



**Commonwealth Edison**

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May 30, 1986

Mr. James G. Keppler  
Regional Administrator  
U.S. Nuclear Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, IL 60137

Subject: Dresden Station Units 2 and 3  
Quad Cities Station Units 1 and 2  
LaSalle County Station Units 1 and 2  
Byron Station Units 1 and 2  
Braidwood Station Unit 1  
Zion Nuclear Power Station Units 1 and 2  
Response to Inspection Reports Regarding  
Operational Analysis Department Activities  
NRC Docket Nos. 50-237/249;50-254/265;  
50-373/374;50-454/455;50-456; & 50-295/304

References: C. J. Paperiello letter to Cordell Reed  
dated March 24, 1986.

I.R. Nos. 50-237/85038, 50-249/85034;  
50-373/85040, 50-374/85041;  
50-254/85031, 50-265/85033;  
50-295/85043, 50-304/85044;  
50-454/85052, 50-455/85046;  
50-456/85-056

Dear Mr. Keppler:

The referenced letter documents the results of a special safety inspection conducted by Messrs. S. G. DuPont, Z. Falevits and Ms. P. L. Eng of your office on December 9, 1985 through January 24, 1986, and March 18, 1986 of activities at the Commonwealth Edison facilities identified above.

During the course of that inspection, certain activities appeared to be in noncompliance with NRC requirements. Attachment A to this letter contains our response to the Notice of Violation. This response is provided consistent with the extended due date granted during telecons with M. Ring of your staff on April 16 and May 15.

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May 30, 1986

With regard to Violation 2b addressing the use of approved procedures at Braidwood Station, our investigation has identified additional information which we believe demonstrates that this violation is inappropriate. Accordingly, we request you review the proposed noncompliance in light of this additional information to determine if it should be withdrawn. The basis for this request is contained in our attached response to this violation.

During the corporate exit meeting for these inspections, your staff requested we respond to the unresolved and open items identified in the Inspection Reports. Attachment B provides our response and planned actions regarding these items.

If you have any further questions regarding this matter, please contact this office.

Very truly yours,

*for H.S. Jurlak*  
D. L. Farrar  
Director of Nuclear Licensing

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Attachments

cc: NRC Resident Inspector - Dresden  
NRC Resident Inspector - Quad Cities  
NRC Resident Inspector - LaSalle  
NRC Resident Inspector - Byron  
NRC Resident Inspector - Braidwood  
NRC Resident Inspector - Zion

Attachment A

Commonwealth Edison Company

Response to Notice of Violation

Violation #1

10CFR 50, Appendix B, Criterion III, as implemented by Commonwealth Edison Quality Assurance Manual, Quality Procedure 3-51, requires that procedures referenced in Maintenance/Modification Procedures be subjected to an On-Site Review as defined in the Technical Specifications.

Contrary to the above, Electrical Construction Test Procedures (ECTP) referenced in Maintenance/Modification Procedures at Dresden have not been reviewed and approved by the Dresden On-Site Review Committee. (237/85038-08 and 249/85034-08)

Discussion

The inspector's review of work request D-27654 which addresses the on-going effort to install the new bus duct for the Unit 2/3 diesel generator revealed that although referenced in the Maintenance/Modification Procedure (MMP) and on the work traveler, there is no objective evidence that the ECTP's used for construction/modification testing have received an on-site review. Quality Procedure 3-51, pages 12 and 13, state that test procedures associated with safety related work must be reviewed by the On-Site Review committee prior to MMP approval. CECO. Quality Procedure 3-51 states that Maintenance/Modification Procedures (MMP) for safety related work shall be approved only if procedures referenced in the MMP have been approved by an on-site review. Discussions with members of plant management revealed that no on-site review of the Electrical Construction Test Procedures had ever been performed. In addition, OAD personnel indicated that they were unaware of the review requirements for procedures associated with Maintenance/Modification work packages delineated in the Quality Assurance Manual. Failure to perform maintenance and modification activities is considered to be a violation of 10CFR 50, Appendix B, Criterion III as implemented by the licensee's Quality Procedure 3-51.

Corrective Action Taken and the Results Achieved

When reviewing work packages involving maintenance and modification work, Southern Division OAD is inserting applicable individual ECTP's along with the OAD traveler that references them into the packages. The procedures are then included in the station review of the final work package, before the modification work begins. This action was implemented on April 1, 1986.

Corrective Action to be Taken to Avoid Further Noncompliance

All existing ECTP's will be on-site reviewed by Dresden Station. In addition, any revisions to, or new ECTP's will be afforded the same review prior to use.

