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ComEd

July 25, 1997

JSPLTR: 97-0141

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Subject: Dresden Nuclear Power Station Units 2 and 3 Reply to a Notice of Violation; Inspection Report 50-237; 249/97007.
NRC Docket Numbers 50-237 and 50-249

Reference: A. Bill Beach letter to J. S. Perry, dated June 13, 1997, transmitting NRC Inspection Report 50-237; 249/97007 and Notice of Violation

The purpose of this letter is to provide ComEd's reply to the Notice of Violation transmitted in the referenced letter. The violations cited can be characterized as failure to follow procedures and failure to properly self-check. We recognize the significance of these violations and are taking aggressive actions as described below and in the attachment to this letter to prevent recurrence.

We are encouraged by your visit to Dresden Station and the results of the inspection of our maintenance activities. We appreciate your comments that:

> "In general, ... most work tasks observed to be performed well, and our overall conclusion was that maintenance at Dresden was at an acceptable level to support safe plant operation."

We agree with your conclusion that there are some areas that require continued management attention in order to achieve our goal of lasting performance improvements. Several Human Performance issues, which encompass procedure adherence, have been identified as areas requiring additional attention.

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In March 1997, Dresden's Site Quality Verification (SQV) Department identified problems with procedure adherence and reported on this issue to the station. In response to this concern ComEd embarked on a special analysis regarding Administrative Procedural Non-Compliance. Included in this analysis was the performance of a Common Cause Analysis (CCA) facilitated by Performance Improvement International. The results of this CCA led to the conclusion that a situation of Administrative Procedure Non-compliance exists at Dresden Station and is being seen company-wide. Further, the analysis indicates that the causes of events are very similar across departments and is independent of work processes or the activity being performed.

An investigative team composed of personnel from our corporate office, station representatives and Performance Improvement International has been charged with identifying the primary contributors for the condition described above and recommending corrective actions to prevent recurrence. The team will use appropriate root cause analysis tools such as, but not limited to, interviews, survey questionnaires, and observations, to identify and validate the contributors and proposed corrective actions. The corrective actions will be available for your review.

Additionally, procedure adherence is being stressed at continuing training programs. The third quarter Engineering training contained a module on procedures that discussed Engineering Management's expectations for procedure adherence. Operations stresses procedural adherence in their continuing training cycle.

Maintenance has recently instituted a Dynamic Learning Activity where work activities are performed and evaluated in a mock-up environment. The evaluation includes, but is not limited to, procedural compliance, foreign material exclusion, and radiation practices. The trainees performance is critiqued at the end of the activity. This activity has been used with the Electrical Maintenance Department and is scheduled to be included in the Instrument Maintenance continuing training cycle. Mechanical Maintenance is evaluating their training schedule to determine when to include this activity.

This letter contains the following new commitments:

- Additional corrective actions will be defined upon the completion of the Administrative Procedure Non-Compliance Root Cause Analysis. (NTS# 0007-230-97-SCAQ00002)

- After the completion of the Administrative Procedure Non-Compliance Root Cause Analysis and the Human Performance Trend Investigation Team evaluation, recommended training actions will be evaluated by appropriate training committees for inclusion into station training programs. (NTS# 237100970070101).

- Operations will develop a better key control program for the department. (Action Item Database #97-080).

- Maintenance will explore options for FME training to contractors, as such is performed at other nuclear sites, and work with Braidwood and LaSalle to develop a standardized FME Training Program for contractors that includes hands-on training. (NTS # 249-200-96-02503B)

- Maintenance will develop and implement a department policy and standards for work group supervisors that provide guidance and direction to determine the length and content of FME pre-job briefings to craft and contractors. (NTS# 249-200-96-02504A)

- Management will ensure an adequate number of root cause investigators and root cause experts is in place to comply with NSWP-A-15, "ComEd Nuclear Division Integrated Reporting Program." (NTS# 249-200-96-02506A)

- Lessons-Learned from the D3R14 Turbine work will be used to develop and expand pre-job briefs to provide job-specific training on FME, chemical control, hot work control, RWPs, confined space control, and fire protection for contractor work and ComEd maintenance as necessary. (NTS # 249-200-96-02509A)

