "Restore Control Room Ventilation Following a High Radiation Trip (PLOR-062P, revision 11)" had some missing steps and cues for the evaluator in the event the control room emergency ventilation 60 second timer times out as described in procedure SO 40D.1.A, revision 9, notes following step 4.6.

Training Feedback and Remedial Training

The training feedback process was mostly a summary of comments collected by the course instructors through verbal feedback from the operators at the end of each training cycle. In addition, the classroom and simulator training sessions were evaluated by management representatives at regular intervals.

The inspectors also reviewed remedial training prescribed for various individuals that had received less than passing grades during the current LORT program cycle. The remedial training plans were developed to meet each individual's identified weaknesses by the training staff with approval from operations management.

Compliance with License Conditions

A review of records and discussions with licensee personnel found that the licensee was meeting the requirements of 10 CFR 55.21 for medical examinations of operators, 10 CFR 55.59 for operator participation in the LORT program, and 10 CFR 55.53, which details, in part, conditions for maintaining an active license.

The licensee was found to be meeting the regulatory requirements associated with operator licenses.

c. Conclusions

PECO was effectively providing requalification training for licensed operators. Written and operating exams content met regulatory requirements. The licensee's simulator evaluations during the annual operating exam for both individuals and the crew were unbiased, detailed, and appropriate for observed operator performance.

The licensed operator requalification training (LORT) program content was balanced and met the needs of the operators overall. All other areas reviewed were found to be acceptable with no weaknesses identified.

II. Maintenance

M1 Conduct of Maintenance

M1.1 General Comments

NRC Inspection Procedures 62707 and 61726 were used in the inspection of plant maintenance and surveillance activities. The inspectors observed and reviewed selected portions of the following maintenance and surveillance test activities:

<u>Maintenance Observations</u>		<u>Observed On</u>
Various	E4 Emergency Diesel Generator (EDG) Maintenance	February 22 - 24, 2000
C0189768	2A Residual Heat Removal (RHR) Cooler Cleaning	March 6, 2000
Various	Independent Spent Fuel Storage Installation (ISFSI) Dry Run Activities	March 13 - 16, 2000
R0734634	High Pressure Coolant Injection (HPCI) Pump Bearing Oil Pressure	March 13, 2000
R0734638	HPCI Oil Supply Pressure Ind	March 13, 2000
R0536445	HPCI AO-53 Steam Trap Bypass	March 13 - 14, 2000
R0564297	HPCI MO-25 Votes Testing	March 13, 2000
R0761331	Stroke MO-14 per SO 23.1.A-2	March 15, 2000
C0193099	Unit 2 Instrument N2 Repair	March 22, 2000
C0193179	HPCI MO-3-23-016 Breaker	March 24, 2000

<u>Surveillance Observations</u>		<u>Observed On</u>
RT-O-23-760-2	HPCI Alt Shutdown Panel Ops	March 16, 2000

The work and testing performed during these activities were professional and thorough. Technicians were experienced and knowledgeable of their assigned tasks. The work and testing procedures were present at the job site and were effectively used. Good pre-job briefs were observed prior to the performance of the maintenance and surveillance activities observed.

M1.2 Maintenance Activities on the E4 Emergency Diesel Generator (EDG)

a. Inspection Scope (62707)

The inspectors observed portions of maintenance activities performed on the E4 EDG during the week of February 21, 2000. The inspectors also reviewed licensee follow-up actions for several problems that led to delays in restoring the EDG to an operable status.

b. Observations and Findings

PECO Nuclear Maintenance Division (NMD) and Peach Bottom Maintenance personnel performed planned maintenance and inspection activities on the E4 EDG during the week of February 21, 2000. A number of problems occurred during restoration and post-maintenance testing. The more significant problems included:

- Fuel oil system check valve assembled backwards
- EDG fuel oil pump motor required rework
- Standby lube oil circulating pump motor required rework
- Fuel oil spill occurred at the EDG day tank
- Unexpected air roll of the EDG

NMD conducted a critique of the activities and identified a number of maintenance performance issues and apparent causes. NMD initiated a number of corrective actions, including the establishment of a diesel generator overhaul improvement team to resolve these issues.