Date When Full Compliance Will Be Achieved

Dresden on-site review of ECTP's was completed on May 30, 1986.

Violation #2a

10 CFR 50, Appendix B, Criterion VI, as implemented by CECO Quality Assurance Manual, Quality Requirement 6, requires that measures shall be established to control the issuance of procedures which prescribe activities affecting quality and that these procedures shall be used at the location where the prescribed activity is performed.

Contrary to the above, protective relay testing was performed at the Dresden Nuclear Power Station using a predated procedure instead of the approved revised procedure. (237/85038-01 and 249/85034-01)

Discussion

Review of the completed work request package D-38044 revealed that OAD had used protective relay test procedures which predate the test procedures found in the SDOAD Manual. Investigation by Southern Division OAD personnel revealed that the procedure copies kept on file and used in the work package in question were dated 1977; the latest approved revision of this procedure was dated 1978. This is a violation of 10 CFR 50, Appendix B, Criterion VI in that the approved procedures contained with the SDOAD Manual were not used at the location where the prescribed activity was performed.

Corrective Action Taken and the Results Achieved

The Dresden OAD files were purged of all the subject outdated procedure copies with the 1977 date. A comprehensive search of all procedure files at Dresden OAD was also conducted to ensure no other outdated procedure copies for other procedures were on file. This action by Dresden OAD personnel was completed on January 13, 1986.

In addition, on January 27, 1986, a formal training session was conducted at Southern Division's Joliet Headquarters. At this session, training was given to the Dresden OAD staff and other Southern Division OAD personnel to provide instruction on the importance of using only current procedures, and to outline methods of control to ensure outdated procedure copies are disposed of properly and not kept on file or used.

Corrective Action to be Taken to Avoid Further Noncompliance

Future internal OAD surveillances by department supervision will monitor the effectiveness of the above training session. The results of these surveillances will determine whether additional training or control measures are necessary.

Date When Full Compliance Will Be Achieved

The first surveillance was completed on May 28, 1986.

Violation #2b

10 CFR 50, Appendix B, Criterion VI, as implemented by CECO Quality Assurance Manual, Quality Requirement 6, requires that measures shall be established to control the issuance of procedures which prescribe activities affecting quality and that these procedures shall be used at the location where the prescribed activity is performed.

Contrary to the above, the following prescribed activities were performed without the use of established procedures at the location where the prescribed activities were performed:

- b. Test and measuring equipment evaluations were being performed at the Braidwood Nuclear Power Station, using a handwritten guideline instead of the approved procedure. (456/85056-01)

Response:

Commonwealth Edison disagrees that Project Operational Analysis Department (OAD) personnel are using handwritten, unapproved and uncontrolled guidelines instead of an approved procedure to perform evaluations of Test Instrument discrepancies.

Braidwood Operational Analysis Department had generated a procedure entitled "O.A.D. Test Instrument Discrepancy Report" in April, 1984. This procedure was reviewed and approved by OAD and Site Quality Assurance. The procedure has remained unchanged since its inception and two controlled copies are maintained in the Electrical Construction Test Procedures Manuals, located in the OAD office.

The OAD engineer, who interfaced with the NRC inspector during the subject inspection, is also the individual responsible for completion of the Test Instrument Discrepancy Reports. The engineer had received training to O.A.D. Test Instrument Discrepancy Report Procedure on January 22, 1985. During this training, the OAD engineer took notes to facilitate his understanding of the procedure. These notes are the "handwritten guideline" referred to by the inspector and those utilized by the OAD engineer to explain how the OAD Test Instrument Discrepancy Report (Form A of the aforementioned procedure) was prepared.

Because Form A is self-explanatory as to the type of information required to be entered in each section, the OAD engineer may have indicated that it was not absolutely necessary to have the formal procedure at his desk to properly fill out a discrepancy report. This type of statement on the part of the OAD engineer, along with the training notes, apparently led to the misunderstanding of OAD performing discrepancy reports without an approved procedure. It should be noted

that during the inspection, the engineer was not in the process of completing a discrepancy report, but only utilizing these notes to better explain the methodology to the inspector. To assure that handwritten notes are not employed, the OAD engineer was instructed to discard the notes reviewed by the inspector. In addition, the OAD engineer was given retraining on January 30, 1986 on the "O.A.D. Test Instrument Discrepancy Report" procedure.

The total population of discrepancy reports was reviewed by OAD supervision to assure compliance with procedural requirements. During this review, no inconsistencies were identified. It should be noted that no discrepancy reports have been generated at Braidwood since August, 1985.

