



Department of Energy
Washington, DC 20585

JUN 04 1991

Mr. B. Joe Youngblood
Director, Division of High-Level
Waste Management
Office of Nuclear Material Safety
and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Youngblood:

For your information, enclosed is a copy of the report on the
U.S. Department of Energy Quality Assurance Grading Workshop,
conducted in Las Vegas, Nevada, on April 2-3 and April 16-19,
1991.

Should you have any questions, please contact me at
(202) 586-6046.

Sincerely,

Dwight E. Shelor
Acting Associate Director for
Systems and Compliance
Office of Civilian Radioactive
Waste Management

Enclosure:
Report on DOE Quality Assurance Grading Workshop

cc w/enclosure:
C. Gertz, YMPO
R. Loux, State of Nevada
M. Baughman, Lincoln County, NV
D. Bechtel, Clark County, NV
S. Bradhurst, Nye County, NV
P. Niedzielski-Eichner, Nye County, NV

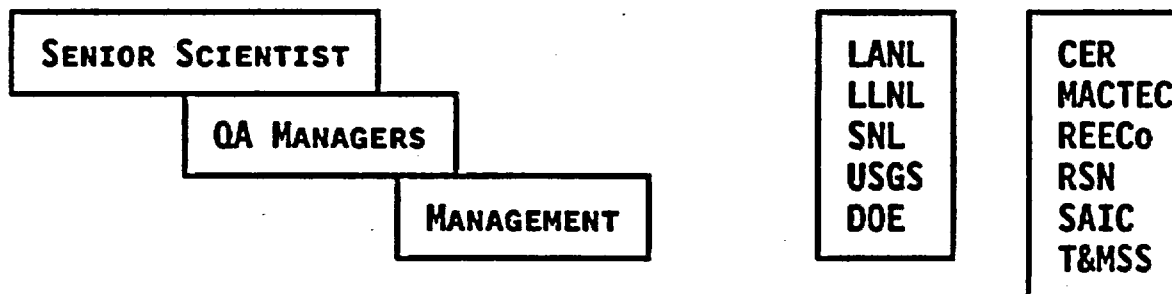
REPORT

DOE QUALITY ASSURANCE GRADING WORKSHOP

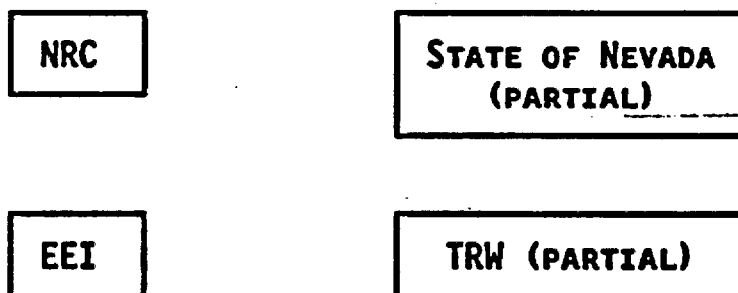
LAS VEGAS

APRIL 2-3 AND APRIL 16-19

PARTICIPANTS



OBSERVERS



ENCLOSURE

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INTRODUCTION

A Workshop was held April 2-3, and April 16-19, 1991, in Las Vegas, to address issues related to the grading process. This report includes a list of attendees, and an outline of workshop activities and results.

WORKSHOP ATTENDANCE

DOE

Nancy Voltura
Bob Clark
Ram Murthy
Susan Jones
Bob Barton
Carol Rehkop

LLNL

Jim Blink

SAIC

Mike Harris
Jim B. Harper
David Stahl
Dewey Hulbert
Stanley H. Klein
Steven C. Smith
Larry B. La Monica
H.Z. Dokuzoguz
John Waddell
Darrell Porter (SAIC Golden)

T & MSS

Regina McCarthy

RSN

Richard DeKlever
Daniel J. Tunney
Asha Kalia

STATE OF NEVADA

Susan Zimmerman

WORKSHOP STAFF

Joe Caldwell, Coordinator (MACTEC)
Cathie Martin, Facilitator (MACTEC)
Haywood Martin, Facilitator (MACTEC)
Gina Keith, Facilitator (MACTEC)

SNL

Leo J. Klamerus
F. Joseph Schelling
Bob Richards

WESTON

Todd Hull
Wayne Booth

USGS

Joe Rosseau
Alonzo Handy

REECo

James Arnold
Bruce Gardella
William J. Glasser
J.A. Catozzi
Dave Wonderly

MACTEC

Terry Prater
Wesley Williams
Bernard J. Verna
Howard Adkins

LANL

Cody Milligan
Steve Bolivar
Mile Clevenger

NRC

John Gilray

EEI

Tom Colandrea

TRW

Leo V. Seeber

M & O

J. D. Berg
Brent Hurst
Jerry Frederickson
Jack A. Jackson

CER

Robert J. Thomas

DE & S

O.J. Gilstrap

WORKSHOP ACTIVITIES AND RESULTS

Introductory comments were made by Max Blanchard, who stated the following goals and constraints for the workshop:

Goals

- Achieve consistency
- Timely
- Build on what works now
- Use lessons learned
- Systematic approach
- No drastic changes
- Conservative, but not overly
- Gain NRC confidence
- Document trail

Constraints

- 10CFR60
- NUREG 1318
- QARD - Q
 - Items and activities
 - Perform grading
- Other CFRs and DOE orders, non Q
- Management Controls

The purpose of the workshop was:

- Build cohesive team
- Identify issues
- Develop plan for resolving issues

Workshop participants introduced themselves and stated their expectations. Workshop expectations may be found in Appendix A.

