



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

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Picket 5*

February 25, 1988

MEMORANDUM: Robert E. Browning, Director  
Division of High-level Waste Management

FROM: F. Robert Cook, Senior On-Site Licensing  
Representative, Basalt Waste Isolation  
Project (BWIP)

SUBJECT: OPEN CONCERNS AND ISSUES FROM PREVIOUS REPORTS  
AND OTHER COMMUNICATIONS, SUMMARY OF

Following below is a list of previously identified concerns and issues which have some generic aspect to them and which have not been resolved or, where resolution was initiated, such resolution resulted in ineffectual or unsatisfactory actions in my judgement. Judgements are based on my current knowledge of the status of events, which knowledge being incomplete because of spotty or no communications with cognizant staff during the last five months. Hence some of the items identified, for example, issues raised as comments on the Quality Assurance Review Plan, may have been resolved by this time.

The item numbers preceded by "\*\*\*\*s" are in my judgement the more significant items with respect to assuring a successful completion of licensing, with fewer "\*"s indicating less significance.

CONCERNS AND ISSUES ARE AS FOLLOWS:

\*\*\*\*1. DOE IMPLEMENTATION OF EFFECTIVE DESIGN CONTROL--REF's:  
Memos of 9/22/83, #4a; 11/15/83, #1; 1/27/84; 4/11/84, Attach. A; 5/2/84, #3; 12/19/84, #1 and #2 and Attach. B; 1/30/85, #4; 4/19/85, #5; 10/30/85, #8C; 1/16/86, #1b; 1/16/86, #8a; 2/28/86, #3a; 5/8/86, Attach D; 10/1/86, #7c, #8b, #8c and Attachment G; 12/8/86, #7d and #8b; 6/26/87, #7b and #8b; 11/18/87, Comm. Carr discussion item #1a; Draft memo for 10/5/87 to 11/20/87, #8a;

\*\*\*\*2. APPENDIX 7 ISSUES--MEETINGS ACCESS, DEFINITION OF TECHNICAL VS MANAGEMENT MEETINGS, AUDIT OVER SIGHT, ACCESS TO INFORMATION, STAFF ACCESS TO SITE AND CONTRACTORS (SEE ITEM 19 ALSO)--REF's:  
Memos 9/29/83, #3; 1/9/84, #2; 11/8/84, #1 and #2; 4/19/85, #3; 5/31/85, #1; 10/30/85, Misc. item #b; 12/16/85, Misc. item #a; 1/16/86, 3a; 1/16/86, Misc. item c; 2/28/86, Misc item d; 4/7/86, Attach. C; 6/13/86, #1B; 6/13/86, Misc. item b and c; 7/18/86, Misc. item a; 10/1/86, #1d and #2b; 10/1/86, Attach. F; 12/8/86, Misc. item b; 6/26/87, #4c;

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\*3. INTERACTION WITH MEDIA/PUBLIC TRUST TRAINING FOR OR'S--REF's: Memos 9/22/83, #4b and #4c; 11/10/83, #1c and B;

\*\*4. PROVISION FOR CONTINGENCY IN TEST SCHEDULES, QA REVIEW PLAN REQUIREMENT--REF's: Memos 10/28/83(A), #1f; 12/05/83, #3;

\*\*\*5. DOE RELIABILITY ANALYSES WITH CONFIDENCE LIMITS QUANTITATIVELY IDENTIFIED, STP ON DESIGN--REF's: Memos of 10/28/83(C), #6; 5/8/86, #1c and #1d;

6. USGS CONFLICT OF INTEREST IN ADVISING NRC DURING LICENSING--REF's: Memos of 10/28/83, #8b;

\*7. INADEQUATE GEOLOGIC CORE INVENTORY AND CONTROL--REF's: Memos 11/7/83, #4;

\*8. PROCEDURES FOR HANDLING OF ALLEGATIONS OR EQUIVALENT DURING PRE-LICENSE APPLICATION--REF's: Memos of 11/10/83, #3;