- Procedure DES 8300-20, "Unit 3 250 Volt Station Battery Modified Performance Test," will be revised to reflect proper sequencing of maintenance as well as instructions concerning as-found and preconditioning issues. (NTS# 2491809700501)

- Station battery testing and maintenance procedures will be reviewed to verify proper instructions concerning as-found requirements and preconditioning issues. (NTS# 2491809700502)

- The last 250VDC and 125VDC battery discharge tests will be reviewed to verify compliance with as-found requirements and preconditioning issues. (NTS# 2491809700504)

- The 250 vdc battery modified performance test event will be presented during an Engineering Support Personnel Training class. The training will review how the event occurred, why the event occurred, the root causes, and corrective actions taken to prevent recurrence. (NTS# 2491809700504S1)

- The Electrical Maintenance and Plant Engineering Superintendent will present a coaching session to the Plant Engineering Group leads and Electrical Maintenance First Line Supervisors on the interface agreement, including that a System Engineer is not to act as a First Line Supervisor. (NTS # 2491809700503S1A&B)

In a discussion with Dresden Station's Senior Resident Inspector on June 25, 1997, it was agreed that the submittal date for this response would be extended to July 25, 1997.

If there are any questions concerning this letter, please refer them to Mr. Frank Spangenberg, Dresden Station Regulatory Assurance Manager, at (815) 942-2920, extension 3800.

Sincerely,

J. Stephen Perry
Site Vice President
Dresden Station

Attachment

cc: A. Bill Beach, Regional Administrator, Region III
W. J. Kropp, Branch Chief, Division of Reactor Projects, Region III
J. F. Stang, Project Manager, NRR (Unit 2/3)
K. Riemer, Senior Resident Inspector, Dresden
Office of Nuclear Facility Safety - IDNS
File: Numerical

ATTACHMENT
RESPONSE TO NOTICE OF VIOLATION
NRC INSPECTION REPORT
50-237/97007, 50-249/97007

Violation: (50-237; 249/97007-01a&b)

Dresden Station Technical Specification 6.8.A required that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, referenced administrative and surveillance test procedures.

Dresden Instrument Surveillance (DIS) 1600-03, "Torus to Reactor Building Vacuum Relief Valve Trip Unit Calibrations," Revision 7, Step D.2 required the performer to obtain Safety Key CB-1 from the operation shift supervisor.

Dresden Administrative Procedure (DAP) 07-14, "Control and Criteria for Locked Equipment and Valves," Revision 8, described the criteria and controls needed for issuing keys and operating locked valves and equipment.

Dresden Administrative Procedure (DAP) 07-27, "Independent Verifications," Revision 13, Section F.1, required that independent verification be performed on all lifted leads involving Technical Specification or safety-related equipment.

Contrary to the above:

A. On April 14, 1997, an instrument maintenance department (IMD) technician obtained an unauthorized key from an IMD key locker and not from the shift supervisor, as required by DIS 1600-03, Revision 7, Step D.2.

B. On April 18, 1997, a "second check" was performed, in lieu of the DAP 07-27 required verification, during the performance of DIS 5700-14, "Reactor Building Stack Flow Monitor Functional Test," Revision 1, Step I.8.c. That surveillance instruction required an independent verifier to "witness" the lifting of a safety-related electrical lead from a terminal block versus the independent verification required by DAP 07-27.

Reason for Violation:

(A) The cause of this violation is the failure of station personnel to follow applicable procedures. In this case, the key in question (CB-1) is not an operations controlled key. The purpose of this key was to give the individual accessing the area a heightened level of awareness to the area and its surroundings. Operations does not control the issuance of the CB-1 key nor do they intend to take such control.

The issue of the requirement to obtain the key from the shift supervisor in the procedure is indicative of the identified administrative procedure non-compliance issue at Dresden Station. In this case, the individual should have stopped at that point in the procedure to take corrective actions or receive guidance in accordance with Dresden Administrative Procedure (DAP) 09-13, "Procedural Adherence."

