



Commonwealth Edison

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September 23, 1983

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

Subject: LaSalle County Station Unit 2
Response to Inspection Report
No. 50-374/83-18
NRC Docket No. 50-374

Reference (a): W. S. Little letter to Cordell Reed
dated August 25, 1983.

Dear Mr. Keppler:

This letter is in response to the inspection conducted by Messrs. I. Ahmed, K. R. Naidu, R. Mendez, and R. Gardner on June 29 through August 5, 1983, of activities at LaSalle County Station. Reference (a) indicated that certain activities appeared to be in noncompliance with NRC requirements. The Commonwealth Edison Company response to the Notice of Violation is provided in the enclosure.

To the best of my knowledge and belief the statements contained herein and in the attachment are true and correct. In some respects these statements are not based upon my personal knowledge but upon information furnished by other Commonwealth Edison employees. Such information has been reviewed in accordance with Company practice and I believe it to be reliable.

If you have any further questions on this matter, please direct them to this office.

Very truly yours,

D. L. Farrar
Director of Nuclear Licensing

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Attachment

cc: NRC Resident Inspector - LSCS

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Attachment

Responses to Items of Noncompliance

Item of Noncompliance 374/83-18-01

1. 10 CFR 50, Appendix B, Criterion V, "Instruction, Procedures, and Drawings", states in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures or drawings".

a. The following are examples of failure to follow procedures:

- (1) Sargent and Lundy (S & L) Specification Drawing 1E-0-3333, Revision C, Note 5, states in part, "Minimum separation between redundant divisional conduits is 3' - 0" horizontal and 5' - 0" vertical except at crossings where the vertical separation may be 12"."

Contrary to the above, Engineered Safety Features (ESF) Division 1 Conduit 2JB117C was not separated by the minimum distance and was in contact with ESF Division 2 Conduit 2JB114C.

- (2) Note 9 on S & L Drawing 1E-0-3070 requires each cable to be affixed with a color coded tag to identify its association with the respective ESF Division.

Contrary to the above, the inspectors observed associated ESF Division II Cables 2NB683 and 2CT018 were incorrectly identified with yellow tags with white stripes (instead of a blue tag with white stripes) indicating that they belonged to associated ESF Division 1 cables, in riser R-385 inside the primary containment.

- (3) Notes 6, 7, 8, 9 and 10 on S & L Drawing 1E-0-3070 requires each ESF Division junction box to be identified with a color coded label.

Contrary to the above, at approximate elevation 745' inside the containment, the inspectors observed that cable junction box 2JB058C was incorrectly identified as belonging to ESF Division II instead of ESF Division 1.

- (4) Morrison Construction Company, the mechanical instrumentation installation contractor, in Work Instruction WI-19 Revision 0, dated January 1982, requires all safety-related instrument lines to be identified with color code tapes to indicate their association with their respective ESF Division or Reactor Protection System channel. Contrary to the above, the inspectors observed several instrument lines to instrument panels 2H22-P004, 2H22-P005, 2H22-P006 and 2H22-P022 identified with the incorrect Reactor Protection System segregation code.
- b. The following is an example of failure to establish a procedure. S & L Specification Drawing 1E-0-3333 specifies the minimum separation distances to be maintained between the ESF Division I and ESF Division II raceways but does not specify the minimum separation distance to be maintained between cables after they exit raceways inside the containment.

As a result, the inspectors observed the following at approximate elevation 783' inside the primary containment:

- (1) ESF Division 1 Cable 2NB11 was in contact with ESF Division 2 Cable 2NB12.
- (2) ESF Division 1 Cable 2NB894 was in contact with ESF Division 2 Cable 2NB896.
- (3) ESF Division 1 Cable 2NB917 was in contact with ESF Division 2 Cable 2NB918.
- (4) ESF Division 1 Cable 2NB911 was in contact with ESF Division 2 Cable 2NB912.