Workshop Agenda:

April 2

- Introduction
- Workshop orientation
- Teambuilding
- Develop problem statement
- Develop goal statement
- Identify issues

April 16-18

- Review data collected
- Identify root causes
- Generate solutions
- Evaluate solutions- decide on recommendations
- Develop integrated Action Plan
- Plan management presentation

April 3

- Prioritize issues
- Select three issues to resolve
- Define problems
- Plan data collection
- Close

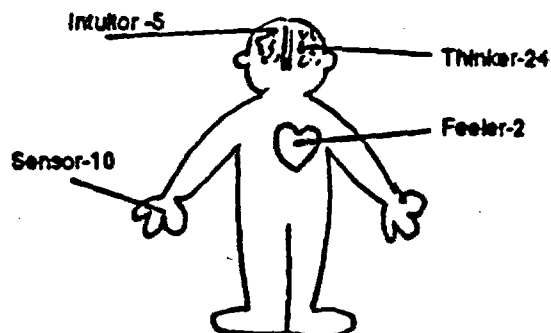
April 19

- Management presentation
- Debrief
- Action planning
- Workshop close

The following Workshop Guidelines were used throughout the workshop:

- Focus on unity (set aside individual agendas)
- Focus on solutions, not blame or finding fault
- Ideas belong to group (let go of individual ideas, once shared)
- Majority rules, support decisions

Participants took an inventory to determine Individual Work Style. It was concluded that the group included a large percentage of Thinkers, and a small percentage of Intuitors and Feelers. Information gained from understanding individual style differences was used throughout the workshop to improve communication.



Workshop participants developed the following problem statement.

The process for preparing lists, grading packages, and defining controls:

- Including purposes, is not clearly defined
- Lacks clear guidance/training
- Is too cumbersome, and
- Is too slow

Participants developed the following goal statement.

The process shall:

- Be simple
- Be timely
- Be a useful product
- Be clearly defined, well communicated, and consistent
- Be defensible in licensing process
- Build on lessons learned from present system
- Focus resources commensurate with possible consequences
- Result in a documented, useful product

Workshop participants developed a list of seventy-six issues related to the grading process, and voted to determine the three top priority issues to be addressed during the workshop. A complete list of issues, along with voting results, may be found in Appendix B. Participants divided into three groups to address the following top priority issues.

Group A

Problem: The grading process does not establish and provide sufficient guidance to preparers, reviewers, and approvers so that objectives of grading process are met.

Participants:

D. Stahl, SAIC, Tech.
 D. Porter, USGS, QA/Tech.
 B. Glasser, REEC Co, QA
 H. Adkins, MACTEC, Mgt.
 Dewey Hulburt, SAIC,
 Bob Thomas, CER, QA
 S. Bolivar, LANL

B. Verna, MACTEC, Mgt.
 J. Rosseau, USGS, Tech.
 R. DeKlever, RSN, Tech.
 Ram Murthy, DOE,
 Jim Blink, LLNL, Mgt./Tech.
 J. B. Harper, SAIC

Group B

Problem: There is a lack of consistent interpretation and definition of purpose and terms regarding quality affecting, non-quality affecting, programmatic importance, grading, and lists.

Participants:

Stan Klein, SAIC, QA
 John Waddell, T&MSS, Mgt.
 Mike Harris, QRB
 A. Kalia, RSN, QA
 J. Schelling, SNL, Tech.
 OJ Gilstrap, DE&S, QA
 Bob Barton, DOE

Dave Wonderly, REEC Co, Tech.
 Dok, QRB Assmt. Team
 L. La Monica, T&MSS-AT
 Steven Smith, T&MSS, Mgt. & QRB Tech.
 Al Handy, USBS, QA
 Tom Colandrea, EEI, TQM
 J. Catozzi, REEC Co, Mgt.

Group C

Problem: Do we need a process for grading non-quality activities and administrative activities? If so, it should be simple.

Participants:

L. Klammer, SNL, Tech.
 B. Clark, DOE HQ, QA
 B. Gardella, REEC Co, Mgt.
 C. Milligan, LANL
 R. Richards, SNL, QA/Mgt.
 J. Arnold, REEC Co
 T. Prater, MACTEC

D. Tunney, RSN, QAS
 J. Gilray, NRC
 W. Williams, MACTEC, QA
 S. Jones, DOE/YMP, Tech. or Mgt.
 T. Hull, Weston, Tech.
 M. Clevenger, LANL
 W. Booth, Weston

The following Problem Solving Process was introduced:

1. Identify problem
2. Collect data
3. Identify cause
4. Generate solutions
5. Evaluate solutions/decide
6. Develop action plan

Step 1. Identify Problem: Participants used a brainstorming process to answer the following questions and expand their understanding of the problem.

What	is involved? is wrong?	When	is it happening?
Who	is generating? is affected?	How	serious? costly? painful?
Where	is it happening?		

Step 2: Collect Data. Participants identified the data they would need to further define the problem and provide background information for generating solutions. The three group lists of data to be collected, along with findings, are located in Appendix C.

Step 3: Identify Cause. Participants used a "fish bone diagram" to identify possible causes for each of the three issues being addressed. Possible causes were prioritized to determine root causes. Results are given below, along with revised Problem Statements.

Group A

Problem Statement: The grading process (including determination of importance) does not establish or provide sufficient guidance to preparers, reviewers, approvers, and implementers so that objectives of grading process are met.

Root Causes:

1. Inadequate guidance, communication, and training
2. Objectives unclear
3. Too complex

Group B

Problem Statement: There is a lack of consistent interpretation and definition of purpose and terms regarding: quality activities, quality affecting, non-quality affecting, programmatic importance, grading and lists.

Group B (continued)

Root Causes:

1. Lack of knowledge of the process
2. Lack of consistent guidance
3. Lack of Vision

Group C

Problem Statement: The current process requires a grading package for administrative activities (both quality and non-quality) and non-quality affecting items and activities, which wastes resources (money and time) and adds no value to the quality of the program.

Root Causes:

1. Inappropriate management direction
2. Lack of understanding- grading objectives
3. inconsistent interpretation of regulations, orders, etc.

Step 4: Generate Solutions.

While focusing on root causes, participants brainstormed possible solutions to each of the three identified issues, concentrating on quantity, not quality. Solutions were prioritized to determine the best alternatives. The best alternatives for each group are given below.

