WM Record File 101.2

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WM DOCKET CONTROL CENTER
MAR 4 '85

(Return to WM, 623-SS) C2 **TRIP REPORT**

To: NA/M. L. Raines cc:NA/CSHarlan/LTSpence/DKNetzband NB/RGCagle (Boeing/HS-02) ND/TJAdams NE/JADavison NS/JBHammack	Date December 13, 1984

Name of Traveler(s)	Title
Joseph H. Levine	Chief, Reliability Division

Place(s) Visited	Date(s) of Visit
Hanford Reservation DOE (Department of Energy) Richland, Washington	December 9-12, 1984

Reason for Travel

To participate in DOE/NRC (Nuclear Regulatory Commission) preliminary conference on quality assurance to minimize downstream licensing concerns (per earlier agreement between NASA/JSC and NRC).

Name(s) of Person Visted	Title
O. L. Olsen	Manager, Richland Operations Office

Action Taken

- o Participated in a NRC team review (see enclosure 1) of the Basalt Waste Isolation Project at Hanford, Washington. Other meetings were planned at the other proposed waste management sites for later in the week and the following week.
- o Briefings provided by NRC (see enclosure 2), DOE and Rockwell (see enclosure 3), on their approach to quality assurance. This was a public meeting and representatives were there from public groups and involved Indian nations.
- o The NRC team leader was J. Kennedy (NRC/NMSS)
- o A copy of the enclosures is available from the traveler.

Comments Regarding Effectiveness and Results of Visit(s)

- o A number of issues and observations were raised by the NRC team which included: (a) scope of the detail involvement in the project by DOE, (b) the role of the Rockwell quality assurance organization versus the engineering organization, (c) how to handle old data that may have been produced without the "new" quality assurance approach, (d) quality assurance content in the site characterization plan, (e) specific approach to how quality assurance is delegated to line organizations, (f) format of detailed procedures to assure quality assurance controls, and (g) application of aerospace disciplines to high level waste management such as the problem reporting and corrective action system.

Recommendations

It would be useful to compare the issues and observations from the three site visits, and arrange detailed discussions to assure early NRC/DOE agreement of what constitutes an accepted quality assurance approach for high level waste management.

Signature(s)
Joseph H. Levine

JSC Form 588 (Rev Oct 84) Previous editions are obsolete. NASA-JSC

1254

PRODUCT

- MEETINGS MINUTES
- NEED TEAM INPUT ON ISSUES
- FOLLOW-UP

SPECIFIC ISSUES

ON IMPLEMENTATION FOR DOE

- DATA QA VS HARDWARE QA - INSPECTIONS, NCR'S, E.G.
- OVERSIGHT OF CONTRACTORS
- INDEPENDENCE OF QA ORGANIZATIONS
- RECORDS - PRELIMINARY VS FINAL
- DESIGN CONTROL - WHEN SHOULD IT START?
- AUDITING OF SUBTIERS (NNWSI BLOCKED AT SANDIA)
- LOS ALAMOS/USGS INTERFACE AT NNWSI
- GRADED QA - WHAT DOE THIS MEAN IN PRACTICE?
- REPLICATION

PROTOCOL

- o LIMITED IN "POSITIONS" OF STAFF DUE TO EARLY PHASE OF PROGRAM
- o TEAM EFFORT
- o JEK TO SPEAK ABOUT NRC POSITIONS
- o DOCUMENTED ISSUE IDENTIFICATION BY TEAM AND INDIVIDUALS FOR DOE
  - FOCUS ON "HARD," CONTENTIOUS QUESTIONS
- o TEAM MEETING EACH NIGHT

TEAM

J. Kennedy, NMSS
S. Bilhorn, NMSS
J. Greeves, NMSS
W. Altman, IE
C. Walenga, IE
J. Levine, NASA
W. Bland, Consultant
On-site representative