Based on the above, formal controlled and approved procedures are available at the location where the activities are performed. These are the implementing documents utilized by trained OAD personnel in performing such activities. As a result, Commonwealth Edison Company believes that full compliance with 10 CFR 50, Appendix B, Criterion V and VI was, and continues to be achieved. We request that violation be withdrawn.

Violation #3

10CFR 50, Appendix B, Criterion V, as implemented by CECO. Quality Assurance Manual, Quality Requirement 5, requires that activities affecting quality shall be accomplished by procedures that shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

Contrary to the above, the protective relay surveillance testing procedure used by Operational Analysis Department personnel at the Dresden Nuclear Power Station did not require recording quantitative or qualitative acceptance "as-found" test results data. (237/85038-02 and 249/85034-02)

Discussion

Review of Dresden OAD test data for periodic testing of protective relays revealed that OAD did not record as-found relay data. The inspector noted that due to the lack of as-found data, trending or identification of those relays which repeatedly drifted away from their required settings was impossible. Failure to record the as-found data was primarily due to the fact that Dresden OAD was not using the SDOAD approved procedures which required recording the as-found data. These findings (which the NRC has determined to constitute a violation of 10CFR 50, Appendix B, Criterion V) refer to the practice of Dresden OAD recording "as left" data only on the relay test cards and not including "as found" test data on the cards. It should be noted that these findings originate directly from the previously discussed inspection findings (Dresden 237/85038-01 and 249/85038-01) because, in following the outdated 1977 relay testing procedure, Dresden OAD personnel were not required by that procedure to record "as found" test data. The later revision of the procedure (1978) required that "as found" and "as left" test data be recorded.

Corrective Action Taken and the Results Achieved

Relay testing policy at Dresden OAD was immediately changed effective January 13, 1986, when the Dresden OAD staff was instructed to begin including "as found" as well as "as left" test data on all relay test cards. On January 27, 1986, a formal training session was conducted at Southern Division's Joliet Headquarters. At this session, training was given to the Dresden OAD staff and other Division OAD personnel to include "as found" and "as left" test data for all protective relay calibrations and instrument calibrations performed in the plant. OAD personnel were also instructed to record test instrument identification numbers on all data cards.

Corrective Action to be Taken to Avoid Further Noncompliance

Future OAD surveillances by OAD supervision will monitor the effectiveness of this training session in these areas. The results of these surveillances will determine the need for adding training or control measures.

Date When Full Compliance Will be Achieved

The first OAD surveillance was completed on May 28, 1986.

ATTACHMENT B

UNRESOLVED AND OPEN ITEMS

The following paragraphs address the unresolved and open items from the OAD Inspection Report. The numbering convention is consistent with the summary list of items on pages 7, 8 and 9 of the Inspection Report.

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|-------------|--------------|---|
| (4) Dresden | 237/85038-05 | It was not apparent that OAD personnel had received training on applicable station administrative procedures and revisions. This is an unresolved item, and is discussed in Paragraph 4.c of this report. |
| Dresden     | 249/85034-05 |   |
| LaSalle     | 373/85040-03 |   |
| LaSalle     | 374/85041-03 |   |

A training program for applicable station administrative procedures and revisions for Dresden and LaSalle OAD personnel was initiated by Southern Division OAD on February 25, 1986. Training for all current resident OAD personnel at Dresden was completed on April 14, 1986. Training for current resident OAD personnel at LaSalle will be completed by July 1, 1986. Temporary or newly assigned OAD personnel will normally be trained within 30 days of assignment. Prior to training, they will be assigned to work with individuals who have been trained.

OAD will be added to the distribution list for Dresden Administrative Procedures change revisions. They are currently on the distribution list for LaSalle.

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|-------------|--------------|--|
| (5) Dresden | 237/85038-03 | Documentation of OAD training does not contain supportive evidence of training subject matter in sufficient detail to determine training adequacy. The licensee's Quality Assurance (QA) group also identified this weakness at the Zion, Quad Cities, Braidwood, and Byron stations. This is an unresolved inspection finding and is discussed in detail in Paragraph 4.b and 4.c of this report. |
| Dresden     | 249/85034-03 |  |
| LaSalle     | 373/85040-01 |  |
| LaSalle     | 374/85041-01 |  |
| Quad Cities | 254/85031-01 |  |
| Quad Cities | 265/85033-01 |  |
| Zion        | 295/85043-01 |  |
| Zion        | 304/85044-01 |  |
| Byron       | 454/85052-01 |  |
| Byron       | 455/85046-01 |  |
| Braidwood   | 456/85056-02 |  |

In response to these findings OAD is preparing matrixes to track QA Manual Training, QA Manual Revision Training, Station Administrative Procedure Training, Station Administrative Procedure Revision Training, Electrical Construction Test Procedure Training, and Qualification.