Group A Possible Solutions:

1. Define QRB guidelines. Fully state limits beyond which participants exercise internal controls. Add evolved QRB guidance to procedures.
2. Grade at participant level, primarily by implementer, so that specific controls embedded in QARD sections are spelled out explicitly. Centralized DOE control/overview; decentralized implementation of grading.
3. Identify Q-Aff & NON-Q-Aff activities; grade only Q-Aff items/activities.
4. Clean up QAGR form to minimize redundant information; minimize paperwork.
5. Eliminate worksheet, keep NUREG-1318 guidance in procedure.
6. Delineate Q-Aff, non-Q-Aff, Prog - Importance, and admin on lists.
7. Break procedures into segments dealing with specific project areas.
8. Train preparers and QRB together.
9. Have YMPO clarify objectives.
10. Expand assessment team, review higher level source documents that are basis for the procedure.

Group B Possible Solutions:

1. Training
2. Guidance/Instruction
3. Vision
4. Definitions
5. DOE management involvement
6. Investigate usefulness of grading process

Group B Possible Solutions (continued)

7. Restricting the scope of grading process
8. Simplify grading process
9. Make grading package manageable

Group C Possible Solutions:

1. Establish criteria for what needs to be graded which will:
 - identify activities that are positively excluded.
 - limit QA grading to Q list and QAL
 - allow use of good engineering and management practices for PRL
 - eliminate support activities from grading.
2. Make TPOs responsible for meeting grading requirements.
3. Better define & communicate purpose of grading.
4. Issue clear direction document on interpretation of regulations, orders, etc. for grading purposes.
5. Better define administrative and non-quality affecting
6. Have NRC better explain their intent of grading.

Step 5: Evaluate Solutions.

Top priority solutions were evaluated to determine:

- To what extent the solution would solve the problem
- The amount of positive impact
- The amount of negative impact
- The cost in time, money, or resources
- The time it would take to put solution into effect
- To what extent the solution would be acceptable to all parties

Those solutions which best met the above criteria are given below, for each group.

Group A Solutions:

ENHANCE GRADING PROCESS

Review : Upper Level Document

QRB lessons

Errors

BWIP Process

Draft objectives

Interviews (Blanchard, Horton, Colandrea)

Final objectives

Group A Solutions (continued)

1. Delineation - what level grading is done
2. Decide format of procedure to meet all objectives in one procedure
 - a. Tweak up procedures
 - b. Write lists
 - c. Approve lists
 - d. Do QAGR
 - e. Approve new grading reports
3. Provide procedure details
 - a. Use what is working
 - b. Eliminate form (worksheet)
 - c. Incorporate QRB guidelines

The Key Questions:

Who should do Grading Reports?

Who should approve Grading Reports?

NEED CONSISTENCY

Group B Solutions:

VISION

- Purpose and objective of grading
- Basis for grading
- Policy - centralized vs. decentralized
- Extent of grading (NRC vs. DOE, scope)

DEFINITION

- What is quality?
- Quality activities are . .
- Quality affecting activities
- Etc.

PROCESS

- Management have straw man developed for vision and definitions
- Management to decide who to include in retreat for decisions
- Management personally participate in process to develop vision and definitions, suggest use of facilitator at retreat
- Management must accept ownership in vision and definitions

MUST COMMUNICATE TO ALL/EVERYONE THE RESULTS

Group B Solutions (continued)

METHODOLOGY

Provide guidance and training to improve the grading process with respect to:

1. Preparation of grading report
2. Use of the grading reports by the participants to translate them into applicable controls

Aids to accomplish this include the following

1. Guidance
 - Selection of 20 criteria by participants using project guidance regarding extent of application
 - Provide line by line instructions for completing forms (include in procedure)
 - Provide access to knowledgeable dedicated staff for consistency
 - Provide representative grading packages of each type as good examples
 - Provide guidance to participants concerning use of grading report to identify specific QA controls
2. Training aids
 - Hands on step-by-step workshops to qualify preparers, reviewers, and users of grading report
 - See "1. Guidance" for examples to be used in Training exercises
 - Training auditors in same methodology

Group C Solutions

1. Identify basic upper tier documents relating to grading.
2. Locate and identify pertinent requirements
3. Modify definitions as necessary
 - Non-quality affecting
 - Quality affecting
 - Administrative activities
 - Grading
 - Quality assurance
 - TQM
3. Evaluate, conclude, and develop criteria for what is required to be graded (with rationale and basis)
4. Management endorsement
5. Modify appropriate documents and procedures
6. Assessment team reevaluate lists based on the new criteria.

RECOMMENDATIONS

- Do not apply the grading process to administrative activities and non-quality affecting items and activities.
- Do not grade items/activities on PRL
- Identify management "quality" (not QA) controls for those items/activities to assure a quality product to interested parties (DOE Management, EEI, NRC) = Responsibility rests with DOE Management to assure this "quality", not QA.

Group C Recommendations (continued)

- Group C will develop the criteria, reach consensus of the whole group and feed to procedure writers.
- This will meet NRC requirements and DOE orders.

Step 6: Develop Action Plan. After review and discussion, the solutions developed by each group were combined into the following three proposed recommendations.

1. VISION - To be developed by Management

- Key definitions
- Purpose and objectives of Quality program
- Purpose and objectives of Grading
- Centralization or decentralization
- Communicate to all

2. PROCEDURES AND DOCUMENTS

- Develop criteria for grading
- Modify existing procedures and related documents
- Revise procedures short term

3. TRAINING AND COMMUNICATION

- Provide representative QAGRs as examples
- Provide "hands on" training for preparers and reviewers
- Provide same training for auditors
- Communicate use of product of grading process

MANAGEMENT PRESENTATION

Workshop recommendations were presented to Max Blanchard and Don Horton on April 19, 1991. The meeting agenda is given below. Management Presentation Chart notes are included in Appendix D.

