UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 17, 1994

MEMORANDUM FOR: Charles E. Rossi, Director
Division of Reactor Inspection
and Licensee Performance, NRR

FROM: Gary G. Zech, Chief
Performance and Quality Evaluation Branch
Division of Reactor Inspection
and Licensee Performance, NRR

SUBJECT: SUMMARY OF MEETING WITH NUMARC ON FEBRUARY 3, 1994

On February 3, 1994 a meeting was held with Nuclear Utilities Management and Resources Council (NUMARC) representatives to discuss the results of the recent NUMARC Regulatory Threshold and Appendix B Working Group's review of the graded quality assurance (QA) task, and to evaluate the feasibility of the proposed schedule for pilot-testing a graded QA program.

NUMARC representatives presented their conceptual approach for implementing graded-performance based QA programs at operating nuclear power stations emphasizing that selected aspects of the guidance contained in NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants", provides the necessary foundation for their development of a graded approach towards QA. They added that approximately 16 utilities had expressed interest in participating in the pilot plant program and that the selection process would include the plant vintage and Nuclear Steam Supply System (NSSS) designs of the prospective candidates in order to obtain a representative sample of the plant population.

NUMARC's proposal includes a challenging schedule for the development and implementation of the graded QA concept. The staff noted that the schedule did not appear to allow sufficient time for NRC review of the pilot methodology. The staff stated that prior to the pilot program initiation, that the following aspects would need to be evaluated: the scope of safety-related low-risk equipment that would be treated under the graded approach, the differences that would exist between the graded QA approach and the current QA program, and the functional areas (i.e. procurement) would be treated in a graded manner. The staff reiterated that the graded QA implementation and the maintenance rule implementation efforts should occur in parallel to take advantage of the common facets.

During NUMARC's presentation the staff provided clarification on certain issues that have remained unresolved since the initial meeting on December 16, 1993, such as the QA treatment to be given to safety-related, low-risk structures, systems and components (SSCs).

Subsequent discussions focused on perceived differences between the approach envisioned by the NRC staff and that advocated by NUMARC. Although a

OFC
OM-7-NUMARC
X-OM-6-MEETINGS
GENERAL

040076

003014

9402280254 XA 3/8

definitive resolution to issues involving scope and implementation was not achieved, a general consensus was reached that the approach espoused by the staff is not fundamentally dissimilar from that envisioned by NUMARC.

The staff outlined its conceptual approach for the graded application of QA principles and emphasized the importance of the expert panel process, as outlined in NUMARC 93-01, in establishing deterministic risk significant criteria for SSCs in view of the evident limitations of Probabilistic Risk Assessment (PRA) analyses.

The staff expressed the opinion that representatives of the respective steering committees in NUMARC and the NRC should meet in the near future in order to give them the opportunity to assess progress to date.

NUMARC noted that the NRC meeting minutes issued on December 23, 1993 indicated that ISO 9000 was being considered by NUMARC as forming a basis for a common Qualified Suppliers List. NUMARC stated that is no longer their intent.

The meeting adjourned with both the staff and NUMARC agreeing to reconvene on February 17, 1994, to discuss proposals related to the implementation of the pilot plant programs.

Enclosure 1 is a list of the meeting attendees and Enclosures 2 and 3 are the material presented by NUMARC and the NRC staff, respectively, during the meeting. The information contained in Enclosure 4 was not presented at the meeting but was developed subsequently by the NRC staff to depict what would constitute an acceptable approach to graded QA based on the recent discussions with NUMARC.

ORIGINAL SIGNED BY
GARY G. ZECH

Gary G. Zech, Chief
Performance and Quality Evaluation Branch
Division of Reactor Inspection
and Licensee Performance, NRR

cc w/enclosures:
Nuclear Management and Resources Council
Attn: Alex Marion
1776 Eye Street NW
Suite 300
Washington, DC 20006-3706

Enclosures:
1. List of Attendees
2. NUMARC presentation material
3. NRC presentation material
4. NRC Graded Approach to Quality Assurance

OFC	SEND	RPEB:DRIL:NRR	RPEB:DRIL:NRR	SC:RPEB:DRIL:NRR	SC:RPEB:DRIL:NRR	BC:RPEB:DRIL:NRR
NAME	TO	JPeralta for	RLatta	RPCorriea	RAGramm	GZech
DATE	PDR?	2/15/94	2/15/94	2/15/94	2/15/94	2/16/94
COPY?	Yes No	Yes No	Yes No	Yes No	Yes No	Yes No

OFFICIAL RECORD COPY DOCUMENT NAME: S:\RPEB\DOCS\SECTION.QA\NUMARC2.3

DISTRIBUTION:

Central Files/PDR	JMilhoan, 17G21	TMurley, 12 G18
WTRussell, 12 G18	WBateman, 17 G21	NRC Meeting Attendees
MModes, RGN-I	CCasto, RGN-II	BBurgess, RGN-III
LConstable, RGN-IV	WAng, RGN-V	EJordan, 3701
AThadani, 12 G18	RZimmerman, 9 A2	JRoe, 12 G18
GHolahan, 9112	MDey, NLS314	TGody, 12 E4
RPEB R/F	DRIL R/F	

Meeting Attendance List

February 3, 1994 Meeting with NUMARC to discuss issues related to the graded implementation of 10 CFR 50 Appendix B

NAME	ORGANIZATION	TELEPHONE
Bob Gramm	NRR/DRIL	(301) 504-1010
Gil Millman	NRC/RES/DE/	(301) 492-3848
Jim Perry	NUMARC	(202) 872-1280
Adrian Heymer	NUMARC	(202) 872-1280
Alex Marion	NUMARC	(202) 872-1280
Tony Pietrangelo	NUMARC	(202) 872-1280
Richard Correia	NRR/DRIL/RPEB	(301) 504-1009
Robert M. Latta	NRR/DRIL/RPEB	(301) 504-1023
Ernie Rossi	NRC/DRIL	(301) 504-2903
Gary G. Zech	NRC/DRIL	(301) 504-1017
Juan Peralta	NRR/DRIL	(301) 504-1052
Owen Gormley	NRR/RES/DE/ESS	(301) 492-3872
Harvey Spiro	OPP/NRC	(301) 504-2559
Theresa Sutter	Bechtel/SERCH	(301) 417-8818
Roger Huston	TVA	(301) 770-6790
Claudia Craig	NRR	(301) 504-1281
Eric Leeds	NRC	(301) 504-1133
Charles Petrone	NRR/DRIL/RPEB	(301) 504-1027
Mark Lombard	MDM Engineering Corp.	(301) 921-5985
James W. Johnson	NRR/SPSB	(301) 504-1093
Hans Renner	NUS Corp.	(301) 258-8693
Tom Foley	NRC/NRR/RPEB	(301) 504-1036