E

GOALS FOR QA VISITS

- FACT-FINDING AND FAMILIARIZATION WITH DOE PROGRAM
- EARLY IDENTIFICATION OF QUALITY ASSURANCE ISSUES
- DISCUSSION OF QA REVIEW PLAN
- ULTIMATELY, TO HAVE A DOE QA PROGRAM IN PLACE WHICH WILL ADEQUATELY ASSURE THE QUALITY OF SITE CHARACTERIZATION PHASE WORK

DOE QA PROGRAM

REVIEW

HLW REPOSITORY ACTIVITIES

SITE CHARACTERIZATION

- o GEOTECHNICAL INVESTIGATIONS
- o LABORATORY AND FIELD WORK
- o EXPLORATORY SHAFT AND UNDERGROUND TEST FACILITY CONSTRUCTION

REPOSITORY DEVELOPMENT

Conceptual Design

- o SUFFICIENT DETAIL TO SCOPE SITE CHARACTERIZATION PROGRAM

Final Design Completion

- o SUFFICIENT FOR PERFORMANCE ASSESSMENT AND CONSTRUCTION

Update Design

- o "AS BUILTS"
- o ADDITIONAL DETAILS ON OPERATIONS AND HANDLING

Construction

- o SURFACE AND SUBSURFACE FACILITIES

Operations