OPENING -

JIM BLINK, LLNL

Welcome, Introductions of Participants
Purpose and Scope

WORKSHOP PROCESS -

AL HANDY, USGS

Problem Statement
Goal Statement
Issue Identification
Problem Solving Process

SOLUTIONS/RECOMMENDATIONS -

**SUSAN JONES, DOE
STEVE BOLIVAR, LANL**

Findings
Recommendations

CLOSING -

JIM BLINK, LLNL

Discussion
Management Decision

The workshop recommendations were well received by management. Participants were encouraged to provide management with the background information necessary for the Management Vision retreat. Management agreed to develop a Vision and definitions, and meet with participants to explain the Vision.

Participants developed an action plan which includes preliminary tasks for implementing each of the three recommendations, along with persons responsible and target dates. A copy of the action plan is given in Appendix E.

APPENDIX A

WORKSHOP EXPECTATIONS

1. Improvement in quality grading process.
2. Ability to fine tune the process.
3. Build on work accomplished - Bring coherent sense to requirements.
4. Provide simplification to grading process.
5. Refine grading process.
6. Use integrated approach between Headquarters and Yucca Mountain.
7. Get better understanding of thinking of participants.
8. Simplified, consistent procedures.
9. Better understanding - different perspective regarding grading.
10. Lead to satisfactory solution
11. Learn how process works; pick up new, fresh ideas.
12. Open and honest communications.
13. Consistent and workable approach by technical experts.
14. System changes that are workable.
15. Achieve and improve process - well understood
16. Achieve goals expressed by Max B.
17. Develop process that provides more guidance of grading reports - providers.
18. Explicit recommendations for improvement of grading process.
19. Better understanding of grading process.
20. Bring to light problems and solutions.
21. Result in clarity and simplification in order to achieve success on first try.
22. Process simplification, comm. understanding and consistency.
23. Reduce administrative impact (paper work). Get understanding of controls required
24. Enhance input to process.
25. Establish better criteria.
26. Modify format of "Q" list.
27. Explore present problems - reach consensus on how to improve.
28. Reach consensus on how to improve.
29. Simplify grading process.
30. See if construction can get out of grading process.

APPENDIX B

GRADING ISSUES

The first number in parentheses indicates the number of votes received on the first round of voting. The second number indicates the number of votes received on the second round of voting.

1. Procedural guidance not clear. (29) (33)
2. Critical definitions (including "quality-affecting.") (21) (28)
3. Careless preparation of QAGR (11)
4. Qualification of Preparer. (0)
5. Impact Analysis Statement. (3)
6. Programatic Importance. (20) (7)
7. Relationship to Engineering Plans. (2)
8. Application of radiological controls. (1)
9. Applications to Craft/Labors personnel (0)
10. Basis for scope of work. (10)
11. WBS level of grading. (22) (11)
12. Application of QARD versus participant QAPD. (8)
13. Program was too inflexible. (2)
14. Acceptance by Engineering Division. (2)
15. Revisions of Supporting Documentation. (7)
16. Decontrol of previously approved QAGR. (0)
17. Changes to job packages. (1)
18. Participant QA & management involvement, (What should it be? Consistency of ?) (20) (14)
19. Lack of technical oversight. (5)
20. Lack of management oversight. (17)
21. The QRB is an appendix on the YMP body with no useful function. (2)
22. Inappropriate centralized control. (7)
23. Labor intensive. (13)
24. Too many grading packages on the same item &/or activity (overlap). (10)
25. Does not properly address "quality affecting". (17)
26. Lacks effective direction for the identification of participant controls (i.e. of what use is 5.28 to participants?) (12)
27. Needless grading packages prepared for administrative activities. (21) (27)
28. Does not address alternate means of achieving grading process. (0)
29. Quality affecting & non quality affecting activities are included on the PRL. (16)
30. Applying QA grading process to the non-quality affecting activities. (19)
31. PRA rather than common sense required to generate lists. (4)
32. Process for minor corrections or changes is over-formalized. (9)
33. No direct tie-in of procedures to grading criteria. (6)
34. Need to integrate grading with work planning and approval. (9)
35. Lack of over-all consensus regarding the general strategy & approach for grading. (9).
36. Changes in grading process results in regrading. (1)
37. Overly conservative interpretation of "related to". (8)

APPENDIX B (continued)

38. Need process for identifying activities related to both quality affecting and non-quality affecting (i.e records.). (5)
39. Quality lists do not have sufficient detail. (2)
40. Participants should actively identify needs for changes to quality lists. (1)
41. Inconsistent interpretation of foundation guidance & requirements (e.g. NUREG 1318 & 20 QARD criteria). (16)
42. Timeliness of revising grading administrative procedures. (0)
43. Confusion between grading and "importance". (3)
44. Too high rejection rate of grading packages (not well enough defined). (12)
45. Lack of commitment to grading process as it exists today. (5)
46. Selecting QARD criteria is not useful for control of technical activities. (1)
47. No exclusions to grading. (0)
48. Reliance on WBS dictionary. (8)
49. Purpose of characteristics worksheet is ineffective. (21) (8)
50. Questionable need for formal process at the project level. (1)
51. Too many preparers. (1)
52. Too many reviews. (2)
53. Too many activities included? (0)
54. Lack of consistency of resulting packages. (4)
55. Lack of understanding and purpose of grading. (22) (10)
56. Grading done by wrong people. (2)
57. Generic grading packages - Should we have them? (8)
58. QRB meetings are closed. (1)
59. Lack of communication of benefits of grading to preparers. (11)
60. Lack of understanding of flow down by preparers. (2)
61. Relationship between items and activities poorly defined. (6)
62. Takes too long. (14)
63. Quality value added = questionable. (0)
64. Lack of understanding of cost benefit ratio. (1)
65. Grading packages alone do not provide sufficient level of detail to establish implementation controls. (16)
66. Grading packages not couples to all technical requirements, i.e. Redundancy. (0)
67. Explanation of QA Dept. involvement in non quality activities. (10) (16)
68. Premature Grading. (1) (16)
69. Process not being institutionalized. (0)
70. Lack of implementation of TQM principles. (5)
71. QRB too autocratic. (3)
72. Should grading reports define controls? (14)
73. Assessment team lists need tweaking. (7)
74. Things on lists that do not need grading. (10)
75. NUREG compliance mixed with management controls. (15)
76. Lack of understanding of how to transition from grading package to implementation. (12)

