



Department of Energy

Richland Operations Office

WM DOCKET CONTROL CENTER
P.O. Box 550
Richland, Washington 99352

86-LES-102

'86 SEP 12 11:15 SEP 4 1986

Mr. John J. Linehan, Acting Chief
Repository Projects Branch
Division of Waste Management
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Linehan:

NRC-BWI DIVISION SITE MANAGEMENT MEETING IN RICHLAND, WASHINGTON,
AUGUST 4, 1986

The attached summary meeting minutes have been provided to the participating states, tribes, and attendees as appropriate for their information. We expect to continue our dialogue on the identified open items with the objective of mutually acceptable resolution of these items. We further expect to contact you shortly to establish mutually acceptable dates for the next Site Management meeting as well as technical workshops on Performance Assessment and Geohydrology, identified in the meeting.

If you have any questions regarding this letter or the attachment, please contact Mr. J. M. Kovacs of my staff, FTS 444-1291.

Sincerely,

O. L. Olson

O. L. Olson, Director
Basalt Waste Isolation Division

BWI:JMK

Attachment

cc w/attachment:

W. J. Purcell, DOE-HQ
J. P. Knight, DOE-HQ
D. L. Vieth, DOE-NV
J. O. Neff, DOE-SRPO

WM Record File

101.2

WM Project *10*

Docket No.

PDR ☒

LPDR ☒

Distribution:

Linehan

Hildenbrand

(Return to WM, 623-SS)

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NRC/BWIP PROJECT MANAGEMENT MEETING

AUGUST 4, 1986
RICHLAND, WASHINGTON

ATTENDEES

A list of attendees and their organizational affiliations is attached as Enclosure 1.

BACKGROUND

The meeting followed the topics outlined in the agenda (Enclosure 2). Copies of viewgraphs and handouts used by the Department of Energy-Richland Operations Office (DOE/RL) and the Nuclear Regulatory Commission (NRC) are attached as Enclosures 3 & 4.

The NRC objectives for the meeting were: Presentation of the NRC five year plan, identification and agreement on significant pre-Site Characterization Plan (SCP) technical concerns and NRC/DOE interactions needed to address these concerns, and discussion of specific aspects of the site specific procedural agreement including timely release of data, planning and conducting meetings and Appendix 7 assignments.

BWID ORGANIZATION

DOE/RL and Rockwell Hanford Operations (RHO) presented descriptions of their respective organizations. Rockwell has undergone a major restructuring of the organization reflecting a greater emphasis on site characterization as opposed to a pre-selection mode of operation. (See Enclosure 3 handouts for more specific details.)

NRC/WASTE MANAGEMENT ORGANIZATION

The NRC presented a description of the Division of Waste Management organization. As a matrix, the Repository Projects branch directs and integrates repository related activities with support provided by the Geotechnical, Engineering, and Policy and Program Control branches. Technical support is also provided at this time by numerous technical assistance contractors. Also involved in the program are the Office of the General Counsel, Inspection and Enforcement and Research together with the Advisory Committee on Reactor Safeguards.

NRC PLANS

The NRC presented its five year plan and the status of both generic and site specific planning efforts. Basically, the five year plan lays out the NRC's strategy and objectives from now until the filing of the license application. The primary objective of the plan is to provide for an aggressive program focused on those activities necessary to provide sufficient licensing guidance to the DOE and sufficient interaction with the DOE, States, Indian tribes and other agencies in order to identify and, to the extent possible, resolve as many licensing open items as possible prior to the licensing hearing.

The NRC believes this open item identification and resolution process should start now rather than waiting until after the SCP has been issued. The DOE observed that considering their limited manpower and aggressive program to meet programmatic milestones and schedules specified by the Nuclear Waste Policy Act (NWPA), they may not have time to meet as frequently prior to release of the SCP as proposed by the NRC. Additionally, the DOE may disagree with the NRC over the significance of particular concerns. The NRC responded that it is the DOE's call as to whether we have interactions early on or after the SCP. Waiting until after the SCP may have more of an impact on their program since the amendment to 10CFR Part 60 will require the DOE to consider the NRC's comments on the shaft portions of the SCP prior to starting shaft construction. However, DOE intends to provide NRC discrete draft chapters of the SCP prior to release of the assembled SCP document to facilitate their review.

The NRC also pointed out that they are developing technical positions on acceptable methodologies as an additional mechanism for resolving open items but that they were not precluding the potential of rule making as an additional resolution process. The DOE asked if the rule making process would be negotiated. The NRC responded that they are considering all options at this time but that any rule making process would not go forward without the support of the DOE.