The inspectors noted that the maintenance performance problems led to delays in restoring the EDG to service, but did not lead to any other significant consequences. Similar maintenance performance issues involving NMD personnel occurred at Limerick during maintenance activities in December 1999 on the D24 EDG. The inspectors determined that PECO personnel took appropriate actions to address the issues at Peach Bottom both individually and collectively.

c. Conclusions

Following maintenance activities on the E4 emergency diesel generator, several problems were encountered with emergency diesel generator components during restoration and post-maintenance testing. Nuclear Maintenance Division personnel initiated appropriate corrective actions to address these maintenance performance issues.

M2 Maintenance and Material Condition of Facilities and Equipment

M2.1 4kV Breaker Anti-Pumping Relay Failures

a. Inspection Scope (62707)

On February 6, 2000, during the transfer of a non-safety 4kV circuit breaker on the 2'B' control rod drive (CRD) pump, the breaker did not close as expected due to a mechanical failure of the anti-pumping relay. The inspectors reviewed the actions taken to correct the breaker failure, determine the extent of condition, and the initial corrective actions to prevent recurrence.

b. Observations and findings

After the failure and subsequent replacement of the 2'B' CRD pump breaker due to a damaged anti-pumping relay, maintenance personnel initiated an extent of condition inspection of anti-pumping relays in all 4kV breakers. Although anti-pumping relays are also installed in 13 kV breakers at the station, maintenance personnel determined that the location of these relays would preclude this type of damage. Although no damaged relays were found installed on breakers for safety related equipment, damaged relays were found on breakers in storage on the turbine floor and in the operating 2'A' CRD pump. Maintenance repaired these breakers.

Maintenance personnel initiated performance enhancement program (PEP) document (I0010765) to track the root cause investigation and corrective actions for this issue. The breakers with damaged anti-pumping relays were considered maintenance rule functional failures since these breakers would have failed if called upon.

As part of the initial corrective actions for this issue, maintenance personnel improved the lifting method during chocking of 4kV breakers, and installed a barrier around the breaker storage area to eliminate the potential for damaging anti-pumping relays on stored breakers.

c. Conclusions

Maintenance personnel took acceptable actions to address a failure of the 2'B' control rod drive pump breaker to close during testing due to a damaged anti-pumping relay, including an extent of condition review for safety and non-safety related equipment and prevention of recurrence.

M7 Quality Assurance in Maintenance Activities

M7.1 Assessment by PECO Nuclear Quality Assurance of Peach Bottom Maintenance (40500 & 62707)

The inspectors reviewed the Peach Bottom Nuclear Quality Assurance Maintenance report for the assessment performed in January through February 2000. The inspectors noted that the assessment was thorough and identified several performance and corrective action challenges within the various maintenance groups, especially in the Nuclear Maintenance Division.

III. Engineering

E1 Conduct of Engineering

E1.1 Maintenance Rule Program Review

a. Inspection Scope (37551 & 62707)

The inspectors performed a review of the station Maintenance Rule program.

b. Observations and Findings

The inspectors reviewed the PECO Maintenance Rule Implementation Program, Peach Bottom Atomic Power Station Maintenance Rule Scope procedures, meeting minutes from a Maintenance Rule Common Expert Panel Meeting, and the 1999 Limerick/Peach Bottom Maintenance Rule Program Self-Assessment, including corrective actions required by this assessment. The inspectors did not identify any concerns with the Maintenance Rule program during these reviews.

The inspectors noted that the Peach Bottom Maintenance Rule program has improved substantially since several programmatic weaknesses were identified during the Maintenance Rule baseline inspection in August 1996. The inspectors noted conservative decision-making when the expert panel placed the Unit 2 HPCI steam admission valve (MO-2-23-014) in (a)(1) status in February 2000 due to a thermal binding occurrence. The inspectors have noticed better unavailability tracking when

maintenance rule systems were recently removed from service. During the past year, the inspectors have also noticed improvements in the station's use of industry-wide operating experience.

c. Conclusions

The Maintenance Rule program implemented at Peach Bottom was determined to be acceptable.