- o SURFACE AND SUBSURFACE FACILITIES

PERFORMANCE CONFIRMATION

- o GEOTECHNICAL TESTING
- o WASTE PACKAGE TESTING

SCP						
1984	1990	1991	1994	1996	1998	CLOSURE / DECOMM.
3 CANDIDATE SITES CHOSEN	1 SITE CHOSEN	CAA	CA	LA	OL	

FIGURE 4-2
ILLUSTRATION OF A PERMANENT REPOSITORY

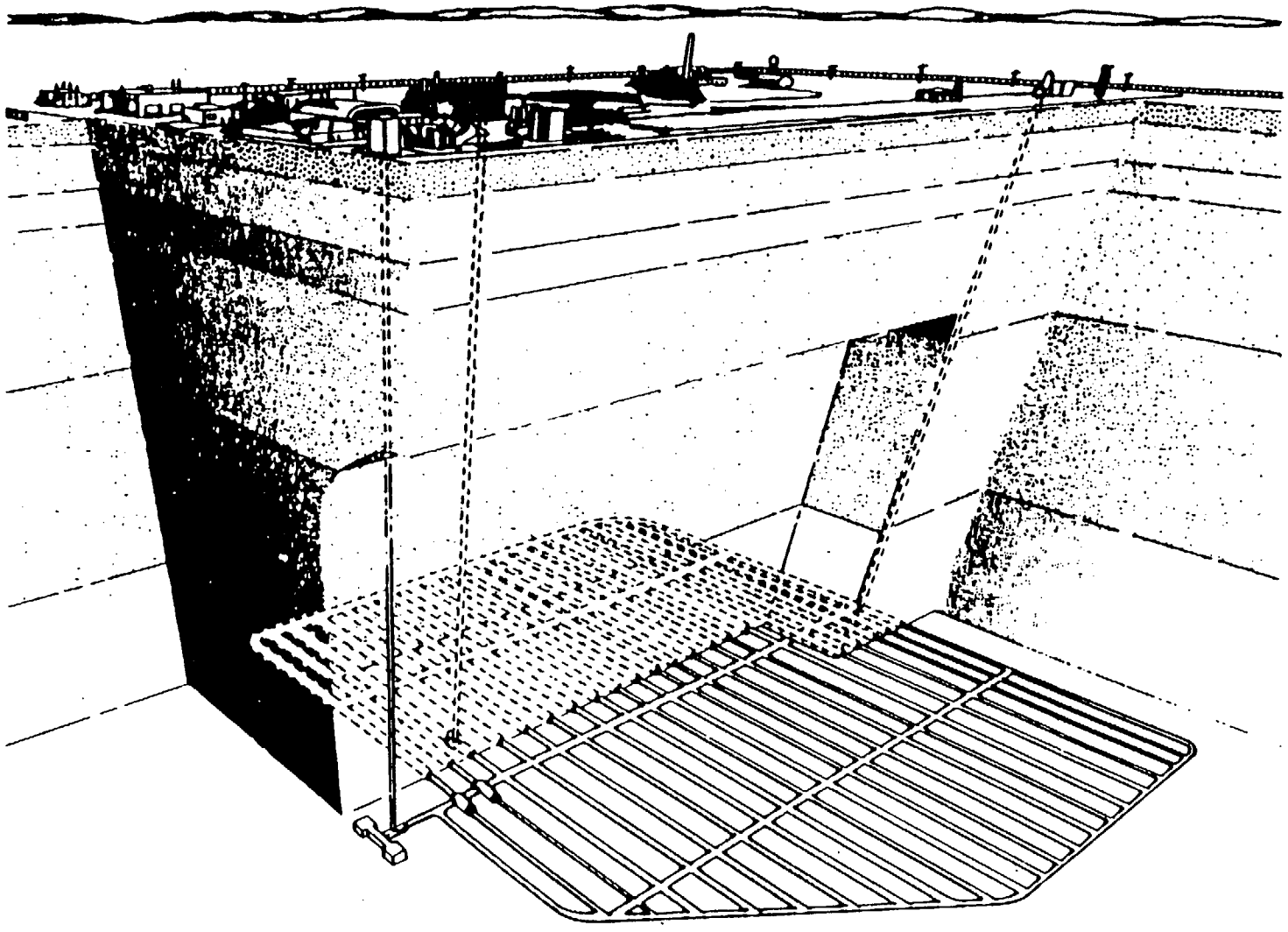
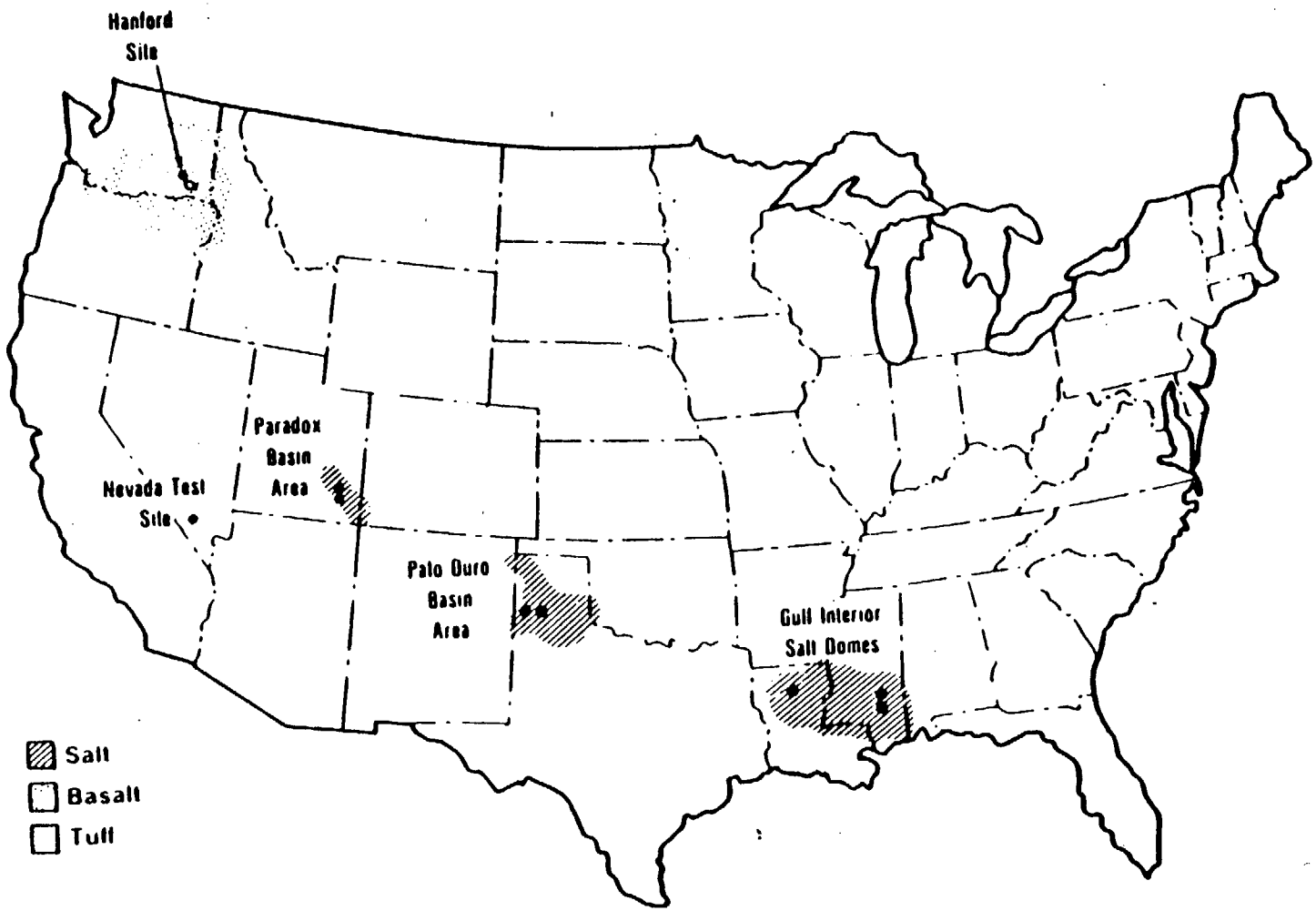
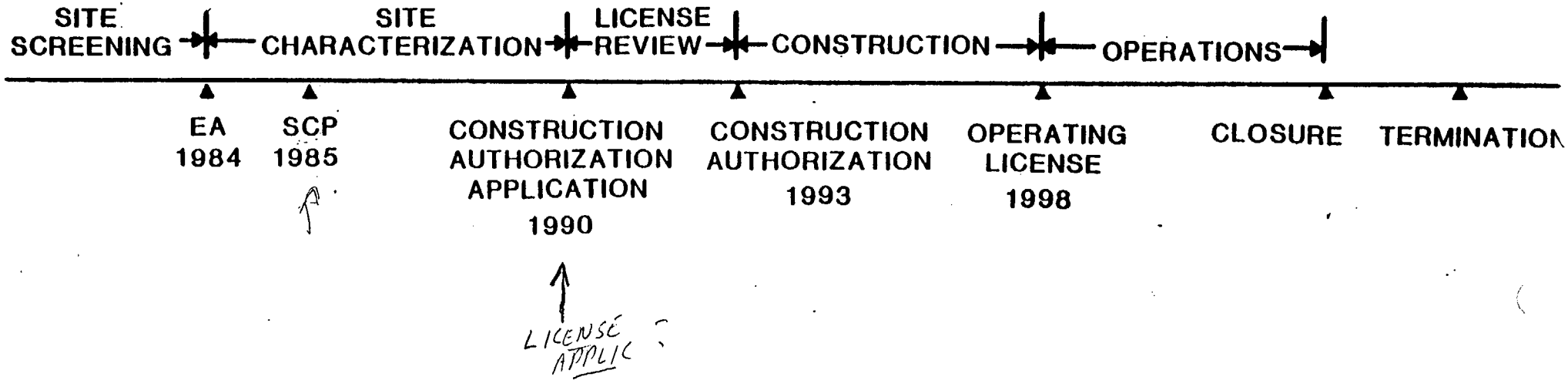