(B) The cause of this violation is the failure of station personnel to follow applicable procedures. In this case, the problem arose when conflicting statements existed in the procedure. One step stated that independent verification was required and another referred to the same process as a second check. This once again is indicative of administrative procedure non-compliance where the individual did not stop and correct the issue when it was encountered.

Corrective Steps Taken and Results Achieved:

(A) A Problem Identification Form (PIF) was generated to address this event.

(B) A search of the PIF Data Base, NRC Maintenance Inspection Daily Debriefs and the NRC Issues/Potential Observations from the NRC Maintenance Inspection did not identify any specific action taken for this event.

Corrective Steps Taken To Avoid Further Violation:

The Maintenance Manager provided a letter to all Maintenance Department Personnel reiterating the Station's procedure adherence requirements.

Operations will develop a better key control program for the department. (action item database #97-080).

DAP 07-27, " Independent Verification" has been revised to eliminate the conflicting statements regarding independent verification and a second check.

The Instrument Maintenance Department recently received training on the STAR (Stop Think Act Review) principles. This involved both classroom and hands-on activities using a simulator. The Department Head performed the evaluations for each group. Management's expectations for procedure adherence was also discussed during this training.

Additional corrective actions will be defined upon the completion of the Administrative Procedure Non-Compliance Root Cause Analysis. (NTS# 0007-230-97-SCAQ00002)

After the completion of the Administrative Procedure Non-Compliance Root Cause Analysis and the Human Performance Trend Investigation Team evaluation, recommended training actions will be evaluated by appropriate training committees for inclusion into station training programs. (NTS# 237100970070101)

Date When Full Compliance will be Achieved:

Management will not consider Dresden to be in full compliance until the corrective actions for the Administrative Procedure Non-Compliance Root Cause Analysis are implemented.

Violation: (50-237; 249/97007-02a&b)

Dresden Station Technical Specification 6.8.A required that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, referenced administrative and surveillance test procedures.

Dresden Instrument Surveillance (DIS) 1600-03, "Torus to Reactor Building Vacuum Relief Valves Trip Unit Calibration," Revision 07, directed test performers to secure the equipment in a safe state.

Dresden Administrative Procedure (DAP) 09-13, "Procedural Adherence," Revision 06, required procedure users to verify that the procedure was the current revision or a temporary change.

Contrary to the above:

A. On April 14, 1997, DIS 1600-03 test performers failed to turn off the power supply to the test modules as directed by the procedure to secure the equipment in a safe state.

B. On April 23, 1997, test performers failed to verify the correct revision of Dresden Instrument Procedure (DIP) 0700-06, "LPRM Pre-Installation Insulation Resistance and Breakdown Voltage Acceptance Checks," was utilized prior to actual work. The surveillance performer used Revision 2 of DIP 0700-06 when the current revision was Revision 3.

Reason For Violation:

(A) The cause of this violation is the failure of station personnel to follow applicable procedures.

(B) The cause of this violation is the failure of station personnel to follow applicable procedures. When work packages are prepared, copies of the applicable procedures are placed in the package. It is the responsibility of the individuals performing the work to stop and verify the correct revision of the procedure prior to commencing work. In this case, contrary to the requirements in DAP 15-06, "Preparation, Approval, and Control of Work Packages and Work Requests," this was not performed and work was subsequently started utilizing the wrong revision. This is an example of administrative procedure non-compliance.

Corrective Steps Taken and Results Achieved:

(A) A PIF was generated for this event. Additionally, the power supply to the test modules was secured.

The individual involved in this event has been counseled and now understands the importance of procedure adherence.

(B) A PIF was initiated to address this issue.

Personnel involved obtained the correct procedure revision, transferred all applicable data and successfully completed the job.

Corrective Steps Taken To Avoid Further Violation:

The Maintenance Manager provided a letter to all Maintenance Department Personnel reiterating the Station's procedure adherence requirements.

The Instrument Maintenance Department recently received training on the STAR (Stop Think Act Review) principles. This involved both classroom and hands-on activities using a simulator. The Department Head performed the evaluations for each group. Management's expectations for procedure adherence was also discussed during this training.