The primary focus of the NRC site specific planning exercise has been to identify significant technical concerns which the NRC and DOE need to work towards resolution prior to SCP issuance thereby avoiding potential major review and construction delays. A listing of significant Pre-SCP technical concerns and proposed interactions for resolving these concerns was presented and discussed. (See Enclosure 4.) It was pointed out by the NRC that this listing does not contain all concerns but are considered to be those which should be addressed and, to the extent practicable, resolved prior to issuance of the SCP. The DOE agreed that interactions in the form of workshops are needed in the areas of hydrology and performance assessment.

They further questioned the logistics of having so many interactions in such a short period of time. The NRC requested that the DOE review the concerns and proposed interactions and provide feedback as to what interactions they will be able to support. DOE agreed to do this in coordination with DOE-HQ. The NRC also indicated that they need to know the DOE's milestones and schedules to more effectively plan interactions that DOE will be ready to participate in.

The DOE indicated that they need to be informed of what the NRC activities and milestones are in the area of guidance document preparation. The NRC stated that they are currently completing a new system which will provide for this type of information and agreed to send copies to DOE on a regular basis. This system should be completed in the near future.

The NRC requested feedback from the DOE on GTP's that are being issued. The DOE indicated that several GTP's are under review at the present time and that comments would be forwarded via headquarters as they are completed.

The NRC emphasized the need for identifying resolution of existing NRC concerns that have been raised through past interactions and reviews of the Site Characterization Report (SCR), Draft Environmental Assessment (DEA) and various other documents. The DOE noted that some issues identified in the past may no longer be valid. The NRC noted that these concerns should be identified and agreement reached by all participants that these concerns have or have not been resolved. The DOE responded that such a review of concerns is desirable and will be addressed for resolution during site characterization.

BWID PLANS (SCP)

The DOE presented the current SCP schedule which now proposes issuance to the public in March 1987. DOE indicated that drafts could be made available to the NRC after the second draft stage which reflects DOE/RL, DOE/HQ and Rockwell review (See Enclosure 3.) The second drafts are scheduled to be released between mid October and the first of December 1986.

The site characterization semiannual document is envisioned by the DOE to be a progress report showing changes being made in test plans and overall progress to date. They do not plan to provide actual page changes to the SCP itself. There was agreement by the DOE and NRC that additional discussion is necessary concerning the scope, and content and timing of the document.

The DOE presented an explanation of its issue resolution strategy process which provides the mechanism for identifying issues and resolving them. (See Enclosure 3.) The NRC noted that the approach to issue resolution was to use logical scenarios rather

than conservative scenarios. The NRC made the observation that this type of approach may put the DOE at risk if the scenarios are incorrect. DOE responded that there is risk involved no matter what approach is taken. The NRC considers it needs to review what DOE considers to be logical and provide feedback to DOE as to its appropriateness. DOE indicated that a first draft of the document is scheduled for release by the end of September 1986, and it may be possible to release it to NRC at that time.

Additionally, the sample licensing strategy for Issue No. 1.4 (see Enclosure 3) listed several design assumptions which may not reflect uncertainties. NRC considers this could potentially lead to an insufficient testing scope to provide bases for future assessment methodologies. In this regard, the NRC did not necessarily agree with the design assumptions as presented in this example.

RELEASE OF DATA AND DOCUMENTATION:

DOE presented a description of the Basalt Records Management Center (BRMC) (see Enclosure 3). DOE noted that its center would not have all the recorded information pertinent to the project, but some information generated outside the DOE sponsored work would be contained in a reference library.

DOE noted that only project produced reports are identified in the Document Accessions List; however, most records created by Rockwell are sent to the BRMC for storage. Contractor records, for example, data concerning instrument calibration, is not stored in the BRMC, but should be present in individual contractor records systems.

DOE noted that draft documents, which are early revisions to final documents in the BRMC, and other information pertinent to the creation of any given final document (for example, comments and pertinent review comment records) are retained in BRMC and can be made available upon request of a program participant once a final document is issued.

The availability of draft documents prior to completion of the final was noted by NRC as a desirable condition to allow early review and feedback to DOE. DOE noted that such feedback would be disruptive and did not in general concur with the desirability of making draft documents available for NRC review other than to the OR.

NRC noted that availability of drafts for NRC staff review under Appendix 7 and general availability for retention would be the subject of a future NRC DOE/HQ meeting on NRC/DOE interactions.