FIGURE 4-1
POTENTIALLY ACCEPTABLE SITES FOR THE FIRST REPOSITORY





NWPA MILESTONES

ENCL ~~ATTACH~~ 1

Document Name:
TEAM MEETING

Requestor's ID:
EMMAC

Author's Name:
James Kennedy

Document Comments:
QA SITE VISITS

NWPA

- REACTORS ARE DIFFERENT FROM HLW REPOSITORIES
- SOME QA MEASURES NOT APPLICABLE TO ALL ACTIVITES
- NRC NEEDS TO BECOME MORE FAMILIAR WITH DOE PROGRAMS
- DOE NEEDS TO BECOME MORE FAMILIAR WITH NRC POLICIES
- NRC APPROACH TO QA BEING MODIFIED AS A RESULT OF FORD STUDY
- SRP A BASELINE DOCUMENT TO BEGIN PROCESS
- UNIFIED NRC APPROACH
- EVOLUTION
- OPENNESS
- COMMUNICATION

NWPA

NRC	DOE
INDEPENDENCE OF QA ORGANIZATION	LINE MANAGEMENT RESPONSIBLE
NRC REGULATOR	DOE RESPONSIBLE FOR PROJECT
REACTOR LESSONS IN QA	LESSONS APPLICABLE TO NON-REACTOR ACTIVITIES
NQA-1	NQA-1

NRC QA PROGRAM PLAN

- COMPUTER SOFTWARE
- MRS, ISFSI
- HLW
- NQA-1
- READINESS REVIEWS

PREMISES OF QA PROGRAM PLAN

- LICENSEES ARE PRIMARILY RESPONSIBLE FOR QUALITY. LICENSEE MANAGEMENT MUST ASSUME RESPONSIBILITY FOR QUALITY AND BE HELD ACCOUNTABLE FOR FAILURES.

- SUBSTANTIVE IMPROVEMENTS IN QUALITY MUST COME FROM THE INDUSTRY ITSELF. THEY CANNOT BE "INSPECTED IN."

- THE FOCUS OF NRC AND INDUSTRY QA PROGRAMS SHOULD BE ON PERFORMANCE, NOT PRESCRIPTIVENESS.

- NRC AND INDUSTRY QA PROGRAMS SHOULD BE ORIENTED TOWARD PREVENTION AND EARLY DETECTION.

- QA PROGRAMMATIC ACTIVITIES TO ASSURE QUALITY SHOULD NOT INTERFERE WITH THE ACHIEVEMENT OF QUALITY.

- QA IS A MANAGEMENT TOOL FOR MONITORING AND CONFIRMING WORK. IT IS NOT A SUBSTITUTE FOR MANAGEMENT.

- GREATER PREDICTABILITY SHOULD BE RESTORED TO THE LICENSING AND REGULATORY PROCESS. LACK OF PREDICTABILITY HAS AN ADVERSE EFFECT ON QUALITY.