NRC - NUMARC MEETING

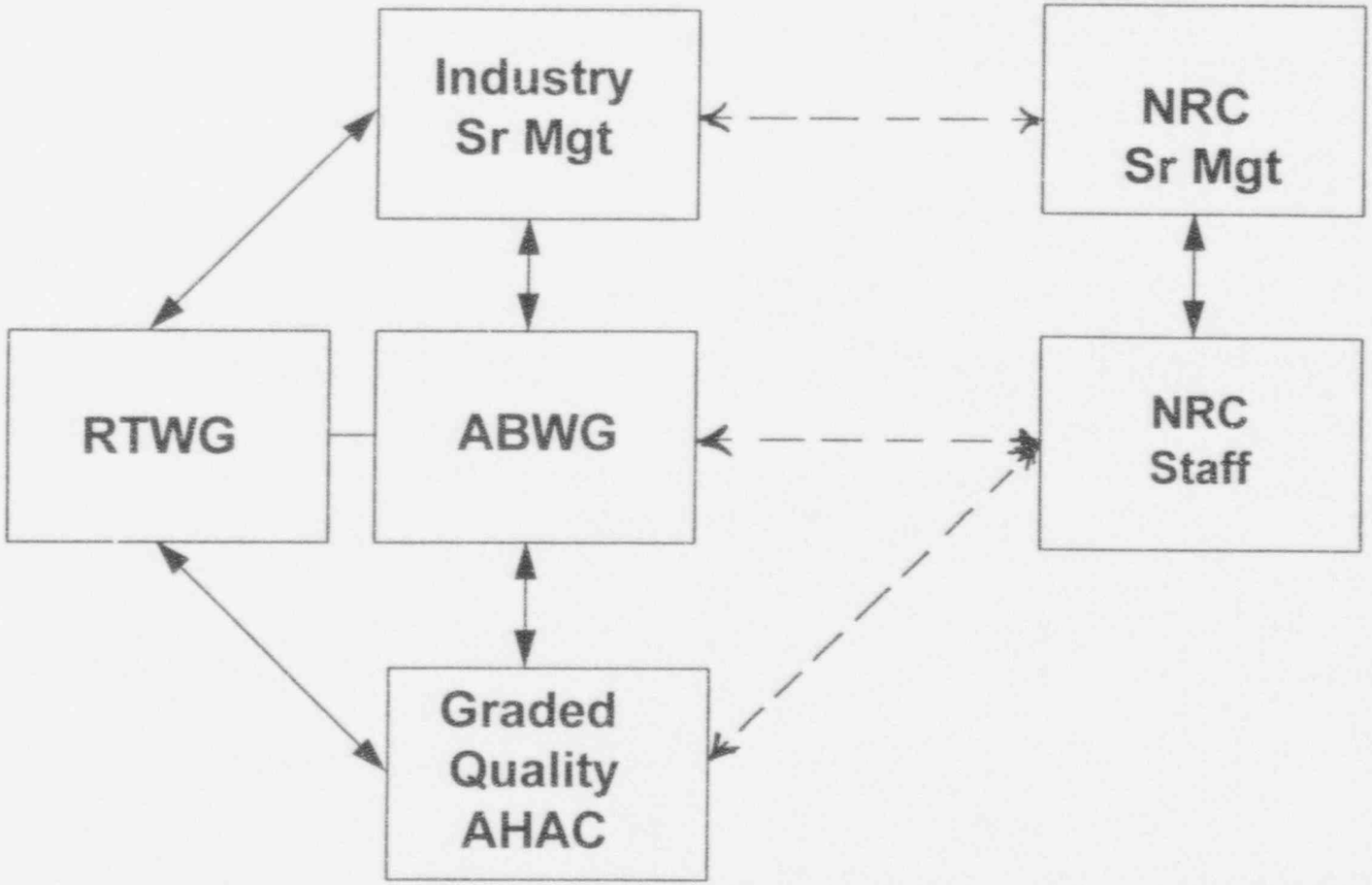
GRADED APPROACH TO IMPLEMENTING QUALITY

Thursday, February 3, 1994

Enclosure 2

PROJECT INTERFACES

DRAFT



GRADED APPROACH TO IMPLEMENTING QUALITY
Industry Briefings

- NUMARC Executive Committee
- NUMARC Issues Management Committee
  - 20+ Senior Industry Executives
- NUMARC Regulatory Threshold Working Group
- NUMARC Appendix B Working Group
- NUMARC - ASQC Meeting
- Briefings set for February/March 1994
  - NUMARC Board of Directors
  - EEI QA Subcommittee
  - Codes & Standards organizations as opportunity permits

GRADED - PERFORMANCE BASED APPROACH TO IMPLEMENTING QUALITY PROGRAMS

- General movement towards performance based regulatory regime
  - Improved effectiveness & efficiency
- Graded approach to quality programs permitted by regulation
  - Performance-based regime permitted by SRP 17.3
- Improved allocation of resources
  - Emphasis on safety/risk significance
- Assist management in focusing on safety/risk significant structures/systems/components & processes based on performance /results

PILOT PLANT CANDIDATES

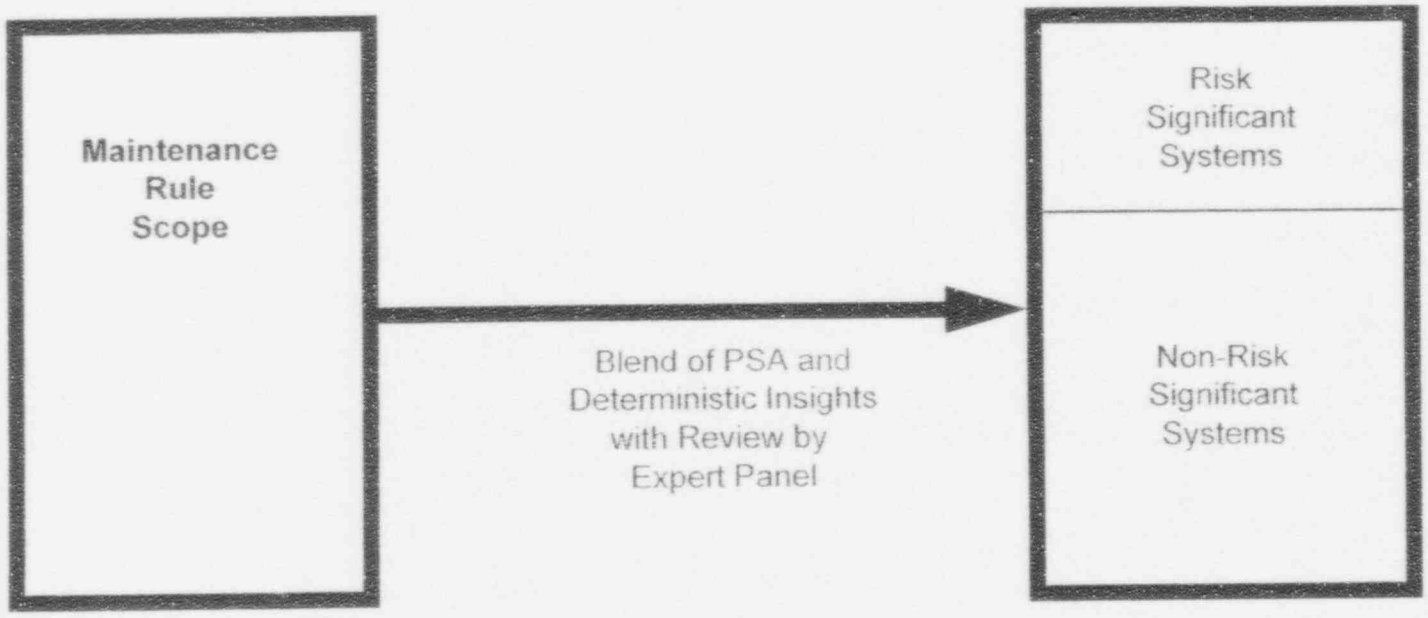
- Utility - NUMARC discussions 16 Utilities
- Executive interaction
  - Arizona Public Service
  - Northern States Power Company - Monticello
  - Baltimore Gas & Electric
  - Entergy
    - » Grand Gulf
    - » Arkansas Nuclear One (ABB-CE unit)
  - Commonwealth Edison - Byron
  - Virginia Power
  - Pacific Gas & Electric
  - Wisconsin Electric Power Company
  - Florida Power Corporation

