



**Commonwealth Edison**

Zion Generating Station  
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June 2, 1994

U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Attn: Document Control Desk

Subject: Zion Nuclear Power Station Units 1 and 2  
Supplemental Response to Inspection  
Report Nos. 50-295(304)/94006

NRC Docket Nos. 50-295 and 50-304

- References:
- (a) B. Clayton letter to R. Tuetken dated March 31, 1994 transmitting Inspection Report Nos. 50-295(304)/94006
  - (b) R. Tuetken letter to U.S. NRC dated May 9, 1994.
  - (c) Telephone Conference with H. Walker held May 16, 1994.

Reference (a) identified one level IV violation of 10CFR50 Appendix B, Criterion V with two examples. Reference (b) provided the Commonwealth Edison Company (CECo) response to the Notice of Violation (NOV). During the reference (c) telephone conference with Mr. H. Walker of the NRC Region III staff, it was agreed that CECo would provide additional information to address NRC concerns regarding the lack of torquing pattern or torquing sequence instructions in the original work package for the containment spray diesel head assembly.

In the reference (b) response, CECo explained that Zion Station conducted the overhaul of the containment spray diesel within the procedural requirements of Zion Administrative Procedure (ZAP) 400-02, "Initiating and Processing a Work Request". Based on the reference (c) conversation, it is CECo's understanding that the central issue remaining is whether or not the torquing pattern/torquing sequence for the containment spray diesel head assembly required specific written instructions or whether it could reasonably be considered to fall under the envelope of work defined as craft capability.

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Zion Station has conducted a further review of the details regarding the torquing pattern and sequence required for the containment spray diesel head assembly. Based on this review, Zion has determined that the torquing pattern/sequence was more complex than a standard criss-cross pattern. Therefore, inclusion of specific written instructions was appropriate for the work package in question, and CECO acknowledges that this is a valid example for the violation as cited. The revised response to this violation example is included as attachment 'A' to this letter.

The above conclusions notwithstanding, Zion Station believes that it is appropriate to clarify that it is the Station's position that standard criss-cross torquing patterns are within craft capability and do not require written instructions to be included in the work package.

During the reference (c) telephone conference, Zion Station was asked to address the issue of how Zion generically utilizes vendor manual information in the preparation of work packages. Zion's maintenance procedures are written referencing the appropriate vendor manuals. The work analysts will consult vendor manuals if they determine that the work scope is beyond their level of expertise, or to help clarify work instructions in the package that are not expected to be within the capability of the craft.

I hope that this information adequately addresses your concern. If your staff has any questions or comments concerning this letter, please refer them to Ken Dickerson, Zion Regulatory Assurance Department, at (708) 746-2084 extension 2371.

Respectfully,



R.P. Tuetken  
Site Vice President  
Zion Station

cc: J. Martin, Regional Administrator, RIII  
C. Shiraki, NRR Project Manager  
J. Smith Senior Resident Inspector, Zion

## ATTACHMENT 'A'

### SUPPLEMENTAL RESPONSE TO NOTICE OF VIOLATION INSPECTION REPORT NUMBER 50-295(304)/94006

#### VIOLATION: 295/304-94006-02B

10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings" requires, in part, that activities affecting quality be prescribed by and accomplished in accordance with documented instructions, procedures, or drawings of a type appropriate to circumstances.

Contrary to the above:

When reviewed on February 3, 1994, the work instructions provided in nuclear work request Z26355 for overhaul of the Unit 1 containment spray pump diesel engine were not appropriate to the circumstances in that they did not address torquing patterns and sequences for engine components.

#### REASON FOR THE VIOLATION

CECo acknowledges this example for the violation as cited. The root cause of this violation example is attributed to management deficiency.

In response to emergent work requirements, a Mechanical Maintenance department work analyst was directed to revise the work package for the containment spray diesel so work could start the following morning. Due to the limited amount of time to prepare and review the work package, the work analyst failed to determine that the torquing sequence was not a standard criss-cross pattern. As a result, the work analyst did not specify in writing, the torquing sequence recommended in the vendor manual.

The above scenario occurred as a result of Zion Management's failure to adequately communicate to the work analyst the expectation that the level of detail to be included in emergent work packages should be equal to that found in non-emergent work packages.

## **ATTACHMENT 'A'**

### **SUPPLEMENTAL RESPONSE TO NOTICE OF VIOLATION INSPECTION REPORT NUMBER 50-295(304)/94006**

#### **CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED**

Prior to commencing work, the work package for the containment spray diesel was revised to include specific instructions for the torquing pattern and sequence for the containment spray diesel head assembly.

Zion Station Management's expectations for the level of detail to be included in work instructions, including emergent work, have been communicated to all Zion work analysts.

A review of CECo and contractor training on proper torquing methods was performed. The training was found to be adequate and supporting of the Zion Station position that standard criss-cross torquing patterns and sequences are within the capability of the craft.

In an effort to benchmark Zion Station's approach to providing work instructions for bolt torquing patterns/sequences with others in the industry, Zion has surveyed several plants and utilities rated highly in the maintenance areas by NRC and INPO. Significant variation was found among the plants surveyed as to the level of torquing detail typically included in work packages. However, based on the information obtained from those plants, Zion Station's interpretation that standard torquing patterns/sequences fall within the area of craft capability is not inconsistent with industry practice.

#### **CORRECTIVE STEPS TO BE TAKEN TO AVOID FURTHER VIOLATIONS**

A permanent overhaul procedure for the containment spray diesels is being developed by the Maintenance Procedure Group and should be issued no later than September, 1994. Torquing patterns/sequences will be specified in this procedure.

#### **DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED**

Zion Station is currently in full compliance.