Part C. Rossi
Part 3-6
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DEC 16 1980

MEMORANDUM FOR: George W. Knighton, Chief, Research & Standards Coordination Branch, Division of Safety Technology

THRU: R. M. Satterfield, Chief, Instrumentation and Control Systems Branch, Division of Systems Integration

FROM: C. E. Rossi, Instrumentation and Control Systems Branch, Division of Systems Integration

SUBJECT: PROPOSED AMENDMENT TO 10 CFR PART 50 APPENDIX A TO CLARIFY THE QUALITY ASSURANCE PROGRAM REQUIREMENTS

The Instrumentation and Control Systems Branch has reviewed the proposed Amendment and "Supplementary Information" intended to clarify the quality assurance program requirements of 10 CFR Part 50 and has the following comments:

1) The proposed amendment is not sufficient to clarify the intended relationship between the quality assurance program specified in Criterion 1 of the General Design Criteria and the requirements established in Appendix B to 10 CFR Part 50. In fact, the proposed amendment could even make the situation more confusing. The "Introduction" to Appendix B includes the following words:

"Nuclear power plants and fuel reprocessing plants include structures, systems, and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. This appendix establishes quality assurance requirements for the design, construction, and operation of those (emphasis added) structures, systems, and components."

The proposed amendment will modify Criterion 1 of Appendix A to read:

"A quality assurance program in accordance with the criteria of Appendix B to 10 CFR Part 50 shall be established and implemented ..."

Without changing words in Appendix B, the modified wording of Appendix A could conceivably be interpreted to limit Criterion 1 of Appendix A to only those "structures, systems, and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public." It is suggested that the amendment also modify the "Introduction" to Appendix B. The words "include structures, systems, and components that prevent or

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mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public" should be replaced by "include structures, systems, and components important to safety; that is, structures, systems, and components that provide reasonable assurance that the facility can be operated without undue risk to the health and safety of the public".

2) Additional words should be added to Appendix B to unequivocally indicate that a graded approach to quality assurance for "structures, systems, and components important to safety" is intended. Words similar to the following should be included somewhere in the "Introduction" to Appendix B:

"It is recognized that some structures, systems, and components are more important to safety than others and, therefore, that it is not appropriate for all structures, systems, and components important to safety to have the same quality assurance measures applied. The extent of quality assurance requirements to be applied to specific structures, systems and components should reflect the level of importance to safety of those structures, systems and components. For example, the most extensive quality assurance requirements would be applied to structures, systems, and components necessary to assure:

(1) The integrity of the reactor coolant pressure boundary.

(2) The capability to shut down the reactor and maintain it in a safe shutdown condition, or

(3) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the guidline exposures of 10 CFR Part 100".

3) The examples given in the letter for the Commissioners and the "Supplementary Information" of structures, systems, and components for which the Appendix B quality assurance program criteria may not have been fully implemented are not particularly good examples. A better list of examples can be obtained from Draft 3 of IEEE p 827, "Criteria for Determining Requirements for Systems Important to Safety." The examples (with some minor word changes) could include:

(1) Systems used to monitor plant variables to ensure that operation is within the initial conditions assumed for design basis events.

(2) Systems used to indicate or verify the state of readiness or status of systems used to mitigate the consequences of accidents.

(3) Systems that could fail in a way to directly cause a demand for automatic operation of systems used to mitigate the consequences of accidents.

4) Systems for accident monitoring.

Examples from IEEE P827 are based upon at least some input from industry.

C. E. Rossi
Instrumentation & Control Systems Branch
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cc: E. Wenzinger
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 7 1981

MEMORANDUM FOR: Karl R. Goller, Director, Division of Facility Operations
Office of Nuclear Regulatory Research

FROM: Victor Stello, Jr., Director
Office of Inspection and Enforcement

SUBJECT: CLARIFICATION OF RELATIONSHIP BETWEEN 10 CFR PART 50 APPENDIX A, "GENERAL DESIGN CRITERIA FOR NUCLEAR POWER PLANTS," AND APPENDIX B, "QUALITY ASSURANCE CRITERIA FOR NUCLEAR POWER PLANTS AND FUEL REPROCESSING PLANTS."

This is in response to your July 15, 1981 memorandum on the subject Commission Paper.