Additional corrective actions will be defined upon the completion of the Administrative Procedure Non-Compliance Root Cause Analysis. (NTS# 0007-230-97-SCAQ00002)

After the completion of the Administrative Procedure Non-Compliance Root Cause Analysis and the Human Performance Trend Investigation Team evaluation, recommended training actions will be evaluated by appropriate training committees for inclusion into station training programs. (NTS# 237100970070101)

Date When Full Compliance will be Achieved:

Management will not consider Dresden to be in full compliance until the corrective actions for the Administrative Procedure Non-Compliance Root Cause Analysis are implemented.

Violation: (50-237; 249/97007-03a,b&c)

Dresden Station Technical Specification 6.8.A required that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, referenced administrative and surveillance test procedures.

Dresden Administrative Procedure (DAP) 03-23, "Foreign Material Exclusion (FME) Program," Revision 8, required in part: (1) FME controls were required for any work activity, modification, test, inspection or sampling that involved opening a system or component; (2) Extra protective clothing, equipment, tools and parts not immediately used that are brought into an FME area will be properly contained while no work was in progress, and (3) Covers must be placed on all systems breached when the opening was left unattended.

Contrary to the above:

A. On April 17, 1997, inadequate FME controls, required by DAP 03-23, were identified in the main steam isolation valve (MSIV) X-room. Excessive amounts of protective clothing, rubber shoe covers, plastic protective clothing, rags and rubber gloves were laying around in the area uncontrolled.

B. On April 17, 1997, inadequate FME controls, required by DAP 03-23, were identified when electrical maintenance technicians failed to replace the valve cover for Motor Operated Valve 3-220-3 for about two and one-half hours after leaving the work area. The valve's limit switch and electrical connections were left unprotected.

C. On April 13, 1997, inadequate FME controls, required by DAP 03-23, were identified during a plant tour, when old and new control rod drive scram solenoid pilot valves were observed in an unspecified FME Zone area in Unit 2. The new valves were intended to be installed in Unit 3. The valves were not fully protected at the pipe ends to prevent dirt and debris from entering and degrading the valves.

Reason For Violation:

The cause of this violation is the failure of station personnel to follow applicable procedures.

Additionally, an Effectiveness Review, completed in May, 1997, of previously identified corrective actions for controlling FME concerns found that previous corrective actions were ineffective in addressing FME issues at Dresden. Corrective actions resulting from the Effectiveness Review are given below.

Corrective Steps Taken and Results Achieved:

(A) The area in question was cleaned-up and extra protective clothing articles removed.

Housekeeping issues were discussed during the daily debriefs during the NRC Maintenance Inspection. A search of the PIF Data Base, NRC Maintenance Inspection Daily Debriefs and the NRC Issues/Potential Observations from the NRC Maintenance Inspection did not identify any other actions taken for this event.

(B) A PIF was initiated to address this event.

Work was completed and the cover replaced.

The individuals involved in this event were counseled and now understand FME principles.

(C) A PIF was initiated regarding this event.

The area was reorganized to address FME concerns, all openings on the new scram solenoid pilot valves (SSPV's) were covered and a 55-gallon drum was obtained to utilize in the disposal of the old SSPV's.

Corrective Steps Taken To Avoid Further Violation:

The Maintenance Manager provided a letter to all Maintenance Department Personnel reiterating the Station's procedure adherence requirements.

Training will explore options for FME training to contractors, as such is performed at other nuclear sites, and work with Braidwood and LaSalle to develop a standardized FME Training Program for contractors that includes hands-on training. (NTS # 249-200-96-02503B)

Maintenance will develop and implement a department policy and standards for work group supervisors that provide guidance and direction to determine the length and content of FME pre-job briefings to craft and contractors. (NTS# 249-200-96-02504A)

Management will ensure an adequate number of root cause investigators and root cause experts is in place to comply with NSWP-A-15, "ComEd Nuclear Division Integrated Reporting Program." (NTS# 249-200-96-02506A)

Lessons-Learned from the D3R14 Turbine work will be used to develop and expand pre-job briefs to provide job-specific training on FME, chemical control, hot work control, RWPs, confined space control, and fire protection for contractor work and ComEd maintenance as necessary. (NTS Item 249-200-96-02509A)

Additional corrective actions will be defined upon the completion of the Administrative Procedure Non-Compliance Root Cause Analysis. (NTS# 0007-230-97-SCAQ00002)

After the completion of the Administrative Procedure Non-Compliance Root Cause Analysis and the Human Performance Trend Investigation Team evaluation, recommended training actions will be evaluated by appropriate training committees for inclusion into station training programs. (NTS# 237100970070101)

Date When Full Compliance will be Achieved:

Management will not consider Dresden to be in full compliance until the corrective actions for the Administrative Procedure Non-Compliance Root Cause Analysis are implemented.