PILOT PLANT CANDIDATES

- Criteria
  - Volunteer
  - Past/current experience with graded approach to implementing quality
  - Regulatory standing
  - IPE/Maintenance Rule implementation status
  - Procurement initiative experience
  - Active member of ABWG/RTWG
  - Executive level discussions
  - Availability of resources
- Plant mix
  - Mature and contemporary operating license
  - Various NSSS designs
  - Large/small plants

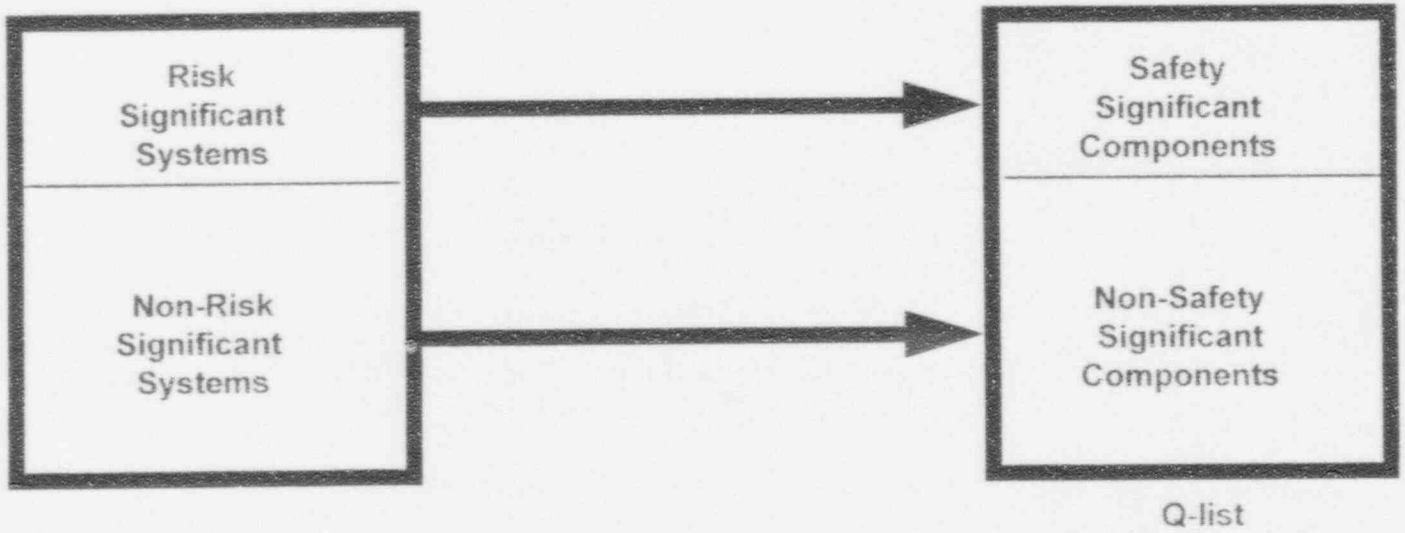
RESTRUCTURING THE Q-LIST

- Start with NUMARC 93-01 to identify risk-significant systems
  - include non-MPFF SSCs



RESTRUCTURING THE Q-LIST DRAFT

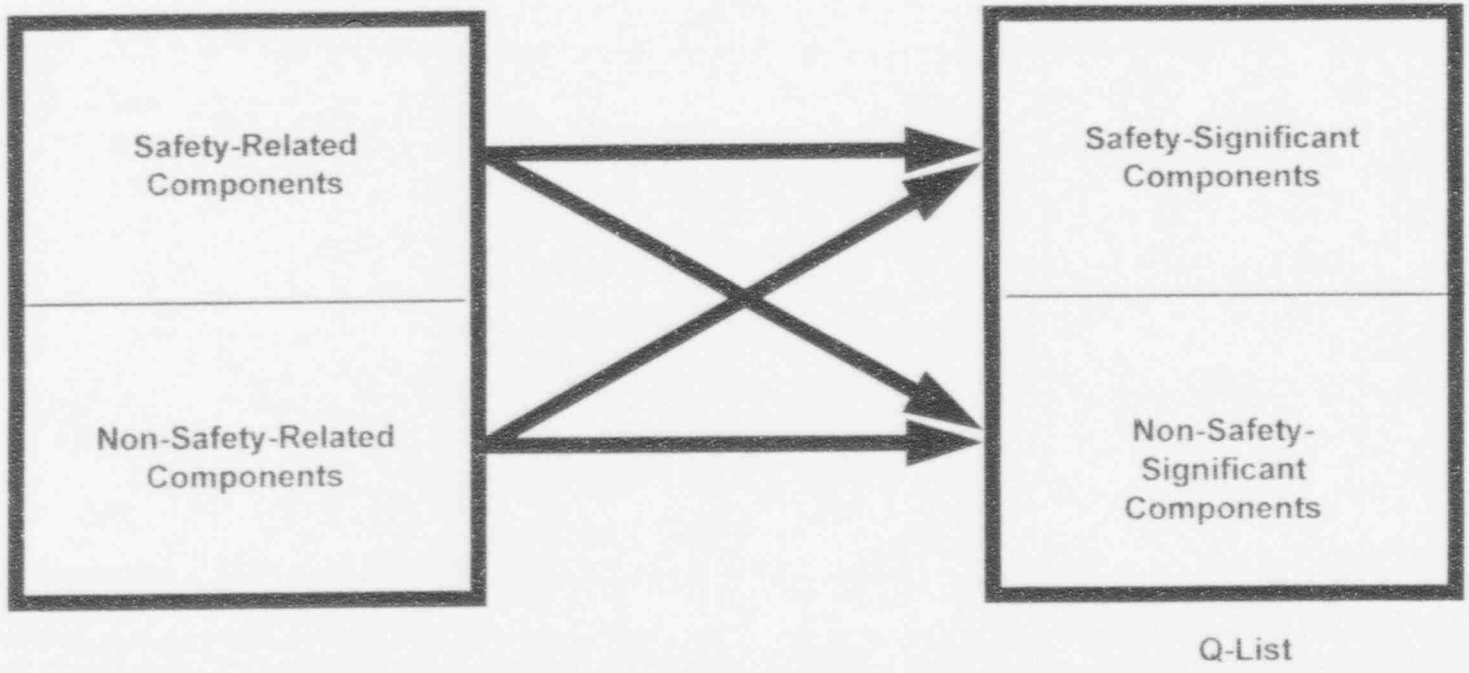
- Option 1
  - assign all components in risk-significant systems to safety-significant category of Q-list
  - assign all components in non-risk-significant systems to non-safety-significant category of Q-list



