

U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report Nos. 50-373/81-12; 50-374/81-07

Docket Nos. 50-373; 50-374

License Nos. CPPR-99; CPPR-100

Licensee: Commonwealth Edison Company  
P. O. Box 767  
Chicago, IL 60690

Facility Name: La Salle Country Station, Units 1 and 2

Inspection At: La Salle Site, Marseilles, IL

Inspection Conducted: March 30-31, and April 1-2, 1981

Inspector: *[Signature]*  
J. T. Yin

4/15/81

Approved By: *[Signature]*  
D. H. Danielson, Chief  
Materials and Processes Section

4/15/81

Inspection Summary

Inspection on March 30-31, and April 1-2, 1981 (Report Nos. 50-373/81-12;  
50-374/81-07)

Areas Inspected: Inspection of licensee audits of site contractors, procedures for hanger installation, implementation of IE Bulletin 79-14 requirements, S&L control of ECN's, and weld control for CRD system; review of licensee actions on previous identified noncompliance and unresolved items. The inspection involved a total of 24 inspector-hours onsite by one NRC inspector.

Results: No items of noncompliance or deviations were identified.

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## DETAILS

### Persons Contacted

#### Commonwealth Edison Company (CECO)

\*L. J. Burke, Site Project Superintendent  
\*T. E. Quaka, Site QA Superintendent  
\*B. J. McAndrew, PCD Mechanical Supervisor  
\*D. J. Skoza, PCD Engineer  
\*B. Annis, Project Engineer  
W. E. Reidy, QA Engineer  
R. A. Braun, QA Supervisor

#### Sargent and Lundy Engineers (S&L)

\*L. P. Dolder, QA Coordinator

#### Morrison Construction Company (MCCO)

M. Wherry, QC Supervisor  
\*D. J. Kanakares, QC Inspector

\*Denotes those attending the exit interview.

### Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (373/78-25-06; 374/78-16-05): Pipe clamps to be installed on GE recirculation loop pump suction and discharge elbows. This item was reviewed further during a followup inspection (RIII Reports 50-373/79-04; 50-374/79-01). The inspector reviewed the revised pipe clamp design shown on E-Systems, Inc. Drawings No. 152457, "Clamp Assembly 24.2" 50/50 Kip L.R. Mount Special Lug", dated March 14, 1979, and No. 152456, "Clamp Assembly 24.2" 50 Kip L.R. Mount Special Lug", dated March 14, 1979, and has no further questions at this time.

(Closed) Noncompliance (373/79-04-02; 374/79-01-02): Inadequate concrete expansion anchor installation and inspection procedures. See Paragraph 2 of this report.

(Closed) Unresolved Item (373/79-19-01; 374/79-13-01): Lack of CECo audit of S&L on pipe whip restraint design. An audit was performed on October 1, 1979, by CECO QA at S&L relative to the subject areas, and the audit identified the lack of S&L verification of design input. Subsequent CECO program audit of S&L for LaSalle, Byron, and Braidwood projects, conducted on February 27-29, and March 30, 1980 found S&L corrective action acceptable, and that S&L PI-LS-18, Review Procedure, was properly implemented.

(Open) Unresolved Item (373/79-19-02; 374/79-13-02): Lack of design documentation for GE purchased ITT-Grinnell suspension system components.

The support system for MS was purchased to ASME Section III Subsection NF requirements. The support system for RR was bought to MSS-SP-58 requirements. The inspector stated that the main issue was whether or not adequate design was provided for non-standard components, and auxiliary steel structures. The licensee indicated that followup inspection could be done at GE.

(Closed) Unresolved Item (373/80-04-01; 374/80-03-01): Basis of torque values used in installation and testing of concrete expansion anchor bolts. The inspector reviewed the S&L's explanation in a document, entitled "Rationale for Installation and Test Torques for Wedge Type Expansion Anchors Given in Tables 38-6, and 38-8 of LS-CEA," and has no further questions at this time.

(Closed) Noncompliance (373/80-04-02; 374/80-03-02): Design specifications and drawings did not list all the applicable ECN's, and ECN's were not incorporated in the design documents in a timely manner. The control measures were further reviewed, and are considered acceptable. See Paragraph 4 of this report.