FORD AMENDMENT STUDY

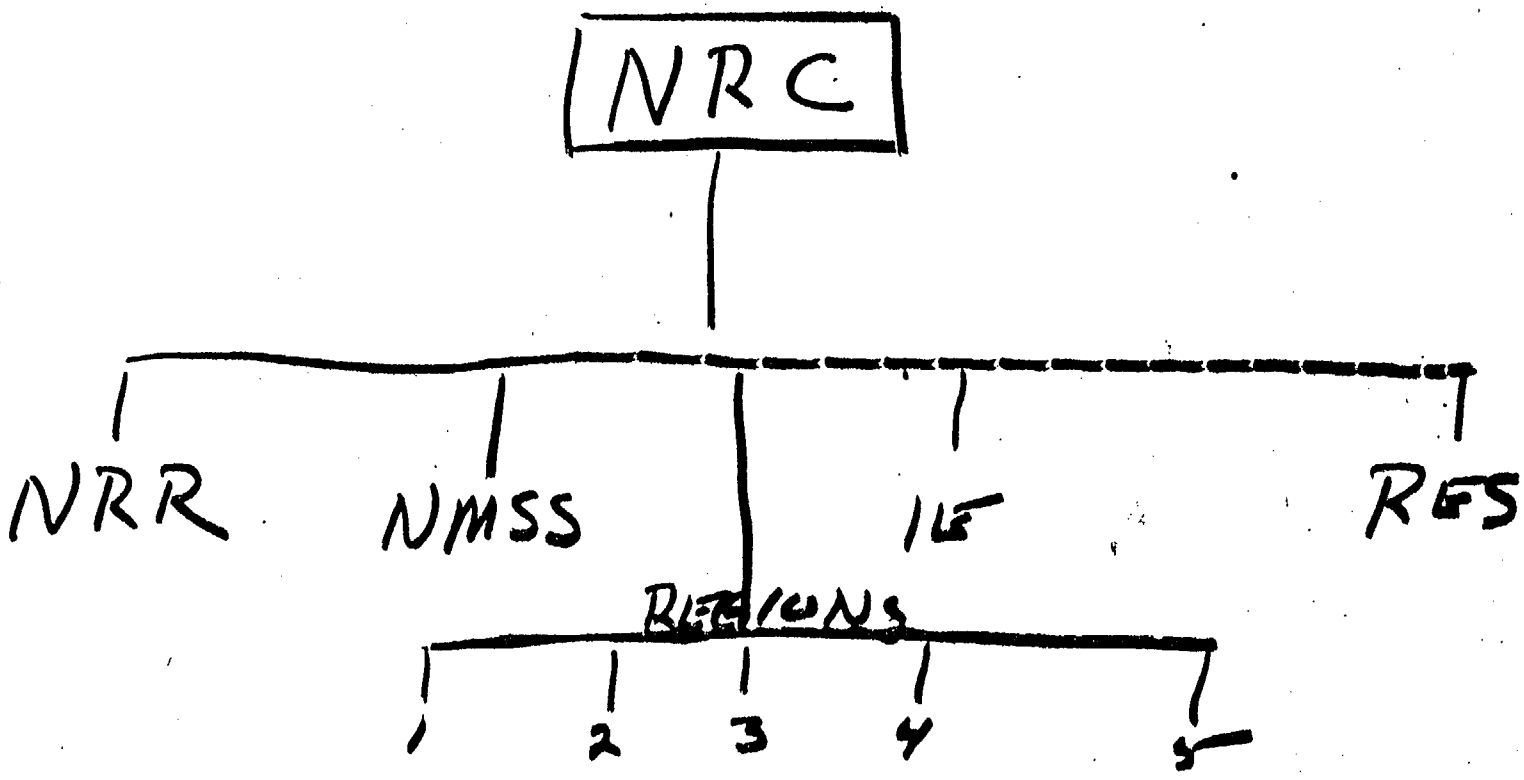
ROOT CAUSES OF PROBLEMS

- CHANGING ENVIRONMENT
  - CHANGING PUBLIC PERCEPTION OF NUCLEAR POWER
  - LONG CONSTRUCTION PERIOD
  - CHANGING STATE OF ART
  - CHANGING DESIGN REQUIREMENTS
  - MORE ACTIVE OPPOSITION: QA AN ISSUE
- NRC
  - FAILURE TO ADEQUATELY SCREEN FOR EXPERIENCE, MANAGEMENT CAPABILITY
  - ASSUMPTION OF UNIFORM LEVEL OF INDUSTRY COMPETENCE
  - FOCUS ON OPERATIONS AT EXPENSE OF DESIGN AND CONSTRUCTION
  - CHANGING REQUIREMENTS

FORD AMENDMENT STUDY

ROOT CAUSES OF PROBLEMS

- INEXPERIENCE
  - LACK OF UNDERSTANDING OF PROJECT, OF REGULATORY REQUIREMENTS
  - FAILURE TO TREAT NUCLEAR DIFFERENT FROM PAST PROJECTS
  - INADEQUATE STAFFING
  - OVER RELIANCE ON CONTRACTORS
  - FAILURE TO RECOGNIZE SYMPTOMS
  - MANY INTERFACES, COMPLEX FIRST OF A KIND PROJECT
  - UNPREPARED FOR ACTIVE INTERVENTION
- MANAGEMENT
  - LACK OF INVOLVEMENT
  - DIFFUSION OF RESPONSIBILITY, DILUTED ACCOUNTABILITY
  - VIEW OF QA AS ANOTHER REGULATORY REQUIREMENT, NOT AS MANAGEMENT TOOL OR AS NECESSARY FOR LICENSING
  - "TEA KETTLE" SYNDROME
  - FALSE SENSE OF SECURITY
  - RELIANCE ON NRC TO DETECT PROBLEMS