RESTRUCTURING THE Q-LIST

DRAFT

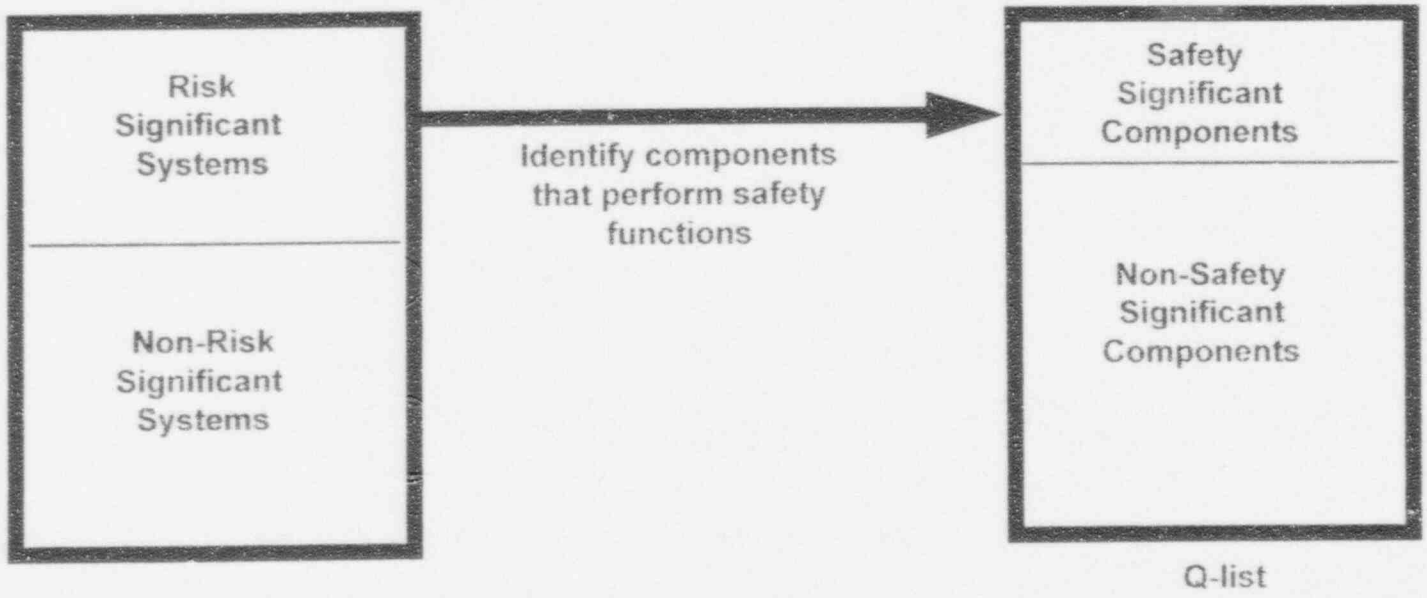
- Concern over classification of components
  - potential for confusion in industry and NRC
  - how should we address?



RESTRUCTURING THE Q-LIST

DRAFT

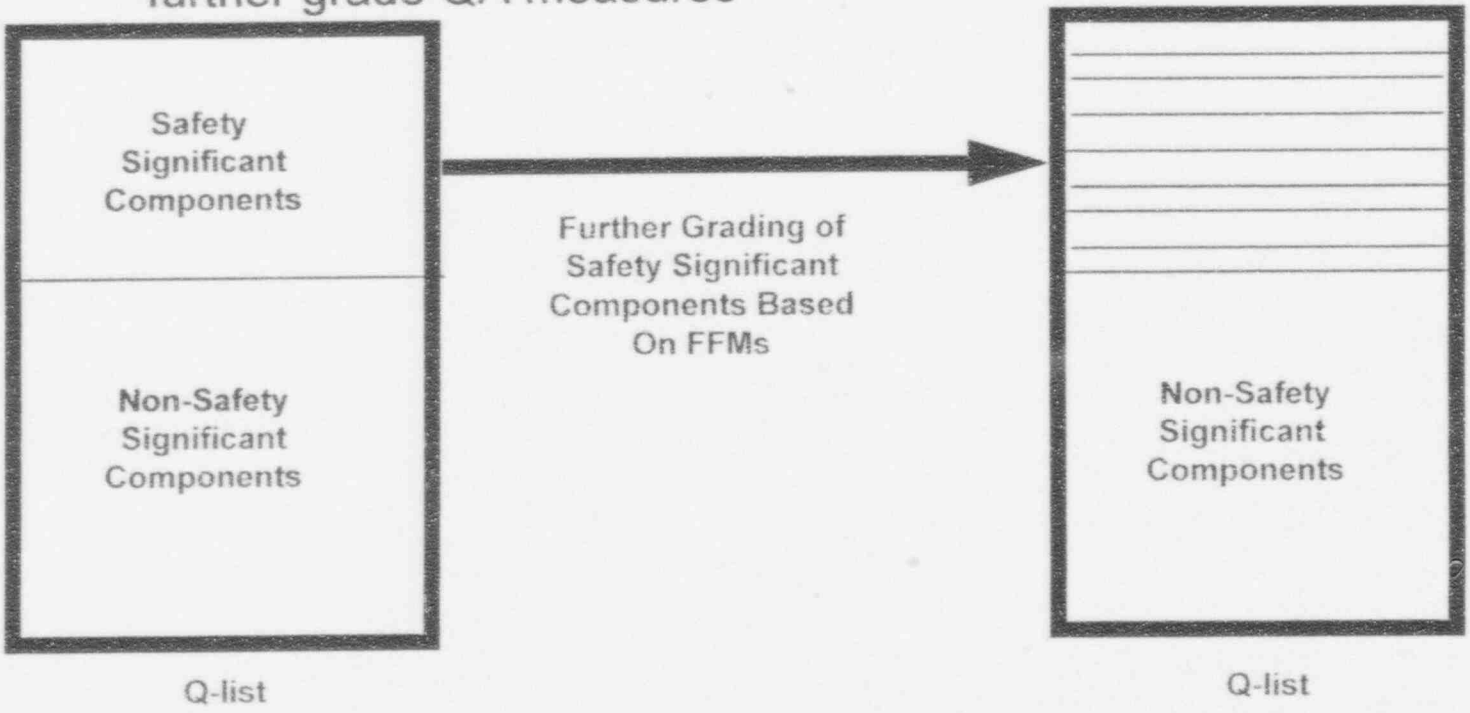
- Option 2
  - review risk-significant systems and identify components that perform safety functions
  - assign components that do not perform safety functions to non-safety-significant category