MEETINGS

The NRC indicated that it was important to have management meetings at regular intervals. DOE agreed that a quarterly time frame is a good target. It was proposed by the NRC that a general type of agenda be developed for the management meetings similar to what the Salt Repository Project Office (SRPO) proposed at their last management meeting. This would allow for continuity and consistency of such interactions. DOE indicated that they would consider the proposal. DOE indicated that it was their position that, depending on the agenda, there is no reason why some management meetings cannot be closed. This should be considered on a case-by-case basis. The NRC concurred that there may be a need at times for limited participation at management meetings.

The NRC stated that technical meeting agendas should focus on identifying and working towards resolution of specific concerns. This may include reaching total resolution, or agreeing to needed follow-up activities that will lead to resolution. Technical meetings should consist of more of a workshop atmosphere with less emphasis on large-scale, broad presentations. Pre-meeting materials should be prepared as far in advance of the meeting as possible to allow all participants a chance to provide input to the agenda topics. The NRC suggested that attempts should be made to make the meeting minutes more understandable, perhaps in a narrative form, clearly indicating agreements, disagreements, and those activities required to reach resolution. The DOE observed that this may not be practical for technical meetings.

Discussions were held concerning involvement by NRC and DOE headquarters management in meeting agreements. The NRC stated that presently the Director of the Division of Waste Management reviews the meeting summary and discusses the meeting with the involved NRC staff immediately following the meeting. The DOE observed that some mechanism should be developed to assure upper management concurrence in meeting agreements since often those people signing the minutes do not have the authority to make commitments.

The NRC also introduced the concept of briefings as another interaction option. Briefings would be used for selected topics requiring an overview of a particular program area. They would consist of a one or two hour presentation to the NRC staff by one or two DOE technical staff. Only questions for clarification would be entertained. These briefings would be open and announced with an agenda provided as for technical meetings. Brief summaries would be prepared consisting of an attendees list, agenda, and copies of viewgraphs and handouts. It is expected that the scope of briefings would be similar to the briefing DOE-HQ gave to the NRC staff on the decision aiding methodology. The DOE concurred that the concept was valid but

questioned whether one or two DOE individuals could provide an adequate technical presentation on such broad topics.

APPENDIX 7 ASSIGNMENTS

In response to the number of Appendix 7 assignments proposed by the NRC during the site specific planning presentation (see Enclosure 4, the DOE responded that they could not support that many interactions due to the disruption it would cause. Additionally, the DOE stated that they had not envisioned Appendix 7 to allow for short term attachments to the NRC On-site Representative's (OR's) office. The DOE believes that activities of this nature would require a revision to Appendix 7. They expressed concern that NRC is circumventing the data review concept which allows states and tribal participation. The DOE further indicated that data reviews may be a better vehicle for accomplishing the types of interactions presently being proposed under Appendix 7 assignments.

TECHNICAL COMMUNICATORS

The DOE provided a revised listing of technical communicators for the project. The NRC indicated that, because of their monitoring role within the organization, technical communicators many times cannot provide immediate answers to NRC technical staff during telephone conversations. The NRC suggested that perhaps secondary contacts consisting of senior technical contractor personnel similar to Nevada's technical communicator network, may expedite the transfer of technical information. The NRC asked for feedback from the DOE as to how their communicators perceive the situation. The DOE responded that they would have to take a hard look at the situation before determining whether a change of this nature is warranted.

AGREEMENTS:

1. DOE will provide NRC organizational relationship charts identifying the QA chain of command for Rockwell and DOE-RL/HQ.
2. DOE will provide NRC an updated list of technical and licensing communicators for Appendix 1 of the Site Specific Agreement.
3. NRC will provide DOE with a list of all NRC BWIP Team members, indicating their relationship to functional and project branches.
4. NRC will provide DOE with its planning document for development of Generic Technical Positions (GTP's) and Site-Specific Technical Positions (SSTP's) when available.
5. It was agreed that DOE and NRC should hold pre-SCP workshops on performance assessment methodology and geo-hydrology and a briefing on performance allocation.

6. DOE agreed to review the NRC list of concerns and additional proposed interactions (see Enclosure 4) and obtain concurrence of DOE HQ. in any future interactions.

7. DOE will provide NRC with the listing of Site Characterization Analysis comments and issues with resolution status from the BWID tracking system by the end of August 1986.

8. DOE agreed to review the abstract section of the Accessions List and for future listings provide additional information concerning scope and purpose of listed documents per the agreement in the Site Specific Procedural Agreement.

9. NRC agreed to provide DOE a copy of the Audit Report of Site Specific Procedural Agreements when it is finalized in September, 1986.

10. It was agreed that the next management meeting date would be mutually determined within two weeks between DOE (Mecca) and NRC (Hildenbrand).