OAD is also incorporating additional information in training documentation regarding subject and scope. It is anticipated that the matrixes will be complete for all sites by July 1, 1986.



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| (6) Dresden | 237/85038-04 | The inspector was unable to determine the    |
| Dresden     | 249/85034-04 | hierarchy of procedures utilized by OAD.     |
| LaSalle     | 373/85040-02 | The procedures include System OAD, Division/ |
| LaSalle     | 374/85041-02 | Project OAD, CECO QA Manual, and station     |
| Byron       | 454/85052-02 | administrative procedures. This is an        |
| Byron       | 455/85046-02 | unresolved inspection finding to determine   |
| Braidwood   | 456/85056-03 | which procedure takes precedence for         |
|             |              | controlling prescribed activities. This      |
|             |              | item is discussed in Paragraph 5.b, 5.d and  |
|             |              | 5.e of this report.                          |

The hierarchy of procedures utilized by OAD is such that the CECO Quality Assurance Manual is the governing document. All other procedures are intended as implementing procedures.

Electrical Construction Test Procedures (ECTPs) are used for construction and modification. Site-specific ECTPs and Data Forms have site requirements in addition to the requirements of the basic ECTPs. A site-specific ECTP is used at only that site in lieu of the basic ECTP.

Periodic relay tests are made in accordance with OAD procedures. Some stations have incorporated the OAD procedures into their station procedures. In this case, the station procedure applies.

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| (7) Byron | 454/85052-03 | Project OAD at Braidwood and Byron were      |
| Byron     | 455/85046-03 | not on controlled distribution for pertinent |
| Braidwood | 456/85056-04 | station administrative procedures. This is   |
|           |              | an unresolved item, and is discussed in      |
|           |              | Paragraph 5.b, and 5.c.                      |

RESPONSE:

Project Operational Analysis Department (OAD) agrees that they should be on controlled distribution of Braidwood Site Administrative Procedures. As of March 18, 1986, Project OAD has received a controlled copy of the Braidwood Station Administrative Procedures. Implementation of this change will assure that Project OAD will be aware of revisions to the administrative procedures.

Prior to receiving controlled copies of such procedures, a training matrix of the specific procedures OAD personnel needed to be trained in did exist. However, because OAD was not on controlled distribution, a positive system did not exist to assure that procedure revisions impacting OAD activities were identified.

Although the review by the inspector revealed no problems in meeting updated administrative requirements, OAD had continued to train personnel to BWAP 300-5 which had been deleted and superceded by BWAP 330-101 on February 10, 1984. Currently, BWAP 330-101 "Electrical Jumpers, Relay Blocks, Temporary Mechanical Alterations and Lifted Lead Tags Prior to Fuel Load" is in place and OAD personnel have received the required training.

Byron Project OAD also has received controlled copies of the complete Byron Station Administrative Procedures. Project OAD has reviewed and determined their applicable administrative procedures. Training on the procedures was complete on April 16, 1986.

- (8) Dresden 237/85038-06 Dresden OAD personnel utilized an informal  
Dresden 249/85034-06 hand drawn flow chart as a supplement to the approved Quality Assurance procedure for drawing control. This is an unresolved inspection finding until OAD formalizes the guidance and verifies the adequacy. This item is discussed in Paragraph 5.d of this report.

The drawing control flow chart format has been revised to make it more easily understandable. It is currently being reviewed by Southern Division OAD. After approval by OAD, it will be submitted for review to the Dresden Quality Assurance Supervisor. The entire approval and review process is expected to be complete by September 1, 1986.

- (9) LaSalle 373/85040-04 The inspectors noted that OAD does not initiate  
LaSalle 374/85041-04 FCRs. However, OAD modifications frequently involve conditions where FCRs may be warranted. Review of several modifications performed by OAD to verify that deficiencies are properly documented will be performed in subsequent inspections. This is an open inspection item and is discussed in Paragraph 5.e of this report.

LaSalle OAD does not initiate Field Change Requests (FCRs) directly. Instead, OAD informs the Technical Staff, and a Tech Staff Engineer initiates the FCR. This is in accordance with the station procedures. The current LaSalle Station procedure for processing FCR's requires the changes to be processed by the Modification Engineer on Tech Staff during all phases of the modification. This practice will be reviewed following the current Unit 1 outage.

- (10) LaSalle 373/85040-06 Lasalle is to determine which approved and  
LaSalle 374/85041-06 reviewed procedures accomplishes electrical motor meggering. This is an unresolved inspection finding and is discussed in Paragraph 6.c of this report.