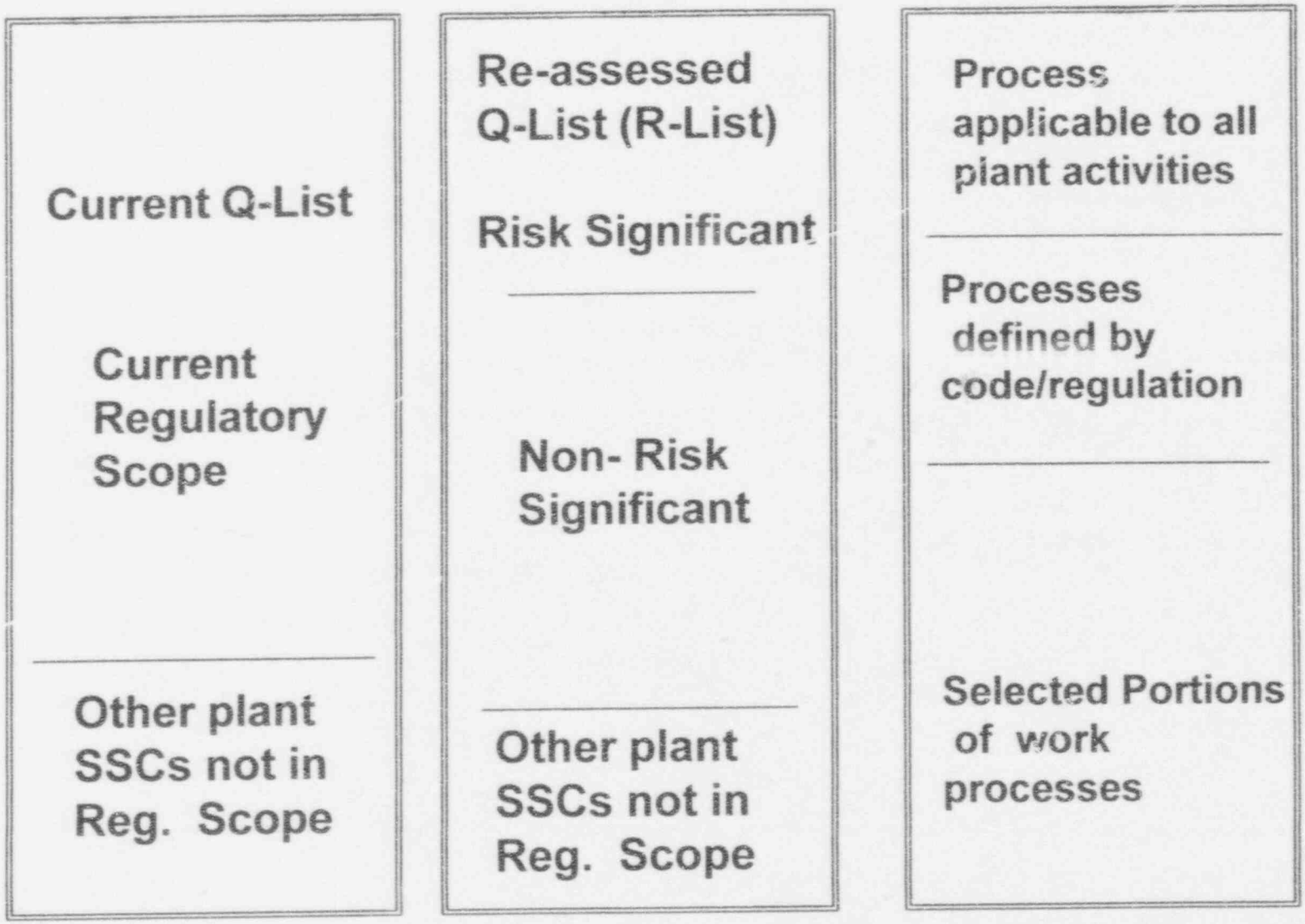
RESTRUCTURING THE Q-LIST

DRAFT

- Option 3
  - identify functional failure modes of safety significant components
  - further grade QA measures