\*\*\*9. ADEQUACY OF R&D TEST PROCEDURES AND RECORDS CONTROL--REF's: Memos of 11/28/83, #2; 1/30/85, #4; 7/3/85, #10; 7/18/86, #8c; 12/8/86, #8b;

\*\*\*\*10. ANALYTICAL BASES FOR R&D TESTING INCLUDING SITE CHARACTERIZATION, DESIGN CONTROL REQUIREMENT--REF's: Memos of 12/5/83, #1 and #2; 1/16/86, 1b;

\*\*11. COMPARATIVE EVALUATION OF ENVIRONMENTAL MATTERS AT LICENSING AND NRC STAFF INVOLVEMENT IN EIS RATIONALE AND DATA COLLECTION--REF's: Memos 1/19/84, #2; 5/2/84, #1B; 10/3/84, #8; 12/8/86, #6a;

\*\*\*12. DEFINITIONS OF "GROUND WATER TRAVEL TIME", "SUBSTANTIALLY COMPLETE", "DISTURBED ZONE" AND RELATED DEFINITIONS--REF's: Memos of 1/30/84, #3; 5/8/86, #1c; 12/8/86, #1b; 12/8/86, #4b; 6/26/87, #1a;

\*\*\*\*13. DOE CONTRACT INCENTIVES OF SCHEDULE ACHIEVEMENT VS QUALITY, CONTROL BY QA REQUIREMENTS--REF's: Memos of 2/21/84, #A, Attach. A1;

\*\*\*\*14. APPLICATION OF PART 21 OR EQUIVALENT RULES TO PRE-LICENSE APPLICATION DESIGN ACTIVITIES AT DOE AND THEIR CONTRACTORS, FORMAL NRC INVOLVEMENT--REF's: Memos of 2/21/84, #C; 4/11/84, Attach. A; 10/3/84, #5, #6 and Attach. D; 6/16/85; 11/18/87, Comm. Carr discussion item #4;

\*\*\*15. MANAGEMENT PRACTICES, ORGANIZATION, RESPONSIBILITY/AUTHORITY/QUALIFICATIONS AND QA AUDIT THEREOF--REF's: Memos of 2/21/84, Attach. A2 and A3; 5/2/84, #2;

\*\*\*16. APPROPRIATE DEFINITION OF "DESIGN", "RESEARCH AND DEVELOPMENT" AND "CONSTRUCTION", "VERIFICATION", "VALIDATION",

ETC. FOR QA APPLICATION, STP CHANGES, ETC.--REF's: Memos of 2/21/84, 3C; 4/11/84, Attach A, #5; 5/7/84, #4; 1/16/86, #8c; 2/28/86, Misc. item a; 2/28/86, Attach. A; 4/7/86, Misc. item 1; 5/8/86, Attach. D;

\*\*\*\*17. SPECIFICATION OF QA REQUIREMENTS SUPPLEMENTING PART 60--REF's: Memos of 5/7/84; 2/21/84, Attach. A;

\*\*18. REQUIREMENT FOR THERMAL-MECHANICAL IN SITU TESTING--REF's: memos of 4/16/84, #8;

\*\*\*19. DEFINITION OF A COMPLETE RECORD REGARDING APPENDIX 7 RELEASES AND DESIGN CONTROL REQUIREMENTS; RECORDS OF DESIGN DECISIONS (SEE ITEM 2 ALSO)--REF's: Memos of 11/1/84, 5; 11/6/84, #4; 11/8/84, #3 and Attach. B; 4/7/86, #8b; 6/13/86, Misc. item c; 12/8/86, Misc. item b; 11/18/87, Comm. Carr discussion item #1c;

\*20. MRS/REPOSITORY WASTE PACKAGE HANDLING SYSTEM DESIGN, COORDINATION OF--REF's: Memos of 11/8/84, #8; 1/16/86, 2a; 5/8/86, #1a;