(Closed) Noncompliance (373/80-12-01; 374/80-08-01): Lack of control for small bore piping suspension system design. Similar problems were identified in a followup inspection, see RIII Reports 373/80-32; 374/80-20, and resulted in the issuance of an Immediate Action Letter requiring licensee to initiate extensive corrective measures. Since then, followup inspections were conducted, and the licensee corrective actions are considered adequate.

(Closed) Unresolved Item (373/80-12-02; 374/80-08-02): The effect of drain pipe on top of CRD small bore hydraulic lines in the event of severe earthquake. The inspector reviewed a letter dated March 13, 1981, from S&L Project Director to CECO Manager, Project Engineering, subject: "Non-Seismic Piping Located Above Safety-Related Components"; and the enclosed S&L Report, No. EMD-4266-027-211, "Assessment of Non-Category I Piping for Protection of Safety-Related Components During Seismic and Pool Related Events", Rev. 0, dated January 14, 1981. The inspector stated he has no further questions at this time.

(Closed) Unresolved Item (373/80-12-03; 374/80-08-03): Excessive clearance was observed between pipe clamps on snubber installations. The inspector reviewed S&L drawing No. M-799, Sheet 36, Rev. B, dated December 8, 1980 including the requirements on shimming between back to back clamps, and considered the provision to be adequate.

(Closed) Unresolved Item (373/80-12-04; 374/80-08-04): Program provisions for re-inspection of all installed concrete anchor bolts. See Paragraph 2 of this report.

(Closed) Unresolved Item (373/80-12-05; 374/80-08-05): S&L verification of as-built piping configuration and component design in compliance with stress calculations. The inspector reviewed S&L Project Instruction, PI-LS-19, "Record Review of Piping and Supports Done by Analysis," Rev. 3, dated January 8, 1981, and has not further questions at this time.

(Closed) Unresolved Item (373/80-20-04; 374/80-13-04): The WPS did not cover ASME Code Case 1644 material. This item is resolved, see Paragraph 6 of this report.

(Closed) Noncompliance (373/80-32-01; 374/80-20-01): Lack of procedures for site small bore suspension component design. During a followup inspection in September, 1980, (RIII Reports 373/80-40; 374/80-26), the inspector reviewed the revised procedures including MCCO Procedure EC-7, "Small Bore Pipe Support - Restraint Section Guidelines and Instructions." Further review of Procedure EC-7, Rev. 0, dated August 1980 was performed by the inspector, and had no adverse comment. The inspector also reviewed MCCO Procedure PC-16, "Erection of Supports - Restraints and Final Installation Verification", Rev. 9, dated March, 1981, and had no adverse comment. The question raised in RIII Reports 373/80-40; 374/80-26 Paragraph 2.b.(5), relative to the interface between S&L and NSI, was closed in RIII Reports 373/81-02; 374/81-02.

(Closed) Noncompliance (373/80-32-02; 374/80-20-02): Lack of formal indoctrination and training program for the small bore pipe support designers. During a followup inspection in September, 1980 (RIII Reports 373/80-40; 374/80-26), the inspector reviewed several of the personnel training records. During this visit, the inspector reviewed CECO QA Surveillance Report No. 81-80, performed on February 6, 1981, and considered the resolution of the identified problem, i.e., training records not maintained to show personnel review of document changes, to be adequate.

(Closed) Noncompliance (373/80-32-03; 374/80-20-03): Inadequate document control on small bore design procedures. This item was reviewed further during a followup inspection in September, 1980 (RIII Reports 373/80-40; 374/80-26). The licensee corrective actions stated in CECO letter to RIII, dated September 26, 1980 were reviewed during this inspection. The four corrective action items identified in CECO QA Surveillance Report No. 80-433, performed on August 27, 1980 were reviewed by the inspector. The inspector has no further questions at this time.

(Open) Noncompliance (373/80-32-04; 374/80-20-04): Inadequate small bore hanger design considerations. In discussion with CECO site representative, the inspector was informed that the structural calculations are being performed at S&L home office in Chicago. The inspector stated that further review at S&L is planned.