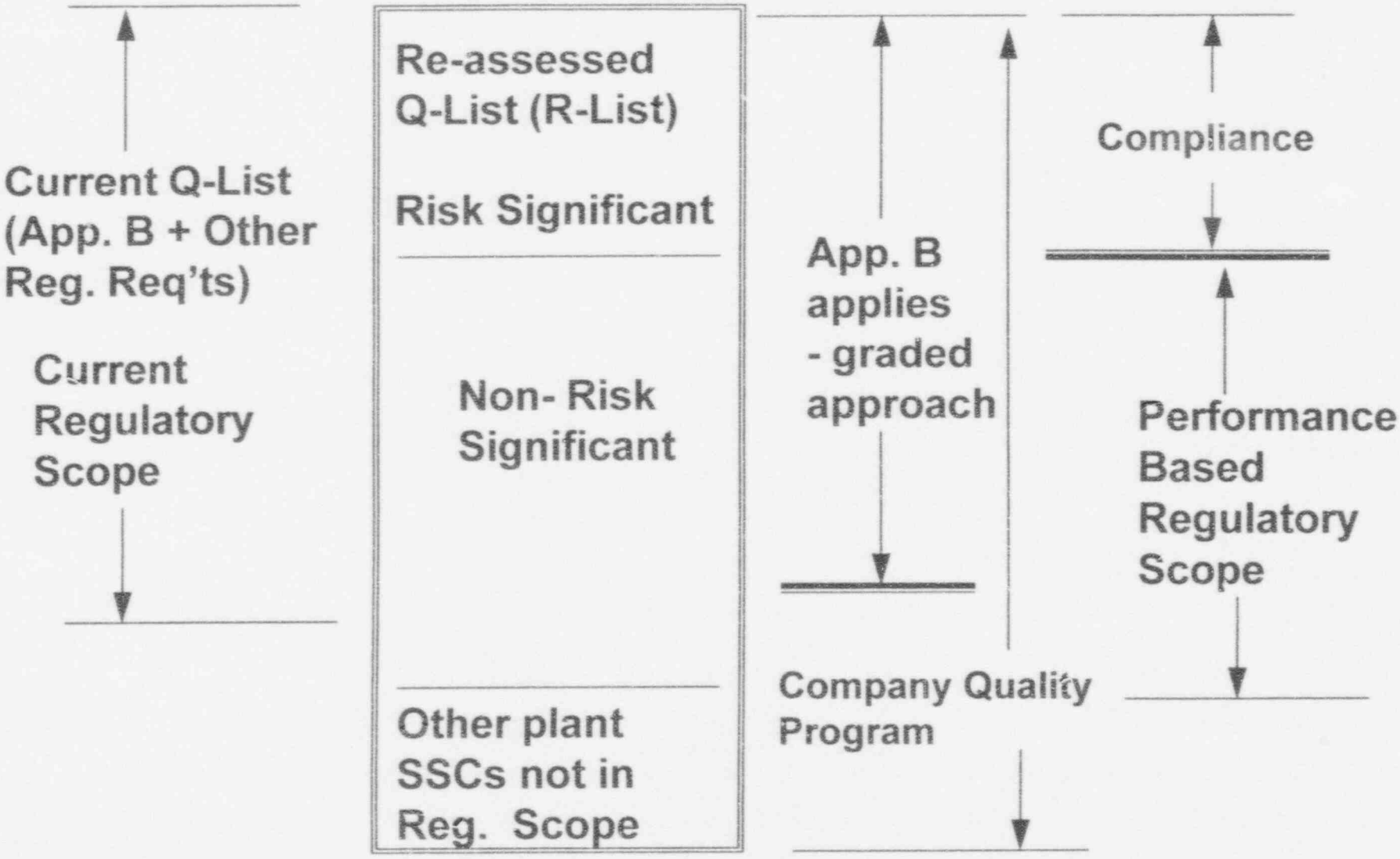
GRADED APPROACH TO QUALITY



GRADED APPROACH TO QUALITY

Initial Discussions

DRAFT

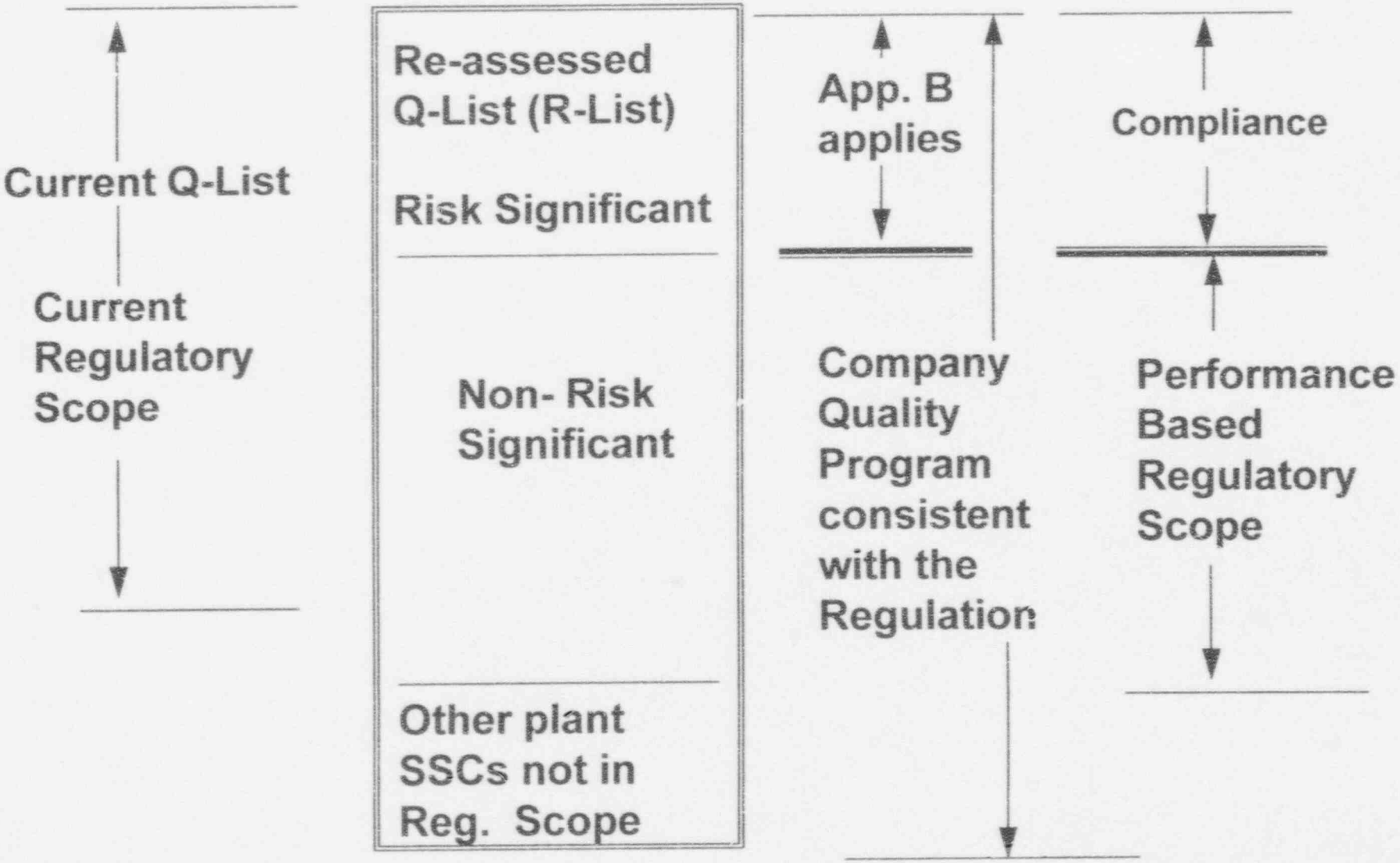


DRAFT QUALITY ELEMENTS
Potential Company Program

- **ORGANIZATIONAL FUNCTIONS**
  - Accountability, Responsibility & Organization
  - Communication
  - Performance Expectations
  - Planning & Resource Management
- **PROCESS CONTROL**
  - Procedures & Instructions
  - Identification of Required processes
  - Identification of Performance (measurement) Criteria
- **ASSESSMENTS**
- **CORRECTIVE ACTION**
  - Evaluation of the Cause
  - Resolution of Deviations