Violation: (50-237; 249/97007-03d)

Dresden Station Technical Specification 6.8.A required that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, referenced administrative and surveillance test procedures.

Dresden Administrative Procedure (DAP) 12-35, "Donning and Remove of Routinely Required Radiological Protective Clothing and PC Guidelines," Revision 4, Step F.1.j required that TLDs be clipped to the PC pocket with the beta window and not covered by fabric, and EDs were to be placed in the pocket.

Between April 14 and April 24, 1997, radiation workers were observed failing to follow Dresden Administrative Procedure (DAP) 12-35 with regard to the use of Thermoluminescent Dosimeters (TLDs) and Electronic Dosimeters (EDs). Specifically, on at least six occasions radworkers were observed inserting TLDs and EDs into protective clothing pocket without regard to the Beta window.

Reason for Violation:

The reason this violation occurred was due to the Radworkers failing to comply with DAP 12-35, Radiation Protection's (RPs) failure to enforce the requirements of DAP 12-35 and failure of workers and RP personnel to comply with Management expectations for procedure adherence. A review of the occurrence indicates that DAP 12-35, "Donning and Removing Required Radiological Protective Clothing and Protective Clothing Guidelines," gives clear guidance regarding the requirements for the wearing of personal dosimeters. Step F.1.j. of the procedure states; "Unless otherwise directed by the Radiation Work Permit (RWP) OR Radiation Protection, clip the TLD to the pocket." This step delineates the requirements for wearing of dosimeters. The personnel identified in the violation were not wearing their dosimeter(s) in accordance with DAP 12-35, Step F.1.j.

Personnel were interviewed by Radiation Protection (RP) in an attempt to identify if the personnel had been directed by RP to wear their dosimeters differently. In most cases, the personnel interviewed stated that they had been directed to wear their dosimeters inside their pockets.

Radiation workers are trained to wear their dosimeters on the outside of their pockets unless directed by RP to wear them differently. Personnel whom had not been directed to wear their dosimeters differently were in clear violation of this procedure. Otherwise, personnel were complying with the procedure and had been directed to wear their dosimeter "inside" their pockets.

Corrective Steps Taken and Results Achieved:

RP Management held a verbal tailgate meeting immediately following the NRC observations with the Radiation Protection Technicians (RPTs) to reinforce the expectations for the requirements of DAP 12-35 for placement of dosimeters and the need for consistency regarding placement of dosimeters on personnel.

Any changes in placement of dosimeters will be as directed by the RWP and RP personnel. Any changes requested will be implemented and documented via the RWP.

Corrective Steps Taken to Avoid Further Violation:

Dresden personnel were presented with tailgate material on July 16, 1997 listing the requirements of dosimeter placement as delineated in DAP 12-35.

NGET and Refresher training were verified to include the requirements for placement of personal dosimeters.

An RP Group Lead meeting was held on July 7, 1997, where all Group Leads reviewed the requirements of DAP 12-35, and agreed that the procedure was correct and was to be used as written. Specifically addressed were the requirements for placement of personal dosimeters.

Additional corrective actions will be defined upon the completion of the Administrative Procedure Non-Compliance Root Cause Analysis. (NTS# 0007-230-97-SCAQ00002)

After the completion of the Administrative Procedure Non-Compliance Root Cause Analysis and the Human Performance Trend Investigation Team evaluation, recommended training actions will be evaluated by appropriate training committees for inclusion into station training programs. (NTS# 237100970070101)

Date When Full Compliance will be Achieved:

Dresden is in full compliance with the requirements for wearing personal dosimeters in accordance with DAP 12-35.