APPENDIX C

DATA COLLECTION

Group A Data Collection

Data Needed	How Collected	Person Resp.
1. Implementation level by grading package by participant	Matrix	Harper, assist- J. Blink
2. QRB guidance data package	Copy	Bernie Verna
3. Information needed for procedural guidance	Survey	H. Adkins
4. Improper approval levels or individuals for grading process	Examples	Hulbert- Proj. SAIC Blink- LLNL DeKlever-RSN
5. Preferred method from preparers for grading packages	Survey	see # 3
6. Copy of NUREG 1318	Copy	Hulbert
7. Packages prepared by other than implementer	Preparer vs. implementer matrix (example)	Adkins- MACT Blink- LLNL Hulbert- SAIC DeKlever- RSN Greer- REEC Porter- USGS Klamerus- SNL Milligan- LANL
8. Estimate of future workload and impact	Survey	see # 3
9. QRB reject rates	Survey	see # 3
10. Past grading process cost	Estimates	see # 7

Group A Findings and Conclusions

1. Implementation level by grading package by participant.
 - Chart grading package level vs participant
 - Total grading package each participant has submitted
 - Feeling level most participants feel comfortable. 50% level 5.

APPENDIX C (continued)
Group A Findings and Conclusions

2. QRB Guidance Data P.
 - How handle programmatic importance
 - Purely admin activities.
 - Wording for exceptions to criteria.
3. Information needed for procedural guidance
 - Areas/Steps within procedures are rigid or not specific.
 - Insufficient information provided.
4. Improper approval levels or individuals for grading process.
 - No objective participant guidance
 - No grading packages reviewed or approved by DDS or branch chiefs (not required by procedure)
5. Preferred method from preparers for grading packages
 - Technical be differentiated from admin process.
 - All QA criteria not have to be addressed in grading
 - Activities on PRL should not be graded
 - Participants lower level grading packages sufficient don't need QRB
 - Participants want flexible procedure so they can grade their own work.
6. Copy of NUREG 1318
 - Criteria non-Q list items.
 - NRC guidance on graded application of QA
7. Packages prepared by other than implementer
Indeterminate
8. Estimate of future workload & impact
Minimum new grading reports - 100
9. QRB reject rates
 - Beginning reject rate very high - 77%
 - As process matured - 37%
 - Total submitted = 377
 - Total accepted = 236
10. Subject for Group C

APPENDIX C (continued)

Group B Data Collection

Data Needed	How Collected	Person Resp.
1. Process time, cost, # of iterations, # of packages, people old vs. new costs, admin. costs, lists, proj. importance grading participant controls	QRB records, charge numbers, documented case study(s), poll participants, survey of preparers	Mike Larry
2. Frustration	Questionnaires	Joe S., Tom
3. Cost of license lost		Dave
4. Uncertainty of definition causes validity questions	Rejected grading packages, surveys, (5 & 6 series), review packages 6.17, 5.28	Joe S., Tom
5. Project disarray can result in possible lack of confidence internally and externally	NRC report- July 88, newspapers presentations to NRC	Tom, Steve
6. Lack of centralized guidance	5.28Q, 6.17Q, personal interviews	Asha
7. No clearly defined customer	Surveys, make list of possible customers, use WHO? list	Steve, Dok
8. How to identify mgt. controls for project activities	Survey of documents, review of documents, eg 5.28 vs sources	Bob
9. Lack of clear distinction between program quality vs. quality assurance		Steve
10. Changing guidelines and requirements	Study early vs. late packages, document history	Joe S.
11. Interpretation & implementation of grading should be a participant responsibility	Interview key players	Asha
12. Better tie definitions to consequences of doing work wrong	Review definitions	Tom C.
13. Relationship between grading process & lists	Group discussion	Steve, Joe S. Larry

APPENDIX C (continued)
Group B Data Collection

14. Enforced use of glossary	Interviews	Joe C.
15. Refer to "Where" list	Pre-workshop questionnaire, procedures	Joe S., Tom
16. See "When" list	Check NR of packages and other package statistics, see QRB for data	Stan

Group B Findings and Conclusions

1. Old Process took two to three times more time than new one.
i.e. Old signatures = 53
new signatures = 4

<u>OLD PROCEDURE</u>	<u>PRESENT</u>
Signatures 53	4
Hours to process 3-4x	X
Product (4 packages) 2-4 weeks with special conditions	(377 packages 236 approved) 8-9 mos.

2. **FRUSTATION: What is the Grading Problem?**
Sample comments;
lack of guidance (3) (policy)
conservative system
failure to establish an approach
insufficient information provided to preparers
process = ill defined, inconsistent
difficult to understand

***Conclusion: Frustration exists**

3. No Data
4. N/A
5. There is a history of NRC concerns about past approaches taken.

APPENDIX C (continued)
Group B Findings and Conclusions

6. Lack of centralized guidance. Conclusion:
 - a. There is a lack of centralized guidance determined as a result of individual interviews with a cross section of approximately 9 people. (From various organizations, preparers, QRB members, assessment teams.)
 - b. There is a failure to convey the project vision of the grading process.
7. We do not know item packages are being used.
 Conclusion: There is knowledge of how packages are created and maintained within the users, however knowledge of how they will be used is not understood.
8. What do we have to apply controls to?
 Conclusion: DOE is required to apply grading beyond import to safety and waste isolation because of other DOE orders. When there is a conflict exists, NRC regulations prevail.
9. Lack of distinction between program quality vs. QA
 Conclusion: Complying with QA does not necessarily assure that total quality will result.
10. Changing guidelines and requirements.
 Conclusion: There is a history of starting over.
11. Interpretation & implementation of grading should be a participant responsibility
 Conclusion: Most of those interviewed believe that Interpretation and implementation should be participant responsibility
12. Better the definitions to consequences of doing work wrong.
 Conclusion: There has not been sufficient guidance to help grading package preparers tailor the QA requirements as a consequence of doing work wrong.
13. Relationship Between Grading process and lists.
 Conclusion: There is a problem:
 The relationship between the lists and the grading process is not widely understood or defined.
14. Enforced use of Glossary
 Data not available.
15. N/A