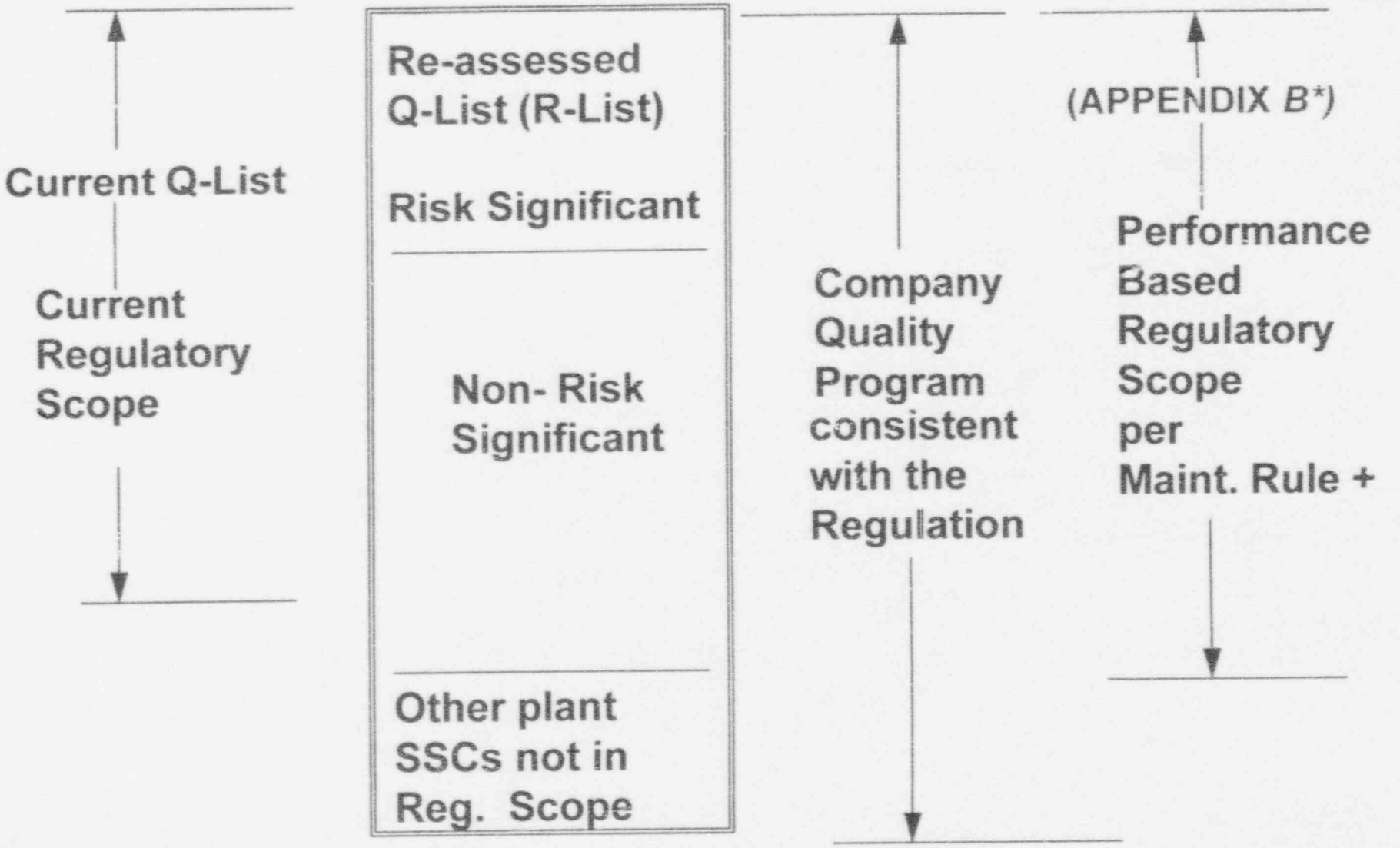
DRAFT

GRADED APPROACH TO QUALITY (SHORT TERM)



GRADED APPROACH TO QUALITY

DRAFT



GUIDANCE DOCUMENT OUTLINE

- Five sections
  - I. Introduction
  - II. Purpose
  - III. Approach to Prioritization and Categorization
  - IV. Applying Quality Measures
  - V. Administrative Guidance and Examples
- ABWG responsibilities
  - Applying Quality Measures
  - Peer review of procedures and specific examples
- Management flexibility
  - e.g. Degree of documentation
- Review and approval
- Team reviews & assessments

GUIDANCE DOCUMENT
OTHER PROCEDURAL FACTORS

- Factors to take into consideration while drafting/assessing guidance and procedures include:
  - Public Health & Safety
  - Personnel safety
  - Potential interface with risk significant elements
  - Special technical issues, including inspections & testing
  - Importance & operational considerations
  - Complexity of the task
  - Training
  - Planning and availability of resources
  - Corrective Action Program
  - Assessments
  - Materials

PILOT PROJECTS
Quality Activities

DRAFT

- Phased Approach
  - Functional work processes
  - Select set of systems
- General procedures -- revisions of existing plant procedures incorporating:
  - Flexibility based on importance and safety significance task
  - Emphasis on performance and results
  - Increase line organization responsibilities and authority
- Exercise procedures on recently implemented modification packages
  - Examples
  - Assist in quantifying benefits

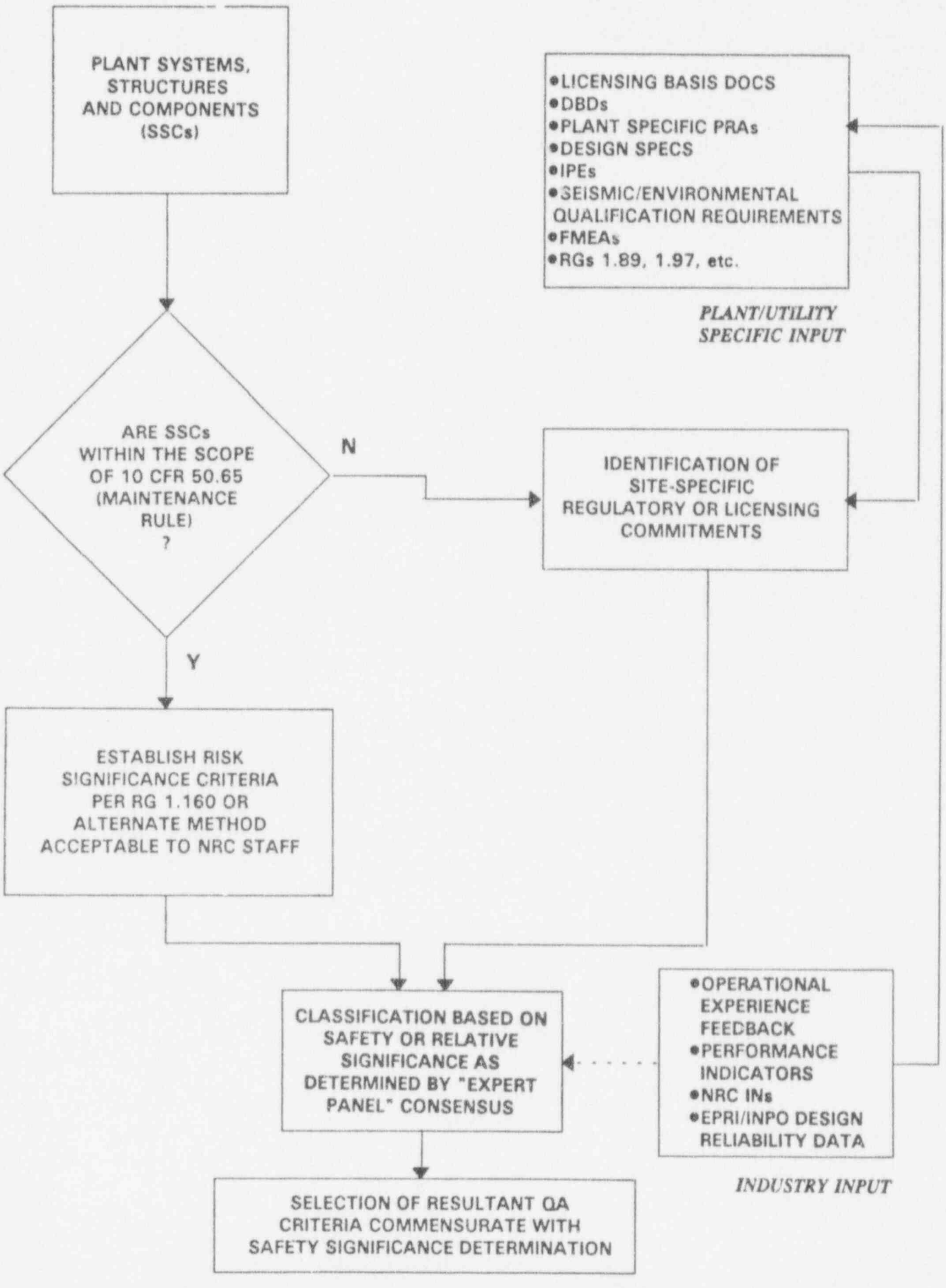
PILOT PROJECT ON A GRADED APPROACH TO QUALITY