\*\*21. APPROPRIATE LEVEL OF CONFIDENCE ASSOCIATED WITH DEMONSTRATING COMPLIANCE WITH GENERAL ENVIRONMENTAL STANDARDS DURING A LICENSING PROCEEDING--REF's: Memos of 11/8/84, Attach. C #9; 12/8/86, #4b;

22. WASTE FORM/PACKAGE TESTING IN A REPOSITORY ENVIRONMENT, STP REQUIREMENT FOR--REF's: Memos of 4/19/85, #9;

\*\*23. I-129 DOE INVESTIGATION REPORTS AND SUPPORTING DOCUMENTS; ALSO GAO INVESTIGATION REPORTS AND SUPPORTING DOCUMENTS--NRC OI INVOLVEMENT WHEN ISSUES ARE RELATED TO SUBSEQUENT LICENSING AND CURRENT DESIGN WORK--REF's: Memos of 4/19/85, #10; 5/8/85; 4/7/86, #6a; 10/1/86, #5a; 10/1/86, Misc. item c; 12/8/86, #5b and Misc. item b; 4/15/87, #5b; 4/15/87, Misc. item a; 5/6/87 memo to file; 6/26/87, #5c;

\*\*\*\*24. SPECIFICATION OF REQUIREMENTS FOR Q-LISTS AND CLARIFICATION OF PERTINENT DEFINITIONS, FOR EXAMPLE, "IMPORTANT TO SAFETY", "PUBLIC HEALTH AND SAFETY", "ISOLATION", "SAFETY RELATED", ETC.--REF's: Memos of 7/3/85, Attach. A; 12/16/85, #8a; 1/16/86, 8c; 7/18/86, #1b and #8a;

\*\*\*25. BORE HOLE AND SHAFT SEAL INTEGRITY FOR THE LONG TERM, INCLUDING CONSIDERATION OF SEISMICITY--REF'S: Memos of 10/30/85, #2B;

\*26. HANDLING OF AND ACCESS TO PROPRIETARY INFORMATION UNDER DOE'S OR A CONTRACTOR'S COGNIZANCE--REF's: Memos of 1/16/86, #3b; 1/16/86, Misc. item d; 5/8/86, Misc. item a;

\*27. IDENTIFICATION OF HIGH LEVEL WASTES AND RADIOACTIVE NUCLIDE INVENTORY IN THE ENVIRONMENT AT A REPOSITORY--REF's: Memos of 1/16/86, #6a; 4/7/86, #5a; 6/13/86, #6a; 12/8/86, Misc. item a;

\*\*28. REQUIREMENTS FOR HANDLING TOXIC OR CHEMICALLY HAZARDOUS WASTES MIXED WITH HIGH LEVEL WASTE OR SPENT FUEL AT A REPOSITORY, INCLUDING THE FISSION PRODUCT SELENIUM--REF's: Memos of 1/16/86, #6a; 4/7/86, #5a; 5/8/86, #4c and 6a;

\*\*29. THE SAME WORKERS SUBJECT TO TWO OR MORE DIFFERENT QA PLANS, REF's: Memos of 1/16/86, #8b;

\*\*\*30. EFFECTIVE, UNABRIDGED IMPLEMENTATION OF APPENDIX 7 ACCESS PROVISIONS AT DOE AND THEIR CONTRACTORS--REF's: Memos of 1/16/86, Misc. item #a; 1/16/86, Misc. item c; 2/28/86, Misc item e; 4/7/86, Attach. C; 5/8/86, Misc. items a and b; 10/1/86, #2b;

\*\*31. COMPLEX MANAGEMENT/ORGANIZATIONAL CONFIGURATIONS INDICATIVE OF UNSATISFACTORY QUALITY IN A PROJECT--REF's: Memos of 2/28/86, #1d;

