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June 9, 2000



Docket Nos.: 50-348  
50-364

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555 - 0001

Joseph M. Farley Nuclear Plant  
Final Safety Analysis Report  
Quality Assurance Program Change  
NCIG-01 Rev. 2 "Visual Weld Acceptance Criteria for Structural Welding at Nuclear Power Plants"

Ladies and Gentlemen:

Pursuant to 10 CFR 50.54(a)(3), this submittal identifies proposed changes to the Quality Assurance Program (QAP) described in the Farley Nuclear Plant (FNP) FNP Updated Final Safety Analysis Report (UFSAR) Chapter 17 and Chapter 3. Attachment 1 provides the 10 CFR 50.54(a)(3) QAP Change Evaluation. Proposed changes to Chapter 3 and 17 are provided for your review and approval in Attachment 2. Upon approval, these changes will be incorporated into the appropriate UFSAR revision.

NRC letter from J. P. Knight to D. E. Dutton dated June 26, 1985 documented NRC concurrence with the use of NCIG-01 Revision 2 document prepared by the Nuclear Construction Issues Group for visual inspection on non-ASME class structural weldments. Accordingly, FNP proposes to apply this document for structural weld inspections.

This issue was discussed on May 5, 2000 with Mr. Steve Cahill of Region II, Mr. Mark Padovan of NRR, and Mr. Mark Ajluni, FNP Licensing Manager. During this conference, FNP agreed to submit a QAP change.

In accordance with 10 CFR 50.54(a)(3), if no comments on these changes are received within 60 days, FNP will regard these changes as accepted by the commission and commence revision of the appropriate documents.

This letter contains no NRC commitments. If there are any questions, please advise.

Respectfully submitted,

Dave Morey

CHM/maf: Letter QAP.doc

Attachments

Attachment 1  
Attachment 2

Quality Assurance Program Changes Evaluation  
UFSAR Mark-Up Pages

Q004

Page 2

U. S. Nuclear Regulatory Commission

cc: Southern Nuclear Operating Company  
Mr. L. M. Stinson, General Manager – Farley

U. S. Nuclear Regulatory Commission, Washington, D. C.  
Mr. L. M. Padovan, Licensing Project Manager – Farley

U. S. Nuclear Regulatory Commission, Region II  
Mr. L. A. Reyes, Regional Administrator  
Mr. T. P. Johnson, Senior Resident Inspector – Farley

**Attachment 1**

**Quality Assurance Program Changes Evaluation  
10 CFR 50.54(a)(3)**

## Attachment 1

### Quality Assurance Program Changes Evaluation 10 CFR 50.54(a)(3)

#### Affected Pages

UFSAR pages 3.8-4, 3.8-60 and 17.2-24

#### Description of the Change

UFSAR section 17.2 on page 17.2-24 states, "Inspection requirements for modifications or maintenance will include the original inspection requirements or equivalent alternatives, to the extent that the original requirements can be determined from available documents." Per UFSAR section 3.8, weld inspections are currently performed to AWS D1.1-86. In NRC letter to Mr. Douglas E. Dutton, dated June 26, 1985, the NRC stated that NCIG-01, Rev 2 represents a technically acceptable approach for visual inspection of structural weldments of nuclear power plants that are under the purview of AWS D1.1. Since the requirements of NCIG-01 are not the original inspection requirements and are not an equivalent alternative, a change to the QAP is required in order to perform inspections per NCIG-01. UFSAR section 17.2 is revised to state, "...or equivalent alternatives (to the extent that the original requirements can be determined from available documents), or other criteria approved by the NRC for FNP." The list of Applicable Codes, Standards and Specifications in UFSAR section 3.8 is revised to include NCIG-01, Rev. 2.

#### Reason for the Change

FNP currently uses AWS D1.1 when performing visual weld inspections. NCIG-01 represents a technically acceptable approach for visual inspection of structural weldments. NCIG-01 requirements are less stringent than AWS D1.1 and thus are a slight reduction in commitment and therefore requires a change to the QAP.

#### Bases for the Acceptability of the Change

The deviations from AWS D1.1 as proposed in NCIG-01 are relatively insignificant in that the redundancy of these structures and their individual welds, and the conservative design practices used, allow non-ASME Code structural steel weldments to use alternative criteria as provided in Criterion II of 10 CFR Part 50, Appendix B. The bases is documented in the following NRC safety evaluations:

- NRC letter from Ernest D. Sylvester to Mr. E. E. Utley, dated June 4, 1986, Visual Weld Acceptance Criteria, Brunswick Steam Electric Plant, Units 1 and 2.
- NRC letter from B. J. Youngblood to Mr. Dennis L. Farrar, dated October 7, 1985, Visual Weld Inspections Requirements, Byron Station Units 1 and 2, and Braidwood Station Units 1 and 2.

**Attachment 2**

**UFSAR Mark-Up Pages**

## FNP-FSAR-3

- |     |             |  |
|-----|-------------|--|
| 8.  | ACI 605-59  | "Recommended Practice for Hot Weather Concreting".   |
| 9.  | ACI 613-54  | "Recommended Practice for Selecting Proportions for Concrete".   |
| 10. | ACI 614-59  | "Recommended Practices for Measuring, Mixing, and Placing Concrete".   |
| 11. | AISC        | <u>Manual of Steel Construction</u> , 1969 Edition.  |
| 12. | AWS D2.0-69 | "Specifications for Welded Highway and Railway Bridges".   |
| 13. | ASME        | "Boiler and Pressure Vessel Code", Sections III, VIII, and IX - 1968 Edition.                                  |
| 14. | ICBO        | "Uniform Building Code" - 1970 Edition.  |
| 15. | SBCC        | "Southern Standard Building Code" - 1969 Edition.  |
| 16. | CFR         | <u>Federal Register</u> , Title 29, Part 1910, Department of Labor, Occupational Safety, and Health Standards. |
| 17. | CFR         | <u>Code of Federal Regulations</u> , Title 10, Part 100, Appendix A, Part 50.                                  |
| 18. | AWS D1.1-86 | "Structural Welding Code - Steel".   |