APPENDIX C (continued)

Group C Data Collection

Data Needed	How Collected	Person Resp.
1. # of packages prepared since 3-15-91. thru 3-3-91	Check log at each site	Leo-SNL Susan- Pr. Off SAIC LLNL USGS Dan-RSN Bruce- REECo Bob C.- HQ Cody-LANL
2. # of packages non-Q affecting	Look at records	see # 1
3. # of packages administrative	see # 2	see # 1
4. Amount of time/cost spent: prepare, review, approve at participant level	Collect from preparers and reviewers	see # 1
5. Examples of non-quality affecting packages	Collect and bring in at least 2	see # 1
6. Examples of admin. packages & 1.2.9.2	see # 5	see # 1
7. Perception from Mgt. about implementing 5700.6B, 4700.1 - HQ mgt. - Proj. office mgt.	Interviews	Bob C. Susan
8. Is it required to grade "related" activities- 1318	Doe/NRC interview	Bob C.
9. Possible solutions for simplifying 5.28	Collect at sites	see # 1
10. Examples of delays in schedule due to prep. of package, non-Q or admin.	see # 9	see # 1

APPENDIX C (continued)
Group C Data Collection

11. Cost of processing, controlling & storing records (for single package)	From records	Bruce
12. Cost of QRB	Review records	Susan
13. Cost of assessment team	see # 12	Leo
14. Flow chart of grading process to show "whens"	Review procedures	Bob R.
15. Chart that shows impact of grading on other procedures	see # 14	Susan
16. Packet of reference documents - 1318 - QACD- HQ - QARD/NQA 1 - AP 5.28 Q - 6.17 Q - 5.21 - Any AP from # 15 - Regulations 10CFR60 - 5700.6B - 4700.1 (QA)	Collect from project office	Wes

Group C Findings and Conclusions

DATA	RSN	SNL	LLNL	LANL	RSED	HQ
Packages prepared	17	100	9	31 includes non-acc	13	90
Non-Q packages	7	42	1	15	10	62
Admin packages	4	9	4	16	10	70
Total non-Q admin packages	10	45	4	16	10	70

APPENDIX C (continued)
Group C Findings and Conclusions

DATA	RSN	SNL	LLNL	LANL	RSED	HQ
Amount of time/cost	50 hrs. each, \$2500 per pkg per sub	\$2500 per pkg per sub	\$8000 per pkg \$70K 60K labor 10K travel	\$1236 per pkg		

QRB

Met 82 days in six months, estimated 3 hours per day X 8 people = 1968 hours
\$49,200 non-Q and admin
or 82 days X 8 hours per day X 8 people = 5248 hours, \$131,200 non-Q and admin.

Assumption

10-9-90 to 4-12-91

non-Q = total hours multiplied by 50% @ \$50 per hour

ASSESSMENT TEAM

6 people X 6 meetings = \$206,00 total for 1 year, \$103,00 non-Q
\$160,00 T&MSS
for all participants, including travel time

GRADING PROCESS INTERFACE

WHERE:

QMP-03-09 Project
Change Control
Board Process

WHAT

Evaluators must determine
if "Adequate ...Quality..."
Analysis been performed
to justify changes?
Quality is defined by
approved grading package

IMPACT

Interpreted to mean
that changes cannot be
approved without
Grading Report
All Reviewers (10-12)
must independently
verify status of QAGR
WBS changes cannot be
w/o QAGR, but you need
WBS to do QAGR

APPENDIX C (continued)
Group C Findings and Conclusions

<u>WHERE:</u>	<u>WHAT</u>	<u>IMPACT</u>
AP-5.36 Project Planning, Budgeting, Scheduling, & Work authorization	Step 32 requires review to determine if grading package complete for P&S account	Interpreted to mean that P&S accounts cannot be signed until grading package signed (all P&S including out-years) Work not being authorized
AP-5.21Q Field Work Activation	Must list QAGR's for each piece of work and participant in job package	Must update job package whenever any QAGR is changed Will result in many revisions to job packages and increased load in document control

CONCLUSIONS

1. A lot of resources being expended for grading things that MAY not need to be graded.

As reported by RSN, SNL, LANL, RSED, & HQ: _____

- A. 151/251 or 60% of QAGR were Non-Q affecting or administrative.
- B. Within YMP 81/161 or 50% were Non-Q affecting or administrative.
- C. YMP average cost for approved package - \$2000.
- D. Total cost for YMP (5 participants) \$232,000.

2. According to DOE, NRC requirements grading is not required for non-Q affecting & admin. functions. Management controls may still be necessary for these activities/functions.

3. A lot of resources being expended by QRB to review & approve non-Q & admin. grading packages.

- 82 days x 8 hours per day x 8 people x .5 x \$50/hr. = \$131,200.
for non-Q & admin. 1st 6 mos of FY '91.
- Assessment Team cost (\$103,000/yr for non-Q & admin.) would still be incurred.

4. Implementation of QMP-03-09, AP-5-36 & AP-5.21Q would be simplified if :

- you didn't grade non-Q,
- you broke tie between grading and procedure.