Violation: (50-237; 249/97007-04a&b)

Dresden Station Technical Specification 6.8.A required that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, referenced administrative and surveillance test procedures.

Nuclear Station Work Procedure (NSWP) "ASME and ASME B.31.1 Welding," Revision 3, Section 6.4.1, stated in part, when interpass temperature was specified on Exhibit A (weld data sheet), check the interpass temperature upon completion of a weld pass.

Dresden Administrative Procedure (DAP 15-06), "Preparation, Approval, and Control Of Work Packages and Work Requests," Revision 17, required at a minimum, a copy of the work request for portions of work being performed that day.

Contrary to the above,

A. On April 22, 1997, maintenance technicians welding on Low Pressure Cooling Injection/Containment Cooling Heat Exchanger "3B" monel stub plate failed to verify interpass temperature as required by the weld data sheet and Weld Procedure NSWP-W-01. Welding was conducted without a temperature stick or pyrometer in the work area to verify interpass temperature.

B. On April 22, 1997, during the second shift, maintenance technicians were observed performing welding activities on the "3B" heat exchanger monel stud plate without the minimum work package information required by DAP 15-06.

Reason For Violation:

The cause of this violation is the failure of station personnel to follow applicable procedures.

Corrective Steps Taken and Results Achieved:

(A) The Dresden Station Welding Engineer evaluated the welding method used for this job. By considering the weld method, metal type and thickness, it was concluded that since the metal was 0.75" thick monel plate being welded to tube sheet utilizing a TIG process, the combination of these items prevented a temperature of 700°F being exceeded. The welding Engineer discussed this with the NRC Inspector at the time of the observation. However, this was a procedural noncompliance.

(B) The supervisor in charge stopped the work and initiated a PIF. The correct documentation was obtained prior to proceeding with the work.

Corrective Steps Taken To Avoid Further Violation:

(B) The individuals involved were disciplined in accordance with station policy.

The Maintenance Manager provided a letter to all Maintenance Department Personnel reiterating the Station's procedure adherence requirements.

Additional corrective actions will be defined upon the completion of the Administrative Procedure Non-Compliance Root Cause Analysis. (NTS# 0007-230-97-SCAQ00002)

After the completion of the Administrative Procedure Non-Compliance Root Cause Analysis and the Human Performance Trend Investigation Team evaluation, recommended training actions will be evaluated by appropriate training committees for inclusion into station training programs. (NTS# 237100970070101)

Date When Full Compliance will be Achieved:

Management will not consider Dresden to be in full compliance until the corrective actions for the Administrative Procedure Non-Compliance Root Cause Analysis are implemented.

Violation: (50-237; 249/97007-05).

Technical Specification 4.9.C.5 stated, in part, that at least once per 60 months, verify that the battery capacity is at least 80 percent of the manufacturer's rating when subjected to either a performance test or a modified performance test (MPT). The modified performance discharge test satisfied both the service test and performance test and therefore, may be performed in lieu of a service test. Since the MPT was subject to the same criteria as a service test, the test was required to be performed in the "as-found" condition as discussed in the Technical Specification Bases 3/4.9.C.

Dresden Electrical Surveillance (DES) 8300-20, "Unit 3 250 Volt Station Battery Modified Performance Test," Revision 02, Step E.3 (Prerequisites), stated: "This test is required to be performed with the battery in the as found condition."

Contrary to the above, on April 22, 1997, the licensee failed to perform a modified performance test on the Unit 3 250 VDC battery in the "as found" condition. Prior to the test, corrective maintenance, which included replacement of a cell, replacement of inter-tier cables, replacement of post seals, and cleaning of the cell to cell connections was performed. In addition, prior to the test, a 222-hour equalizing charge was placed on the battery.