We concur in the rule as proposed with the provision that certain changes be made in the paper to be presented to the Commission. The matters which need to be addressed more clearly in the paper are:

1. To clarify the importance of the proposed Task 1F, NUREG-0660 guidance in attaining the objective of the proposed rulemaking, add the following as the last paragraph of the discussion part of the paper:

   DONE TAYLOR MOSELEY COMMENT

   This rule is ~~only~~ a ~~first step and a major~~ portion of the NRC effort to change the scope and extent of quality assurance applied at nuclear power plants. The action to provide the guidance to change the scope and extent is described in Task 1F, NUREG-0660, "NRC Action Plan Developed As A Result Of The TMI-2 Accident" and is scheduled for completion late in 1983.

2. Under 1.3.3 of Enclosure B, Value/Impact Assessment, the impact of the proposed rulemaking to industry is stated as having "the potential for increased quality assurance requirements being applied." Although the direct impact of this document is minimal, the impact of subsequent NRC actions is understated. We therefore recommend 1.3.3 of Enclosure B be revised to include the underlined additions, as noted below:

   OK

   DONE

   "The extent . . . will be increased with the ~~likelihood~~ potential for increased quality assurance requirements being applied to additional items important to safety."

CONTACT: M. W. Peranich, IE
49-24853

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3. Until the NRC effort and guidance discussed in 1 above is provided, this Office believes that the licensee and inspector efforts necessary to assure compliance with the new rule will be quite limited. We therefore recommend 1.3.1 of the Enclosure B Value Impact Assessment be revised to include the underlined addition to the assessment of impact, as noted below:

"The proposed action will represent . . ." The impact will be limited until the guidance on the change in scope and extent of quality assurance requirements becomes available.

4. Enclosure A, Supplementary Information, last sentence on page 4 states "It is not proposed that quality assurance requirements for activities already completed be upgraded in accordance with the proposed action."

Additional discussion should be included on how the rule is to be applied to activities in plants in various stages of construction. An example would be where the design and procurement for an additional item to be covered by quality assurance is completed and the fabrication or installation has not started or is partially completed. Also, we recommend that the licensee be allowed a reasonable period to establish the specific quality assurance requirements to be implemented for the additional items to be covered under the licensee's QA program.

Since a combined engineering and quality assurance effort is needed to develop the guidance discussed in 1 above, we recommend that a special NRC task group of individuals expert in the review of plant structures, systems, and components and quality assurance be established. We will provide IE assistance as appropriate.

Victor Stello, Jr.
Director
Office of Inspection
and Enforcement

cc: R. B. Minogue, RES
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Part 3-6

CHANGES
RESULTING FROM
IE, OPA

Bill –

I think inserts ① & ② belong in ✓ supplementary info section of Fed. Reg. Notice (Encl A) p. 4 – otherwise OK

S

S. Richardson
working copy
including Cawley's comments.
I&E Comments of 8-7-81
marked w/ clips.

Part 3-7

Note: Controlled by SD-584-76 to Arlotto

Malhoan — The most import value assessment should reassess whether we should proceed further in the effort. UMH 4/1

UNITED STATES
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G. A. Arlotto, Director of Engineering Standards, SD

PROPOSED REGULATORY GUIDE, "NUCLEAR POWER PLANT STRUCTURES, SYSTEMS, COMPONENTS AND ACTIVITIES SUBJECT TO A QUALITY ASSURANCE PROGRAM"

Enclosed for your review and processing is a revised draft of the previously proposed Regulatory Guide 1.XYZ, in response to the Interoffice QA Task Force Item No. 11, "Delineation of Activities Which Come Under the Quality Assurance Requirements of Appendix B to 10 CFR Part 50."

The draft includes the comments forwarded by the Offices of Standards Development and Inspection and Enforcement. This guide should be considered for issuance as a new regulatory guide.

We believe that the guide is complete and technically correct with respect to substance. We have not drafted an implementation section of the guide since we feel that SD could better do this in light of current management guidance.

Please provide any questions on this guide to Fred Liederbach or Alfred Garland. Mr. Liederbach should be identified as the PM representative on the task matrix in the Green Book.

Donald J. Skovholt, Assistant Director
for Quality Assurance & Operations
Division of Project Management

Enclosure:
As stated

cc: w/ enclosure
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Examine 1.29 as to adequacy

Development of selection criteria.

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