- NMSS resp for licensing HLW, MRS
- IE has policy lead for QA
- NMSS / IE interface on QA for HLW

QA

LICENSING
DESIGN INSP
IDUP
Some Generic
Issues

Policy
Program Development
Special Studies
Codes, Standards
Rules
Research
QA Program Plan

ENCL
~~ATTACH~~ 2

NRC - DOE

HLW SITE VISITS FOR QUALITY ASSURANCE

Enclosure 2

11:00 a.m.	QUESTIONS, ANSWERS, COMMENTS	All
12:00 Noon	LUNCH	
1:00 p.m.	EXIT MEETING PREPARATION Participants caucus to prepare for exit meeting	All
3:00 p.m.	EXIT MEETING (RECONVENE) Discuss meeting results and conclusions Prepare meeting minutes	All
4:30 p.m.	ADJOURN	

December 12, 1984

8:00 a.m.	FIELD TOUR DEPARTS FEDERAL BUILDING
12:00 Noon	TOUR ENDS WITH RETURN TO FEDERAL BLDG. - MEETING OVER

2:00 p.m.	BWIP MANAGEMENT SYSTEMS AND CONTROLS Mission Definition Data Requirements Identification Issue Correlation Work Definition Traceability Data Base Management Project Document Hierarchy (15 minute break when appropriate)	T. W. Woods
4:00 p.m.	ROCKWELL QA/MANAGEMENT SYSTEMS Implementation Key Actions Schedules	M. F. Nicol
5:00 p.m.	ADJOURN	

December 11, 1984	RECONVENE	
8:00 a.m.	PROJECT OFFICE QUALITY ASSURANCE PLAN Review and discuss major points, including design and test control graded quality assurance records management, etc. Identify implementation plans, schedules and procedures	G. J. Bracken
9:15 a.m.	BREAK	
9:30 a.m.	BWIP MANAGEMENT SYSTEMS AND CONTROLS Using examples, show how the developing management systems will control BWIP work from the initial definition of top level requirements to the eventual performance of data gathering and analysis activities.	E. B. Ash T. W. Woods

ENCL 1

AGENDA

DOE/NRC QUALITY ASSURANCE MEETING
BASALT WASTE ISOLATION PROJECT
December 10-12, 1984

Location: Holiday Inn
1515 George Washington Way
Richland, Washington

December 10, 1984

8:15 a.m.	DOE INTRODUCTION AND WELCOME Introduce DOE/Contractor Staffs Discuss goals for meeting Highlight agenda for workshop	O. L. Olson
8:30 a.m.	NRC INTRODUCTION AND DISCUSSION Introduce Staff Discuss goals for meeting Present review plan background Discuss NRC QA organization and responsibilities	J. Kennedy
9:30 a.m.	OVERVIEW - BWIP QUALITY ASSURANCE Project QA Philosophy DOE Safety & QA System BWIP Quality Program Organization Responsibilities Project Management systems and controls QA program development QA program assessment Issues and major actions Implementation (15 minute break when appropriate)	O. L. Olson R. E. Gerton
12:00 Noon	LUNCH	
1:00 p.m.	OVERVIEW - ROCKWELL QUALITY ASSURANCE PROGRAM FOR BWIP Organization Rockwell Responsibilities as BWIP Technical Manager Current QA/Management Systems Issues and Major Actions QA/Management Systems Development Challenges Ahead	E. B. Ash

Enclosure 1