DRAFT

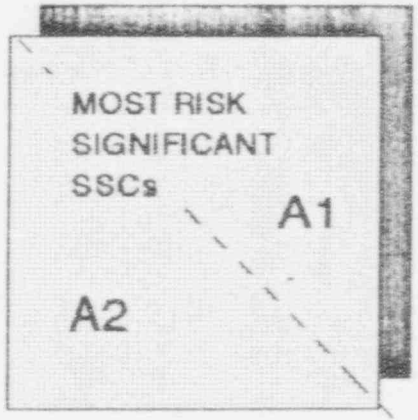
- **Schedule**
  - Complete Quality Elements — 3/94
  - Issue Draft Industry Guidance — 3/94
  - Start pilot projects — 4/94
  - Pilot project familiarization visits — 5/94 - 9/94
  - Complete pilot projects — 8/94
  - Revise guidance document to incorporate lessons learned — 9/94
  - Submit revised industry guidance document to NRC staff ex-appendices — 10/94
  - Interact with the NRC staff on final guidance document — 10/94 - 12/94
  - Issue Industry guidance document — 1/95
  - NRC Draft Regulatory Guide — Spring 95

NRC CONCEPTUAL APPROACH FOR GRADED QUALITY ASSURANCE

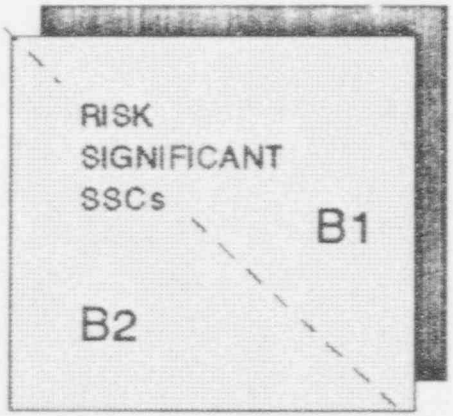
Enclosure 3



NRC CONCEPTUAL APPROACH FOR GRADED APPLICATION OF QA PRINCIPLES

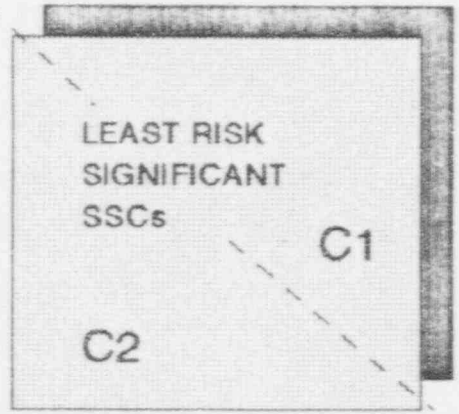


GRADED APPLICATION OF 10 CFR 50 APPENDIX B FOR SAFETY-RELATED SSCs

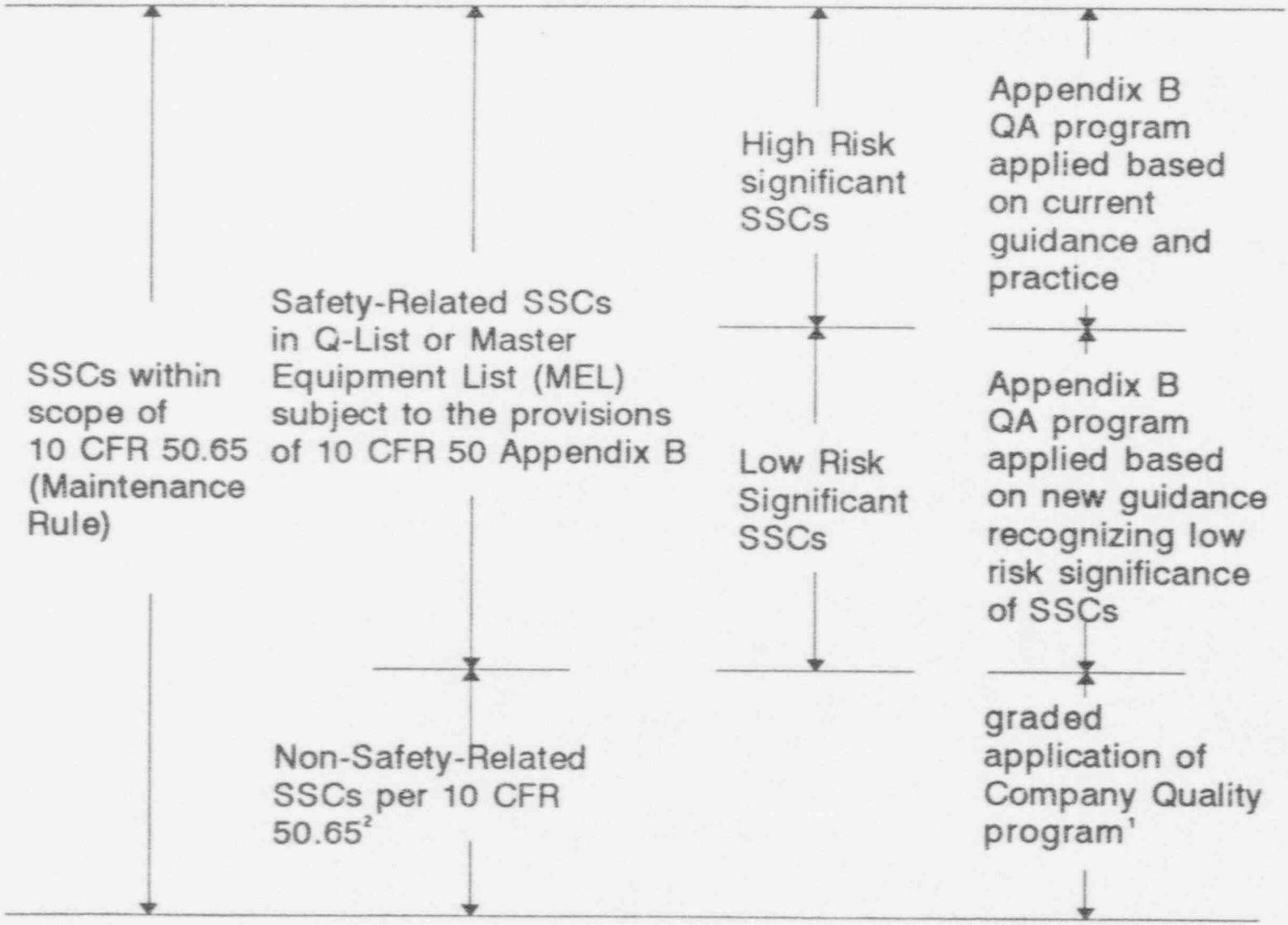


APPLICATION OF QUALITY VERIFICATION ACTIVITIES:
- A1/A2 - COMPREHENSIVE
- B1/B2 - MODERATE
- C1/C2 - LIMITED

GRADED APPLICATION OF COMPANY COMMERCIAL QA PROGRAM



NRC GRADED APPROACH TO QUALITY ASSURANCE



[1]At the option of licensee(s), the criteria in Appendix B may be applied to select Non-Safety-Related SSCs commensurately with their risk significance.

[2]Non Safety-Related SSCs identified as High Risk Significant will require additional evaluation, on a case-by-case basis, as they may impact the licensing basis of the facility.

Enclosure 4