Electrical Motor meggering tests are performed in accordance with ETCP 1. This procedure and all other OAD Electrical Construction Test Procedures were approved by LaSalle on-site review on May 7, 1986, in accordance with Station Procedure LAP 820-9.

- (11) LaSalle 373/85040-07 The inspector was unable to resolve the requirements for review and approval signatures on schematic diagrams utilized by ECN ED-71 prior to completion of the inspection. This is an unresolved inspection finding and is discussed in Paragraph 6.c of this report.  
LaSalle 374/85041-07

ECN No. ED-71 was approved on September 30, 1983. At that time, the procedure which controlled the preparation, review and approval of ECNs was Project Instruction PI-LS-15, "Processing of Commonwealth Edison Non-Conformance Reports, and Sargent & Lundy Engineering Change Notices". This PI did not require review and approval signatures on each drawing included in ECNs. The first page of the ECNs contained the review and approval signatures.

PI-LS-15 was later superseded by the current Project Instruction for processing Sargent & Lundy Engineering Change Notices, PI-LSNS-09. PI-LSNS-09 was initially issued on February 2, 1984. The early revisions of this PI, also, did not require review and approval signatures on each drawing included in ECNs. Revision 7 of PI-LSNS-09, which was issued on May 22, 1985, was the revision which included the current requirement that each page of the ECN which is a diagram or drawing (including reproduction of all or part of a design document) shall be (a) individually signed by the Preparer and the Reviewer of that page and (b) processed in the same manner as S&L drawings except that the "Engineering Approval" and "Interfacing Comment" requirements are fulfilled by the signatures on the first page of the ECN.

Therefore, including drawings, which did not contain review and approval signatures, in ECN ED-71 was not a deviation from the applicable project procedures. Also, the "Engineering Approval" signature on each drawing, which is included in an ECN, is still not required by the current procedures.

- (12) Braidwood 456/85056-07 Certain construction testing activities were performed with general usage Test and Measuring Equipment (T&ME). This is an open inspection finding and is discussed in Paragraph 7.b of this report.

Braidwood Operation Analysis personnel utilize general use clamp-on ammeters to measure motor running currents on circuits not equipped with current transformers. When current transformer secondary current is measured, a standard ammeter is used. All standard ammeters supplied to OAD are certified.

The use of test equipment at Braidwood is consistent with that of Project OAD and all stations under construction.

All motor running currents taken by OAD personnel during construction tests are considered to be qualitative measurements due to their dynamic nature. This data is not used as a basis for equipment acceptance.

(13a) LaSalle 373/85040-05 The LaSalle station has committed to conduct  
LaSalle 374/85041-05 an onsite review of all relay setting changes  
to verify adequacy.

LaSalle Station has written Administrative Procedure LAP 1300-7, Control of Protective Relay Setpoints, to delineate the station review and authorization requirements for protective relay settings. The procedure is completed and approved.

(13b) Dresden 237/85038-07 Dresden OAD will incorporate original relay  
Dresden 249/85034-07 settings from the Sargent & Lundy letter into  
the current established method for documenting  
relay settings and changes.

To meet current documentation standards, the CECO System Planning Department has issued Relay Setting Orders (blue tickets) for all of the original relay settings contained in the Sargent & Lundy transmittal dated August 6, 1969.

Station OAD at Dresden is verifying that actual relay settings agree with the Relay Setting Orders. To date, 85 percent of the Relay Setting Orders have been verified. It is anticipated that all Relay Setting Orders will be verified by July 1, 1986.

(13c) Byron 454/85052-04 System OAD will review relay tolerance  
Byron 455/85046-04 control and define the program for all  
Braidwood 456/85056-05 stations.

A relay tolerance governing list for safety related and Tech Spec related relays at all sites was approved on April 10, 1986 and issued on April 15, 1986 by System OAD. This list will be implemented by OAD at each site following approval according to appropriate site procedures.

(14) Braidwood 456/85056-06 The Braidwood Station had not established a program delineating the method to insure that Technical Specifications requiring protective relay surveillances will be conducted prior to fuel load. This is an unresolved inspection finding until a program is developed. This finding is discussed in Paragraph 8.d of this report.

Initial calibration of relays covered under the scope of the Technical Specifications will be performed immediately prior to fuel load. Calibrations will be done by Southern Division OAD personnel, using an approved Braidwood Station Procedure, BWHP 4009-003 titled "Periodic Relay Testing Procedure Southern Division OAD Braidwood Station".

This procedure dictates relay acceptance criteria and Tech Staff reviews of relay data acquired during these activities.