Correction Action Taken - Results Achieved

- 1.a.(1) The flexible conduits exiting 2JB114C have a segregation code of 22K (non-safety related associated with division 2). The flexible conduits exiting 2JB117C have a segregation code of 2YK (division 1). According to S & L drawing IE-0-3333, Rev. C note 1, the required separation between these conduits is 1 inch horizontal

and vertical rather than 3 feet horizontal, 5 feet vertical, and 1 foot crossing. An inspection by Project Construction Department engineers showed the flexible conduits are now separated by at least 1 inch horizontal and vertical distance. Commonwealth Edison Company Project Construction Department engineers will review this item with the responsible NRC inspector during his next inspection.

1.a.(2) & (3) Cables 2NB683 (22K) and 2CTC18 (22K) have been re-tagged with a blue tag with white stripes. Junction box 2JB058C has been re-tagged with a yellow (divisional 1) tag.

1.a.(4) Morrison Construction Co. (MCCo) initiated Nonconformity and Disposition Report No. 2333 on July 21, 1983. The corrective action included:

- i. Retaining of the applicable personnel before the continuation of tagging.
- ii. Reinstallation of the incorrectly color coded tags.
- iii. A verification that required process and instrument piping is properly color coded.

1.b. We have no separation requirements for cables in free air, but we agree that this was an unsatisfactory condition. This problem was caused by design difficulty: (a) solenoids are stacked on 4" centers, (b) cables terminate in plugs, (c) cables must be slack for approximately 2" of thermal expansion of SRV piping, (d) cables must be removable for relief valve calibration. In order to provide a barrier, flexible conduit and Zipper Tubing was installed over all division 2 (2BC) cables terminating at the SRV solenoids. This fix applies to nine cables (2NB881, 2NB884, 2NB887, 2NB912, 2NB890, 2NB893, 2NB986, 2NB899 and 2NB918).

Corrective Action Taken To Avoid Further Noncompliance

1.a.(1),(2),(3) H.P.Foley procedures were revised by the addition of a cable separation addendum to WI-300, WI-302, WI-400 and WI-500. Field personnel and Q.C. inspectors have received training and will continue to receive training regarding awareness to separation problems, labeling of cable, and junction box color codes.

Final area walkdowns are being performed in all areas of the plant. Any labeling discrepancies found as a result of these area walk-downs will be corrected.

Finally, a cable separation audit was completed on August 5, 1983. This field audit was performed by Sargent & Lundy personnel. Separation, identification and labeling problems found through this audit are being corrected.

1.a.(4) Applicable personnel were retrained as part of the subject nonconformance report.

1.b. Commonwealth Edison Company considers the contact between division 1 and division 2 cables at the SRV solenoids an unacceptable condition related to the physical location, termination requirements and thermal expansion requirements of the SRV's. It is not representative of a generic separation problem. We have now included in our Q.C. inspector training sessions cable separation criteria. This action should ensure that similar unsatisfactory conditions are identified and special designs requested and installed in the future.

Date When Full Compliance Will Be Achieved

1.a.(1),(2),(3),1b. Full compliance has already been achieved.

1.a.(4) Full compliance will be achieved prior to Unit 2 fuel load.

Item Of Noncompliance 374/83-18-02

10 CFR 50, Appendix B, Criterion XVII, states in parts, "Sufficient records shall be maintained to furnish evidence of activities affecting quality. The records shall include at least the following: ...the results of reviews, inspections, tests, audits...inspection and test records shall, as a minimum, identify...the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted."

Commonwealth Edison Topical Report No. CEI-A, Revision 2, Section XVII, states in part, "Fabrication and Construction documentation is generated by contractors,...for Commonwealth Edison Company and will be available at the construction site .Records generated during site construction, testing...will be available at the Station. Files shall be maintained current, complete and available for audit..."

Contrary to the above, no documented evidence existed to indicate that insulation resistance tests were performed on replacement modules in electrical penetrations as required by the manufacturer (CONAX) in Section 7.0 of their Instruction Manual IPS-1004. CONAX replacement modules had already been installed and the conductors terminated in four Bunker-Ramo penetrations. The manufacturer requires that all the conductors in the replacement modules be tested for insulation resistance prior to termination. The licensee stated that the conductors in the penetrations had been tested; however, no documented evidence exists to suggest that the required insulation resistance tests were performed.