\*\*\*32. NRC STAFF INTERACTION WITH DOE IN READINESS REVIEWS TO REACH AGREEMENT ON OPERATING PROCEDURES, REQUIREMENTS, ETC. TO BE INVOKED--REF's: Memos of 1/16/86, Misc. item b.;

\*\*\*33. PERFORMANCE ALLOCATION TO CONCEPTUALIZED BARRIERS OF THE REPOSITORY AS PART OF DESIGN CONTROL; REF's: Memos of 2/28/86, #4b; 5/8/86, #1b; 12/8/86, #4b; 4/15/87, #4a;

34. DOE'S NEED TO OBTAIN A LICENSE FOR HANDLING SPENT FUEL FROM A FOREIGN REACTOR--REF's: Memos of 2/28/86, Misc. item b;

35. CONDUCTING FREQUENT DOE/NRC MEETINGS IN THE STATES--REF's: Memos of 2/28/86, Misc. item c;

\*\*\*36. QA MANAGER INDEPENDENCE FROM SCHEDULE/PRODUCTION INFLUENCES, ORGANIZATIONAL INDEPENDENCE--REF's: Memos of 5/8/86, #8c; 6/26/87, #8d;

\*\*\*\*37. NRC REGULATION OF DESIGN ACTIVITIES WITH EMPHASIS ON QUALITY ASSURANCE IN DESIGN--REF's: Memos of 6/5/86, #2, #5, #6, #7, #8; 11/18/87 Comm. Carr discussion item #5;

\*\*38. CONSISTENCY OF DEFINITIONS OF THE TERMS "UNDISTURBED PERFORMANCE", "UNANTICIPATED PROCESSES AND EVENTS", "ANTICIPATED PROCESSES AND EVENTS", "HUMAN INTRUSION", "AQUIFER", "CONTAINMENT", "DISPOSAL SYSTEM" AND "GEOLOGIC REPOSITORY" BETWEEN NRC RULES AND EPA STANDARDS--REF's: Memos of 8/15/86, all items;

\*\*\*39. APPLICATION OF QA REQUIREMENTS TO WASTE PACKAGE DESIGN AND CONSTRUCTION, CONSIDERATION AS PART OF SITE CHARACTERIZATION PLANNING--REF's: Memos of 10/1/86, #1c; 12/8/86, #1d;

\*\*\*40. QUALITY ASSURANCE REVIEW PLAN ITEMS--REF's: Memos of 10/1/86, #8a and Attach. G;

\*\*\*41. GRADED QUALITY ASSURANCE, IMPLEMENTATION OF--REF's: Memos of 12/8/86, #8c; 4/15/87, #8d;

42. POTENTIAL ETHICS IN GOVERNMENT VIOLATION--REF's: Memos of 12/8/86, Misc. item b; 1/12/87; 3/6/87;

\*\*\*43. SCOPE OF QUALITY ASSURANCE REQUIREMENTS, DO THEY INCLUDE MANAGEMENT AND/OR ADMINISTRATIVE SYSTEM REQUIREMENTS AND PROCEDURES--REF's: Memos of 4/15/87, #8b, #8c and #8d; 11/18/87, Comm. Carr discussion item #1b;

\*\*44. APPLICATION OF STATISTICAL RISK ASSESSMENTS TO WORKER SAFETY EVALUATIONS, DECISION WITH RESPECT TO--REF's: Memos 6/62/87, #4d;

\*\*\*45. INITIATION OF GOOD HORIZONTAL COMMUNICATION AMONG PROGRAM TECHNICAL PARTICIPANTS-REF's: Memos of 6/26/87, Misc. item d and Attach. G Protocol; 9/23/87, YIN #4 and CTIUR #4;

\*\*\*46. APPLICATION OF CRITERION X, 10 CFR 50 APPENDIX B, TO SITE CHARACTERIZATION ACTIVITIES--REF's: Draft memo for 10/15/87 to 11/20/87, #8b.



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