E2 Engineering Support of Facilities and Equipment

E2.1 Thermal Binding of the Unit 2 HPCI System Steam Admission Valve (MO-2-23-014)

a. Inspection Scope (37551 & 71707)

The inspectors reviewed a failure of the Unit 2 HPCI steam supply motor-operated valve to open due to thermal binding. This valve is risk-important and has a safety function to open when the HPCI system starts.

b. Observations and Findings

On March 15, 2000, the Unit 2 HPCI steam admission valve (MO-2-23-014) failed to open when operations personnel attempted to align the HPCI system for post-maintenance testing. PECO determined that this event was caused by thermal binding of the valve disk in its seat. A similar event had occurred in November 1999 and was documented in NRC Inspection Report 50-277(278)/99008. Several corrective actions were initiated for the November event, including plans to upgrade the valve motor and placing the valve in a Maintenance Rule (a)(1) status in February 2000.

One of the corrective actions resulting from the November event, a change to the system operating procedure to manually open the valve off the closed seat following maintenance and steam line warm-up, was not effectively implemented. The procedure was changed to open the valve until both the open and shut position indicator lights in the control room were lit. In this position the valve is normally off the closed seat, but, in case, this action was not sufficient to ensure that the valve was actually off the closed seat. Consequently, when operators attempted to open the valve from the control room, the valve did not open due to thermal binding. The ineffective procedure change was a minor violation not subject to formal enforcement.

The inspectors noted some deficiencies in PECO's evaluation of this issue under their corrective action program. PECO did not review the human performance aspects that led to an ineffective procedure and did not initially recognize that the Unit 3 HPCI procedure was also affected.

c. Conclusions

A second occurrence of thermal binding of the Unit 2 high pressure coolant injection (HPCI) steam admission valve during alignment for post-maintenance testing was due to a procedure revision that was not effective.

E2.2 Unit 3 HPCI System Outboard Steam Supply Valve (MO-3-23-016) Breaker Auxiliary Contact Failure

a. Inspection Scope (37551 & 62707)

The inspectors reviewed a breaker auxiliary contact failure associated with the Unit 3 HPCI MO-16 steam supply DC motor-operated valve. The inspectors observed maintenance activities, discussed the issue with engineers, and reviewed corrective action documents.

b. Observations and Findings

On March 23, 2000, while the HPCI system was inoperable for surveillance testing, the Unit 3 HPCI MO-16 would not re-open after being taken to the shut position. Troubleshooting revealed that this failure was caused by high resistance associated with a contact in the open logic circuit. Maintenance personnel cleaned the contact and initiated actions to replace it.

A similar event occurred in November 1998, when the same valve (MO-16) on Unit 2 failed to close due to an auxiliary contact problem. The contacts for this valve were recently removed for analysis during a scheduled maintenance activity on March 15, 2000. The cause of this failure was under investigation (PEP I0009425) at the time of the Unit 3 failure.

Engineering personnel initiated an investigation of the cause of the most recent failure in PEP I0010949. Engineers appropriately recognized the possible recurring nature of this issue and the potential impact on system operability for similar failures on other DC motor-operated valves in the HPCI and reactor core isolation cooling systems. The inspectors noted that auxiliary contact failures have occurred in several safety and non-safety related valve breakers over the past few years. These failures have been documented in NRC Inspection Reports 50-277(278)/99006, 98001 and 97005.

c. Conclusions

Engineering personnel took appropriate actions to investigate the causes and corrective actions for potentially recurring problems with auxiliary contacts on DC motor-operated valves in the high pressure coolant injection system. Several auxiliary contact failures have occurred in safety and non-safety related valve breakers over the past few years.

E2.3 Review of Operability Determinations for the 2'A' RHR System and the 2'B' Station Battery (37551)

The inspectors reviewed the following operability determinations performed by engineering personnel:

- 2'A' RHR relief valve lifting during surveillance testing on February 7
- 2'B' battery cell seal weepage

The inspectors had no concerns with the operability evaluations for either of these issues.