Reason for Violation:

Investigation of this event determined the root cause to be personnel error leading to an inadequate technical review of the work sequence and test procedure. The System Engineer assumed the MPT prerequisites were the same as the Performance test and did not verify this with the Technical Specification's Bases, or through a detailed review of IEEE 450. Thus, when scheduling the battery maintenance and equalization charge, the engineer improperly scheduled the maintenance prior to performing the MPT. Additionally, during reviews of the MPT procedure, reviewers did not identify the procedural errors and missed an opportunity to resolve the precondition issue prior to testing. During the performance of work activities Electrical Maintenance and Engineering personnel did not sufficiently question performing the procedure without meeting the as-found prerequisite.

Corrective Actions Taken and Results Achieved:

The MPT test documentation was reviewed to assure an acceptable test in accordance with Station procedures on Operability Evaluations. Although the battery was not tested in the as found condition, and it is not possible to recreate this condition, the battery will perform its required function in the future. Additionally, our analysis indicated that the work which was completed prior to the MPT did not significantly change the outcome of the test.

Corrective Steps Taken to Avoid Further Violation:

The System Engineer and second procedure technical reviewer (System Engineer) have been disciplined in accordance with station policy.

The MPT First Line Supervisors, Superintendent of Outage Planning, and Work Analyst have been disciplined in accordance with station policy.

Procedure DES 8300-20, "Unit 3 250 Volt Station Battery Modified Performance Test," will be revised to reflect proper sequencing of maintenance as well as instructions concerning as-found and preconditioning issues. (NTS# 2491809700501)

Station battery testing and maintenance procedures will be reviewed to verify proper instructions concerning as-found requirements and preconditioning issues. (NTS# 2491809700502)

A sample review of completed Electrical Maintenance work packages has been performed to verify compliance with Station policy concerning development and revisions to the packages.

The last 250Vvdc and 125 vdc battery discharge tests will be reviewed to verify compliance with as-found requirements and preconditioning issues. (NTS# 2491809700504)

The Maintenance Manager provided a letter to all Maintenance Department Personnel reiterating the Station's procedure adherence requirements.

The Site Engineering Manager provided a letter to all site Engineering Personnel which communicated that no Technical Evaluations (Engineering Correspondence) should be construed as authority to omit an existing procedure step or to circumvent an administrative process, and emphasized standards for procedural adherence.

Plant Engineering personnel were coached on engineering standards concerning system bases knowledge, procedure development and review, maintenance first line supervision, and regulatory compliance.

The 250 vdc battery modified performance test event will be presented during an Engineering Support Personnel Training class. The training will review how the event occurred, why the event occurred, the root causes, and corrective actions taken to prevent recurrence. (NTS# 2491809700504S1)

Additional corrective actions will be defined upon the completion of the Administrative Procedure Non-Compliance Root Cause Analysis. (NTS# 0007-230-97-SCAQ00002)

After the completion of the Administrative Procedure Non-Compliance Root Cause Analysis and the Human Performance Trend Investigation Team evaluation, recommended training actions will be evaluated by appropriate training committees for inclusion into station training programs. (NTS# 237100970070101)

Date of Full Compliance:

Dresden is in full compliance. The batteries have been tested and will perform as designed.

Violation: (50-237; 249/97007-06)

Dresden Station Technical Specification 6.8.A required that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, referenced administrative procedures, procedure adherence and temporary change method, and procedural review and approval.

Dresden Electrical Surveillance (DES) 8300-20, "Unit 3 250 Volt Station Battery Modified Performance Test," Revision 02, Step E.3 (Prerequisites), stated: "This test is required to be performed with the battery in the as found condition."

Dresden Administrative Procedure (DAP) 09-13, "Procedure Adherence," Revision 6, Step F.9.a & .c required the cognizant supervisor to ensure: a) "If the Procedural Intent will be affected, THEN perform Step F.2.a of this procedure," and c) "Applicable prerequisites are met." Step F.2.a required that the cognizant supervisor terminate use of the procedure OR perform a permanent change in accordance with station procedure and revision processing.

Contrary to the above, on April 17, 1997, the cognizant supervisor (test director) changed DES 8300-20, based on a corporate engineering recommendation (DOC No. DG-97-000513, dated April 14, 1997) that the "as found" requirement be waived. Deleting the "as found" prerequisite was an intent change, and the cognizant supervisor did not terminate the procedure or perform a permanent change in accordance with station procedure and revision processing.