Discussion

Commonwealth Edison Company will not contest this Item of Non-compliance. Extent of inspection documentation can always lead to disputes between regulator and licensee. Rather than let this issue become a matter of argument between both parties, we will state our position for the public record and at the same time, attempt to improve our inspection/documentation operations.

H.P. Foley Form 020 documented the installation and testing of the replacement Conax module in accordance with Conax Instruction Manual IPS-1004. The Foley Q.C. Inspector witnessed in-process all steps of the Conax procedure including the insulation resistance test. Form 020 was signed by Craft foreman, Q.C. inspector and the Manager of Quality. All this was performed properly.

Megger tests do not provide precision measurements with a high degree of accuracy. Even the speed of megger cranking (or battery charge) can affect the reading. The acceptance level of 10^8 ohms provides an acceptable or not acceptable indication of the penetration module. Any unacceptable megger reading would have been noted. All readings were greater than 10^8 ohms and hence acceptable.

Vendor manuals are frequently used as reference sources during installation procedures. To document every specific step of the vendor procedure should not be necessary unless a deficiency is found. H.P. Foley implemented the Sargent & Lundy approved procedure WI-205 and applicable checklist Form 020 properly. There were no requirements in WI-205 to document every step in the vendor manual.

As far as providing baseline megger readings for any future problems, the values obtained without field conductors terminated would be of little value. The field conductors are permanently crimped to the penetration assembly wiring. We would not remove the permanent field conductor terminations for testing purposes. A megger reading taken with field conductors terminated to both sides of the penetration assembly would be more useful for any future troubleshooting.

Corrective Action Taken - Results Achieved

The Quality Control Inspection files for the applicable penetration assemblies have been backfitted with a signed statement by the Quality Control Inspector who witnessed the megger test.

Corrective Action Taken To Avoid Further Noncompliance

Copies of this Item of Noncompliance and Response have been sent to LaSalle County Project Construction Department supervisory personnel, Byron and Braidwood Station Site Project Construction Superintendents and Edison's Station Construction Department (Operating Plants). The primary purpose was to make them aware of the events regarding this noncompliance and take any necessary actions at other sites to preclude similar occurrences.

Date When Full Compliance Will Be Achieved

Full compliance has already been achieved.

Item Of Noncompliance 374/83-18-03

10 CFR 50, Appendix B, Criterion VI, states in part, "Measures shall be established to control the issuance of documents, such as instructions, procedures and drawings, including changes thereto, which prescribe all activities affecting quality. These changes shall assure that documents, including change, are reviewed for adequacy... and are distributed to and used at the location where the prescribed activity is performed."

Commonwealth Edison Topical Report No. CE 1-A, Revision 11, Section VI, states in parts, "A document control system will be used to assure that documents such as specifications...and drawings are reviewed for adequacy... Also, this system includes as-built drawings and provisions to assure as-built drawings are kept updated, properly maintained, and controlled.

Contrary to the above, S&L as-built Drawings 1E-2-4000EC, Revision C, dated 2/12/81, and 1E-2-4000FB, Revision E, dated 1/28/83, had not been updated to reflect the correct information pertaining to MCC panel 221 Y and D.C. distribution panels 211 Y and 211 K. Consequently,

the above drawings contained numerous errors involving the actual breaker ratings for the individual cubicles.

Corrective Action Taken - Results Achieved

Commonwealth Edison Company/Sargent & Lundy Engineers will review the Unit 1/2 Key Diagrams against issued wiring diagrams, schematics and "ESO" Setting Sheets. The Key Diagrams will be updated accordingly and issued for record.

Corrective Action Taken To Avoid Further Noncompliance

The Sargent & Lundy review will bring the Key Diagrams in agreement with the current as-built plant condition. Future changes are to be tracked thru the Station Modification Program. Additionally, Sargent & Lundy Engineers will initiate the necessary internal communications to ensure LaSalle County Station Electrical Supervisors and other Electrical Nuclear Project Station Supervisors understand the circumstances and corrective actions related to this noncompliance.

Date When Full Compliance Will Be Achieved

Full compliance will be achieved prior to October 1, 1983.