E2.4 Reactor Coolant System Leakage Into the Reactor Building Closed Cooling Water (RBCCW) System Through the 2'B' Recirculation Pump Seal Cooler

a. Inspection Scope (37551)

The inspectors reviewed several Action Requests, station documentation, and industry information associated with leakage of reactor coolant system water into the reactor building closed cooling water (RBCCW) system. The inspector discussed the in-leakage and planned corrective actions with operations and engineering personnel.

b. Observations and Findings

Since October 6, 1999, reactor coolant system water has been leaking into RBCCW due to cracking in the 2'B' recirculation pump seal cooler. On March 15, 2000, the leakage increased and PECO determined the leakage to be approximately 4.125 gallons per hour. Engineering personnel performed an operability evaluation for this condition and determined that the existing leakage remained within the design analysis, including potential off-site dose consequences during an accident. Engineering personnel also determined that the Technical Specification for reactor coolant system leakage did not apply to this condition. Engineering management was developing contingency actions for operations personnel in case the RBCCW in-leakage continued to increase, including locating materials for any un-planned maintenance activities to stop the RBCCW in-leakage or to address any potential recirculation pump cracking problems.

Site engineering was working with the pump vendor (Byron-Jackson) and General Electric on this issue. Engineering personnel and managers were considering a plant modification for the Fall 2000 outage.

The inspectors had no concerns with the current operability evaluation for this RBCCW in-leakage or the actions that station personnel were taking to address this issue. The inspectors determined that engineering personnel appropriately analyzed and evaluated leakage of reactor coolant system water into the RBCCW system.

c. Conclusions

Engineering personnel appropriately analyzed and evaluated leakage of reactor coolant system water into the reactor building closed cooling water system due to cracking in the 2'B' recirculation pump seal cooler.

IV. Plant Support

R1 Radiological Protection and Chemistry (RP&C) Controls

R1.1 General Comments

Radiological Protection personnel performed thorough analyses and preparations for an entry of the Unit 2 drywell while at power (<20%) to facilitate repair of an instrument nitrogen leak. Personnel dose was well-managed throughout this evolution.

S1 Conduct of Security and Safeguards Activities

S1.1 Momentary Loss of Compensatory Access Control to the Emergency Diesel Generator (EDG) Building

a. Inspection Scope (71750)

On February 26, 2000, the inspectors observed that a security force member was inattentive for a short time while assigned to continuous observation of a degraded vital area access door at the EDG building. The immediate corrective actions taken by the security force and follow-up evaluations were discussed with the security manager.

b. Observations and Findings

The inspectors notified station security personnel that the security force member was inattentive for a short time while assigned to continuous observation of a vital access door at the EDG building. The security guard acknowledged not maintaining continuous observation of the posted duties.

The inspector reviewed the Immediate actions taken by PECO and found them to be acceptable. This access control vulnerability issue constituted a minor violation not subject to formal enforcement action. This issue was documented in PEP I0010853. The planned evaluations, changes, and personnel actions due to this issue were discussed with the security manager. No new issues were identified by these evaluations. The inspectors had no concerns with the licensee's corrective actions for this issue.

c. Conclusions

Security force personnel and management took acceptable corrective actions to address the inattentiveness of a security force member who was providing continuous observation of a degraded vital area access.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the results of the inspection to members of licensee management on April 12, 2000. The licensee acknowledged the findings presented.

INSPECTION PROCEDURES USED

IP 37551	Onsite Engineering
IP 40500	Effectiveness of Licensee Process to Identify, Resolve, and Prevent Problems
IP 61726	Surveillance Observation
IP 62707	Maintenance Observation
IP 71001	Licensed Operator Requalification Program Evaluation
IP 71707	Plant Operations
IP 71750	Plant Support Activities

ITEMS OPENED, CLOSED, AND DISCUSSEDOpened/Closed

None

Closed

None

Discussed

None

LIST OF ACRONYMS USED

CRD	control rod drive
EDG	emergency diesel generator
HPCI	high pressure coolant injection
IP	inspection procedure
JPMs	job performance measure
LORT	licensed operator requalification training
NMD	Nuclear Maintenance Division
NRC	Nuclear Regulatory Commission
PDR	public document room
PECO	PECO Energy
PEP	performance enhancement program
RBCCW	reactor building closed cooling water
RHR	residual heat removal