Standards

- |    |     |   |
|----|-----|---|
| 1. | ACI | <u>Manual of Concrete Inspection</u> - sp 2 |
|----|-----|---|

Specifications

- |    |      |  |
|----|------|--|
| 1. | CMAA | "Specifications for Electric Overhead Traveling Cranes" - No. 70 - 1970 Edition. |
| 2. | ASTM | The specifications utilized are identified in the applicable sections.           |

Design Criteria

- |    |      |  |
|----|------|--|
| 1. | ASCE | "Wind Forces on Structures", Paper No. 3269. |
|----|------|--|

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ACI 613-54 "Recommended Practice for Selecting Proportions for Concrete."

ACI 614-59 "Recommended Practice for Measuring, Mixing, and Placing Concrete."

AISC Manual of Steel Construction, 1963 and 1969 Editions.

AWS D1.1-86 Structural Welding Code - Steel.

AWS D2.0-69 Specifications for Welded Highway and Railway Bridges.

ICBO Uniform Building Code, 1970 Edition.

SBCC Southern Standard Building Code, 1969 Edition.

CFR Code of Federal Regulations, Title 29, Chapter XVII, "Occupational Safety and Health Standards."

Specifications

CMAA Specifications for Electric Overhead Traveling Crane - No. 70, 1970 Edition.

ASTM The specifications used are identified in the applicable subsections.

Design Criteria

ASCE "Wind Forces on Structures," Paper No. 3269.

AEC "Nuclear Reactor and Earthquake" - Publication TID 7024.

NRC Regulatory Guides

Regulatory Guide No. 1.10 "Mechanical (Cadmold) Splices in Reinforcing Bars of Concrete Containments."

Regulatory Guide No. 1.13 "Fuel Storage Facility Design Basis."

Regulatory Guide No. 1.15 "Testing of Reinforcing Bars for Concrete Structures."

Regulatory Guide No. 1.28 "Quality Assurance Program Requirements - Design and Construction."

Regulatory Guide No. 1.29 "Seismic Design Classification."

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8. ACI 605-59 "Recommended Practice for Hot Weather Concreting".
9. ACI 613-54 "Recommended Practice for Selecting Proportions for Concrete".
10. ACI 614-59 "Recommended Practices for Measuring, Mixing, and Placing Concrete".
11. AISC Manual of Steel Construction, 1969 Edition.
12. AWS D2.0-69 "Specifications for Welded Highway and Railway Bridges".
13. ASME "Boiler and Pressure Vessel Code", Sections III, VIII, and IX - 1968 Edition.
14. ICBO "Uniform Building Code" - 1970 Edition.
15. SBCC "Southern Standard Building Code" - 1969 Edition.
16. CFR Federal Register, Title 29, Part 1910, Department of Labor, Occupational Safety, and Health Standards.
17. CFR Code of Federal Regulations, Title 10, Part 100, Appendix A, Part 50.
18. AWS D1.1-86 "Structural Welding Code - Steel".
19. NCIG-01 Rev. 2 "Visual Weld Acceptance Criteria for Structural Welding at Nuclear Power Plants" - EPRI NP-5380

Standards

1. ACI Manual of Concrete Inspection - sp 2

Specifications

1. CMAA "Specifications for Electric Overhead Traveling Cranes" - No. 70 - 1970 Edition.
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Design Criteria

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AWS D2.0-69	<u>Specifications for Welded Highway and Railway Bridges.</u>
NCIG-01 Rev. 2	"Visual Weld Acceptance Criteria for Structural Welding at Nuclear Power Plants" - EPRI NP-5380
ICBO	<u>Uniform Building Code</u> , 1970 Edition.
SBCC	<u>Southern Standard Building Code</u> , 1969 Edition.
CFR	Code of Federal Regulations, Title 29, Chapter XVII, " <u>Occupational Safety and Health Standards.</u> "

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Regulatory Guide No. 1.28	"Quality Assurance Program Requirements - Design and Construction."
Regulatory Guide No. 1.29	"Seismic Design Classification."

FNP-FSAR-17

The nuclear plant general manager shall also assign centralized responsibility for certifying inspectors for specified types of inspection activities based upon either being licensed or meeting requirements of ANSI N45.2.6-1978. The person designated shall also review assignment of inspectors to ensure the independence of inspection.

The general manager nuclear plant will assign responsibility for procurement, document reviews, and cross-disciplinary reviews of inspection procedures for fulfillment of QA requirements.

The following categories of inspections will be provided:

A. Inspection of Operations Activities

Inspection of operations activities will be performed by a qualified inspector who will be someone other than the person who performed the activity. Personnel holding reactor operator or senior reactor operator licenses constitute qualified inspectors for these activities.

B. Inspection of Maintenance/Modification Activities

Inspection requirements for modifications or maintenance will include the original inspection requirements or equivalent alternatives, to the extent that the original requirements can be determined from available documents. General items of importance will include visual examinations to determine material and assembly integrity, cleanliness, verification of critical dimensions, housekeeping safety, environmental conditions, compliance with work procedures, use of proper tools, use of calibrated tools and instruments, tagging measures, and adequacy of identification and documentation.

Inspectors may be selected from the appropriate departmental organizations or from contractor personnel but shall be independent of the work activity being inspected.

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