Reason for Violation:

An investigation of this event determined that the cause of the event is personnel error. The sequence of activities leading up to and including the performance of the Modified Performance Test (MPT) were improperly planned. On April 10, 1997, during a review of the MPT procedure prior to performing the test or battery maintenance, the as-found prerequisite was identified by the Work Analyst (WA)/ DC Window Manager. The WA anticipated that the scheduled battery maintenance would violate the as-found prerequisite.

The WA contacted the former System Engineer, who by default was acting as an Electrical Maintenance First Line Supervisor, to resolve the issue. The System Engineer by this time was leading, and making the decision for the MPT. This resulted in an inadequate technical review of the work sequence and test procedure. The System Engineer attempted to have the MPT procedure revised to remove the as-found prerequisite, but the maintenance procedure writer refused because the as-found requirement was contained in the IEEE standard and the Technical Specification's Bases.

The System Engineer then contacted Corporate Engineering to resolve the issue and Corporate Engineering responded with a letter dated April 14, 1997, that stated in part that because sufficient maintenance was required on the battery and since a cell was being replaced, it was prudent to perform the test after all maintenance had been completed and an equalize charge had been received.

The Corporate Engineering view of the April 14, 1997, letter was to provide technical information concerning the MPT, not regulatory or administrative requirements of the site. However, station personnel viewed this letter as the authorization to proceed with the maintenance prior to performing the MPT without properly revising the procedure.

Although the improper sequencing of maintenance activities had a negligible effect on the outcome of the MPT it is agreed that an engineering evaluation letter is not to be used as a justification to violate an approved procedure.

A contributing cause of this event is a Management deficiency. The interface (Plant Engineering/Maintenance) policy and expectations which prohibits the System Engineer from acting as a Maintenance First Line Supervisor were not sufficiently implemented. During the MPT, a System Engineer acted as a First Line Supervisor for the job. This lead to complacency and lack of a questioning attitude.

Corrective Actions Taken and Results Achieved:

The MPT test documentation was reviewed to assure it was acceptable test in accordance with Station procedures on Operability Evaluations. Although the battery was not tested in the as found condition, and it is not possible to recreate this condition, the battery will perform its required function in the future. Additionally, our analysis indicated that the work which was completed prior to the MPT did not significantly change the outcome of the test.

Corrective Steps Taken to Avoid Further Violation:

The MPT First Line Supervisors, Superintendent of Outage Planning, and Work Analyst have been disciplined in accordance with station policy.

A sample review of Engineering letters has been performed to verify compliance with Station policy concerning development and revisions to procedures and work packages.

The Maintenance Manager provided a letter to all Maintenance Department Personnel reiterating the Station's procedure adherence requirements.

The Site Engineering Manager provided a letter to all Site Engineering Personnel which communicated that no Technical Evaluations (Engineering Correspondence) should be construed as authority to omit an existing procedure step or to circumvent an administrative process, and emphasized standards for procedural adherence. Plant Engineering personnel were coached on engineering standards concerning system bases knowledge, procedure development and review, maintenance first line supervision, and regulatory compliance.

The 250 vdc battery modified performance test event will be presented during an Engineering Support Personnel Training class. The training will review how the event occurred, why the event occurred, the root causes, and corrective actions taken to prevent recurrence. (NTS# 2491809700504S1)

The Electrical Maintenance and Plant Engineering Superintendent will present a coaching session to the Plant Engineering Group leads and Electrical Maintenance First Line Supervisors on the interface agreement, including that a System Engineer is not to act as a First Line Supervisor. (NTS # 2491809700503S1A&B)

Additional corrective actions will be defined upon the completion of the Administrative Procedure Non-Compliance Root Cause Analysis. (NTS# 0007-230-97-SCAQ00002)

After the completion of the Administrative Procedure Non-Compliance Root Cause Analysis and the Human Performance Trend Investigation Team evaluation, recommended training actions will be evaluated by appropriate training committees for inclusion into station training programs. (NTS# 237100970070101)

Date of Full Compliance:

Dresden Station is in full compliance. Long term actions to prevent recurrence will be completed prior to similar testing scheduled for the next refueling outage (D2R15).