**APPENDIX D
MANAGEMENT PRESENTATION CHART NOTES**

**YUCCA MOUNTAIN
PROJECT**

**QUALITY ASSURANCE
GRADING WORKSHOP**

**APRIL 2-3, 1991
APRIL 16-19, 1991**

APPENDIX D (continued)

AGENDA**OPENING****JIM BLINK, LLNL****Introduction of Participants
Purpose & Scope****WORKSHOP PROCESS****AL HANDY, USGS****Problem Statement
Goal Statement
Issue Identification
Problem Solving Process****SOLUTIONS/RECOMMENDATIONS****Findings
Recommendations****STEVE BOLIVAR, LANL
SUSAN JONES, DOE****CLOSING****JIM BLINK, LLNL****Discussion
Management Decision**

APPENDIX D (continued)

EXISTING GRADING PROCESS

- We have forced it to work
- It is difficult to use

WORKSHOP TASKS

- Build a cohesive team
- Identify issues
- Develop a plan to resolve the issues

GUIDANCE

**We were given YMP Management's
guidance at the start of
the Workshop**

APPENDIX D (continued)

PROBLEM STATEMENT

The process for preparing lists, grading packages, and defining controls:

- **Including purposes, is not clearly defined**
- **Lacks clear guidance, training**
- **Is too cumbersome, and**
- **Is too slow and costly**

GOAL STATEMENT

The grading process shall:

- **Be simple**
- **Be timely**
- **Be clearly defined, communicated, and consistent**
- **Be defensible in licensing**
- **Incorporate lessons learned without major changes**
- **Result in a documented, consensus product**

APPENDIX D (continued)

PROBLEM SOLVING PROCESS

- 1. Identify problem**
- 2. Collect data**
- 3. Identify cause**
- 4. Generate solutions**
- 5. Evaluate solutions**
- 6. Develop Action Plan**

PROBLEM STATEMENTS

A.

Current process does not establish or provide sufficient guidance.

B.

Lack of consistent interpretation and definition of purpose and terms.

C.

Process requires QAGR for administrative activities and non-quality affecting items and activities.

APPENDIX D (continued)

DATA

QAGR	377
	236
	100 +

RATE	77%
	37%

APPENDIX D (continued)

DATA

- **50 % of QAGRs are not quality affecting**
- **grading not required for non-quality affecting and administrative functions**
- **resources are being expended on non-Q QAGRs**
 - **preparer**
 - **QRB**
 - **revisions**
 - **cost per report**

ROOT CAUSES

A.

- **Inadequate guidance, communication, and training**
- **Objectives unclear**
- **Too complex**

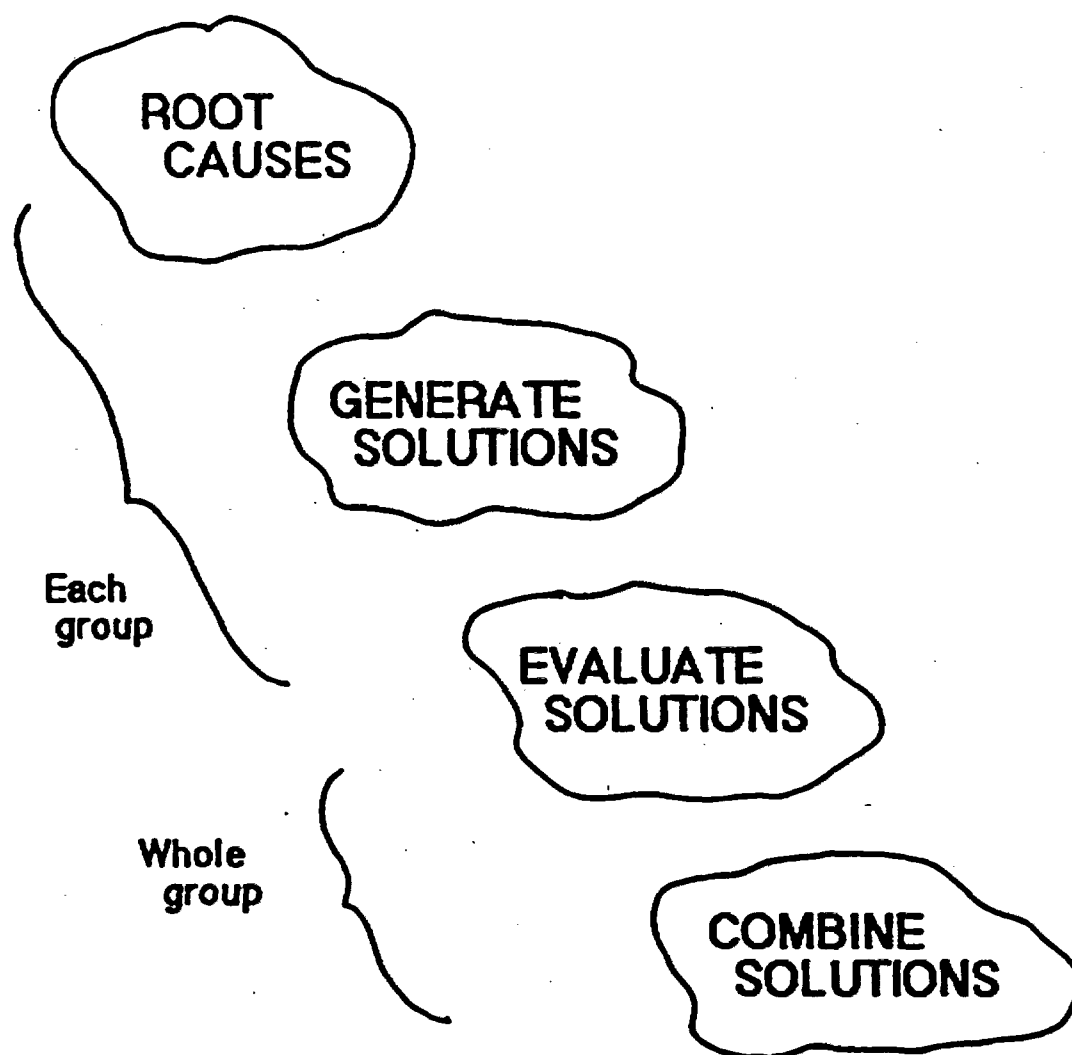
B.