(Closed) Noncompliance (373/80-32-05; 374/80-20-05): Licensee's program of planned QA audits and surveillance of site contractor activities was inadequate. During a followup inspection on September 24, 1980, (373/80-40; 374/80-26) the inspector reviewed some licensee audit reports including the findings and resolutions. Further review of licensee audits and surveillance of site contractors was carried out during this inspection, as documented in Paragraph 1 of this report.

(Closed) Unresolved Item (373/80-40-03; 374/80-26-03): Program to assure that no safety related small bore pipe restraints and hangers will be

installed prior to design calculations. The program measure was reviewed and documented in Paragraph 5 of this report.

(Open) Unresolved Item (373/80-40-04; 374/80-26-04): Questionable small bore hanger design calculations. In discussion with CECO representative, the inspector was informed that the small bore hanger calculations are being reviewed and approved at the S&L home office in Chicago. The inspector stated that further review at S&L is planned.

#### Functional or Program Areas Inspected

##### 1. Review of Licensee Audits of Site Contractors

In conjunction with RIII Report Nos. 373/80-40; 374/80-26, Paragraph 2.1, the inspector continued selective review of the following CECO audit and surveillance reports, and had no adverse comment:

###### a. Audit Reports:

- (1) No. 1-81-8, audit of NSC SAR 307 Group site small bore piping as system suspension design activities, audit performed on February 12, 1981.
- (2) No. 1-81-11, audit of S&L Field Component Support group, audit performed on February 19-23, 1981.
- (3) No. 1-81-20, audit of NSC field document control for small and large bore pipe support design calculations and reviews, audit performed on March 16-18, 1981.

###### b. Surveillance Reports:

- (1) No. 81-73, performed on February 6, 1981, on NSC site personnel training.
- (2) No. 81-72, performed on February 6, 1981, on S&L site personnel training.
- (3) No. 81-136, performed on February 26, 1981, on S&L control of field support change authorizations.
- (4) No. 81-143, performed on February 18, 1981, on NSC control of field information requests.
- (5) No. 81-145, performed on February 26, 1981, on NSC control of field support change authorizations.

No items of noncompliance or deviations were identified.



## 2. Installation of Concrete Expansion Anchor Bolts

The subject program provisions, in the areas of: (1) installation and inspection procedures, (2) re-inspection procedure for previously installed anchor bolts that were without adequate control measures, and (3) rework of rejected anchor bolts, were reviewed by the inspector. No adverse findings were identified as a result of the review. Documents reviewed included:

- a. MOCO Procedure, PC-42, "Expansion Anchor Control Program for the Installation of Concrete Expansion Anchors as Defined by the A.E. on Drawings and/or Project Specifications", Rev. 3, dated October, 1980.
- b. MOCO Form PC-117, attached in PC-42, "Traveler Package Checklist for the Installation of Concrete Expansion Anchors as Directed by the A.E. on Drawings and/or Project Specifications."
- c. MOCO Form PC-117A, attached in PC-42, "Retrofit Concrete Expansion Anchor Inspection of Anchors Installed to the Requirements of Specifications J-2530, Form LS-CEA, Rev. 5, dated December 10, 1979, and Morrison Standard Operating Procedure PC-42".
- d. MOCO Form PC-118, attached in PC-42, "Traveler Package Checklist for Replacement of Nonconforming Anchor Bolts Originally Installed as Directed by the A.E. on Drawing and/or Project Specifications."

Furthermore, the inspector reviewed the MOCO issued Nonconformity and Disposition Report No. 593, dated July 3, 1980, and closed on January 14, 1981, relative to the findings identified during MOCO QC inspections. The resolution of Report No. 593 was based on S&L Field Component Support Section review results through a letter dated October 22, 1980, entitled "Disposition of Site Contractor NCR Relative to Expansion Anchor Procedure LS-CEA." The inspector stated that he had no further questions at this time.

No items of noncompliance or deviations were identified.

## 3. Implementation of IE Bulletin 79-14

The inspector discussed the IE Bulletin 79-14 requirements with the licensee and S&L staff in March, 1980. Although the discussions were not documented in RIII Report Nos. 50-373/80-12; 50-374/80-08, problems related to the piping and component as-built evaluation against the piping stress analysis and component calculations were recorded in Paragraph 4 of the report. During this visit, the inspector reviewed:

- a. MOCO Procedure No. PC-43, "Final Line Walk Inspection and Verification of Specified Piping Systems, Supports and Restraints," Rev. 3, dated September, 1980. The procedure received final approval from S&L on February 2, 1981.