- **Lack of knowledge of process**
- **Lack of consistent guidance**
- **Lack of common vision**

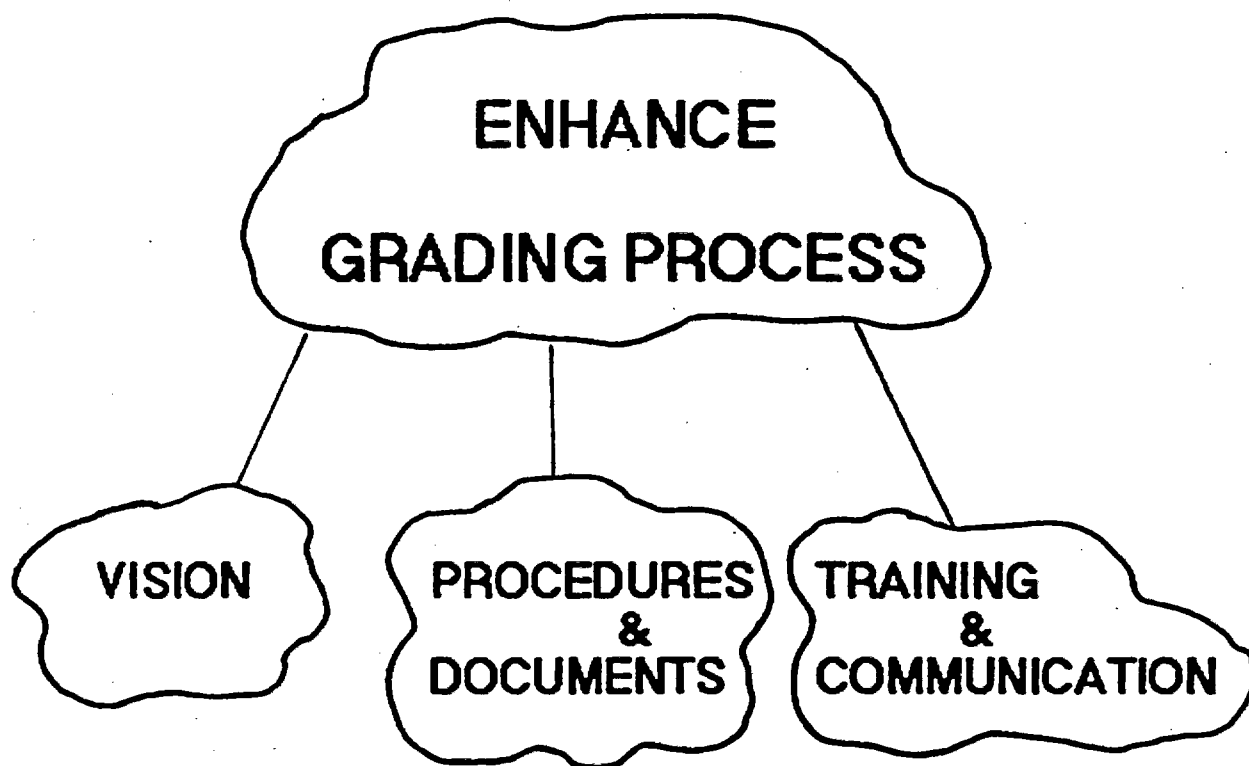
C.

- **Inappropriate management direction**
- **Lack of understanding - grading objectives.**
- **Inconsistent interpretation of regs., orders, etc.**

APPENDIX D (continued)



APPENDIX D (continued)



VISION

must address:

1. KEY DEFINITIONS

e.g. Quality, Quality Affecting, Grading

2. QUALITY PROGRAM

- purpose & objectives
- compliance with both NRC and DOE requirements.
- extent of involvement of QA organization

3. GRADING

- purpose
- basis
- objectives
- extent or exemptions

4. CENTRALIZATION OR DECENTRALIZATION

VISION

WORKSHOP RECOMMENDATION:

- **QAGR is not needed for all items/activities**
- **Examples: project control, administration, management, prelim/"scoping"**
- **Management Controls MUST be sufficient to demonstrate compliance with Regs., Orders**

VISION

ACTIONS: STAFF

- Review upper level document, and summarize guidance on grading/quality
- Summarize lessons learned from QRB, preparers
- Prepare draft definitions
- Summarize options related to vision needs - their pros & cons.

APPENDIX D (continued)

VISION**ACTIONS - MANAGEMENT**

- Develop vision statement (written)
- To ensure your ownership of vision:
 - dedicate time to solving this problem
 - do not delegate to staff

COMMUNICATE TO ALL

PROCEDURES & DOCUMENTS

- **Develop criteria for grading**
- **Modify existing procedures and related documents to incorporate vision, eg.**
 - QAPD
 - AP-6,17 & AP-5.28
 - Lists
- **Short Term - revise procedures to make simple changes, eg.**
 - QAGR form easier to use
 - eliminating worksheet
 - guidance on wording

COMMUNICATION & TRAINING

- **Provide representative QAGRs as good examples**
- **Provide "hands on" training for preparers and reviewers**
- **Provide same training for auditors**
- **Communicate use of product of grading process**

ACTION PLAN

SHORT TERM

- **Establish action time line**
- **Distribute accepted templates**
- **AP-5.28Q Quick Fix**
 - ...eliminate worksheet
 - ...streamline QAGR form
 - ...staff work on vision

MID TERM

- **Establish Management Vision**

LONG TERM

- **Rewrite procedure?**
- **Revise List?**
- **Improve Training**
- **Monitor Resolution of 76 Issues**

APPENDIX E

ACTION PLAN

<u>TASK</u>	<u>PERSON</u>	<u>DATE</u>
I. Identify QAGR Templates & respond to requests	J. Waddell	4/26
II. Input to management	Bob Barton	4/29
1. List of definitions (straw man or options for each definition)		
2. Brief summary of Orders & Regulations Straw man on the way program should address them.		
3. Requirements & Straw man on Grading.		
4. Discussion on pros/cons - issues on Centralize vs Decentralize.		
5. List of Policy decisions needed		
6. Information on purpose & objectives of grading (straw man)		
7. List of representatives from group.		
8. User/Producers list what products do for user/preparer.		
9. Answer from NRC RE: Natural barrier being treated as items resulting in one Q list		
10. Summarize lessons learned from QRB & preparers.		
III. Schedule Management Vision Retreat	Bob Barton	5/13
IV. Develop Training framework	Steve S. Asha, Terry	4/26
V. Schedule follow up meeting	Bob Barton	5/14