- b. S&L Project Instruction, PI-LS-19, "Record Review of Piping and Supports Done by Analysis," Rev. 3, dated January 8, 1981.

Subsequent to the review, the inspector stated that problems stated in RIII Report 50-373/80-12; 50-374/80-08 relative to the subject matter were considered resolved, and that the program to meet the IEB 79-14 requirements was considered adequate.

#### 4. Control of ECNs

The lack of control of ECNs was identified in RIII Report 50-373/80-04; 50-374/80-03. Specific problems discussed included design specifications and drawings that did not list all the applicable ECNs, and that ECNs had not been incorporated into the design document in a timely manner. The inspector reviewed the following documents initiated as a result of the corrective actions taken by the licensee and S&L:

- a. S&L Status of Project Specifications, Period Ending March 20, 1981, issued on April 1, 1981.
- b. CECO Site Quality Procedure LSQP No. 6-1, "Instruction for Site Design Document Receipt, Distribution, and Control," Rev. 2, dated November 15, 1980.
- c. CECO QA Surveillance Report No. 80-336, performed on June 17, 1980, including findings and followup actions.
- d. CECO QA Surveillance Report No. 80-674, performed on December 3, 1980, including the finding and its corrective action.

Subsequent to the review, the inspector stated that the program provision appeared to be sufficient, and that the QA surveillances to ensure program implementation were considered adequate and effective. The inspector stated that he had no further question in this area.

#### 5. Component Design Consideration

The program, established to ensure that no safety related restraints and hangers will be installed until the design of the components and the effects on the attaching structure have been determined, was reviewed by the inspector. The implementing work instructions and procedures reviewed by the inspector included:

- a. S&L Instruction PI-LS-22, "S&L Divisional Interfaces to Complete the Design of 2-Inch and Smaller Seismic Process and Seismic Instrumentation Piping", Rev. 3, dated September 3, 1980.
- b. MCCO Procedure EC-7, "Small Bore Piping Support Restraint Selection Guidelines and Instructions", Rev. 0, dated August, 1980.

- c. MOCO Procedure PC-16, "Erection of Support Restraints and Final Installation Verification", Rev. 9, dated March, 1981.

The design/selection of small bore pipe support and restraints was done by MOCO. The procedure requires S&L review and approval prior to the drawing release for fabrication and installation. Measures reviewed by the inspector appeared to be adequate.

6. WPS for Code Case 1644-9 Material

In review of the WPS for CRD restraints made of ASTM A570, Grade C, material at RCI in April, 1980 (RIII Report 50-373/80-20; 50-374/80-13), it was noted that the A570 material was accepted in ASME Code Case 1644 but was not listed as a P-1 material, and so the applicability of RCI WP-100 was questionable. In review of the ASME Code Case N-71-9, approved by Council on January 7, 1980, which superseded Code Case 1644, Rev. 9, Table 3 listed A-570-75 Grade C as a S-1 material.

In conjunction with provisions prescribed in Code Case N-71-9 Paragraph 3.0 Classifications, and Paragraph 4.0 Welding Qualifications, it was determined that WPS qualified for the use of P-1 materials can be used for welding of S-1 materials without requalification. This matter is considered resolved. In addition, the inspector reviewed the following revised RCI WPS for better clarification, and had no adverse comment.

- a. RCI-WP-100, "Mild Steel to Mild Steel for CRDHS Fabrication at Installation," Rev. 3, dated February 18, 1981.
- b. RCI-WP-200, "Stainless Steel to Mild Steel for CRDHS Fabrication and Installation," Rev. 4, dated February 18, 1981.
- c. RCI-WP-300, "Stainless Steel to Stainless Steel for CRDHS Fabrication and Installation," Rev. 3, dated February 18, 1981.
- d. RCI-WP-600, "Weld Repair Procedure for CRDHS Fabrication and Installation," Rev. 2, dated February 18, 1981.

Exit Interview

The inspector met with the licensee representatives (denoted under Persons Contacted) at the conclusion of the inspection on April 2, 1981. The inspector summarized the purpose and findings of the inspection. The licensee acknowledged the findings reported herein.