OPEN ITEMS:

1. The definition for "anticipated processes and events," and "unanticipated processes and events" is to be discussed between DOE/HQ and NRC to resolve differences in the interpretations of these terms, for example, where are expected and unexpected human induced events covered when such events are not human intrusion into the repository?

2. The scope, content and timing of site characterization semiannual document requires definition.

3. A consistent program-wide approach to Appendix 7 interactions must be developed by NRC and DOE/HQ.

JRCook 8/5/86
for John J. Linehan, NRC/WMRP

John M. Olson
J.L. Olson, Director
Division Basalt Waste Isolation

Paul R. Hildebrand
Paul R. Hildebrand, NRC/WMRP

James M. Mecca
James Mecca, Chief
Licensing, Environmental and
Safety Branch

AGENDA

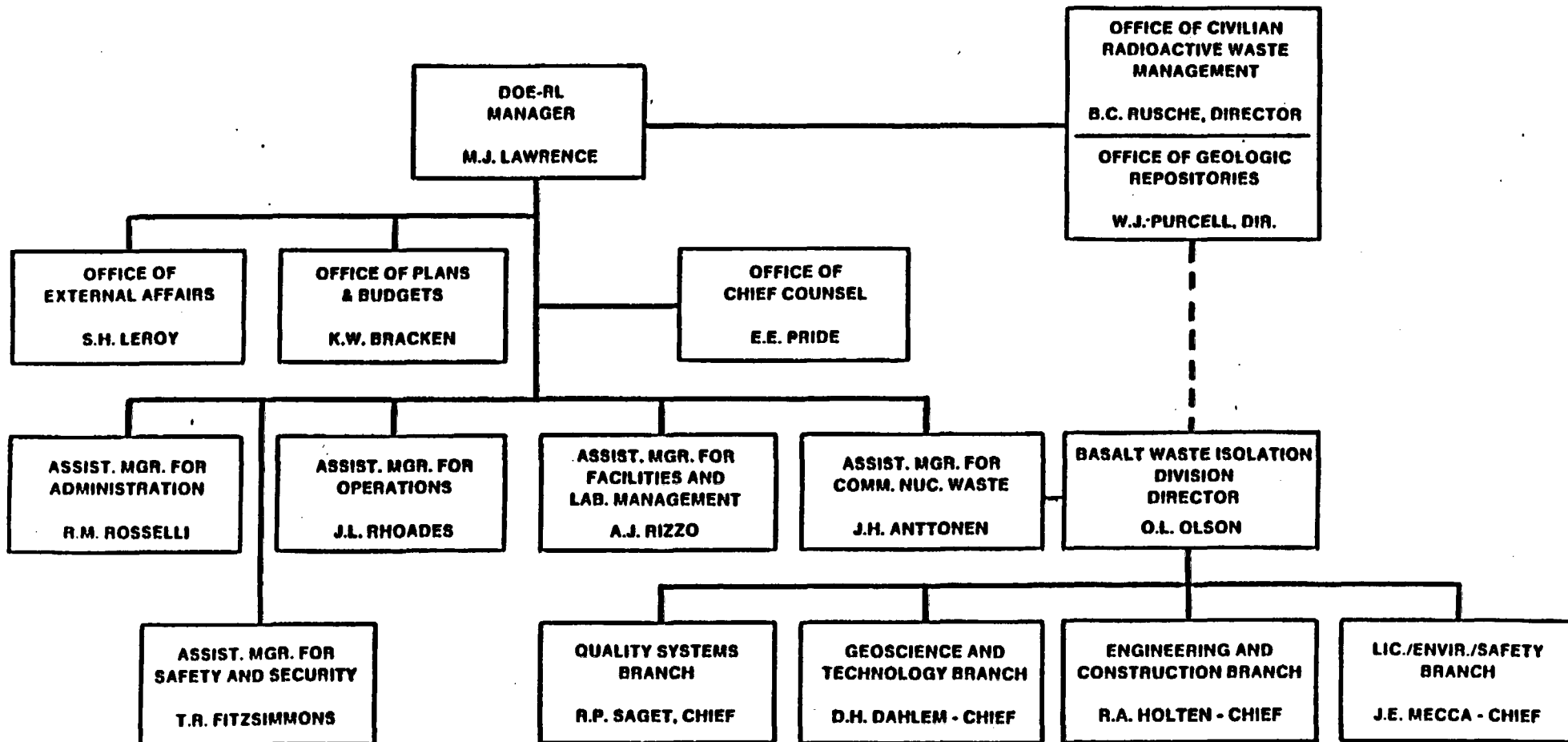
NRC/DOE BWI DIVISION MANAGEMENT MEETING

AUGUST 4, 1986, RICHLAND, WA

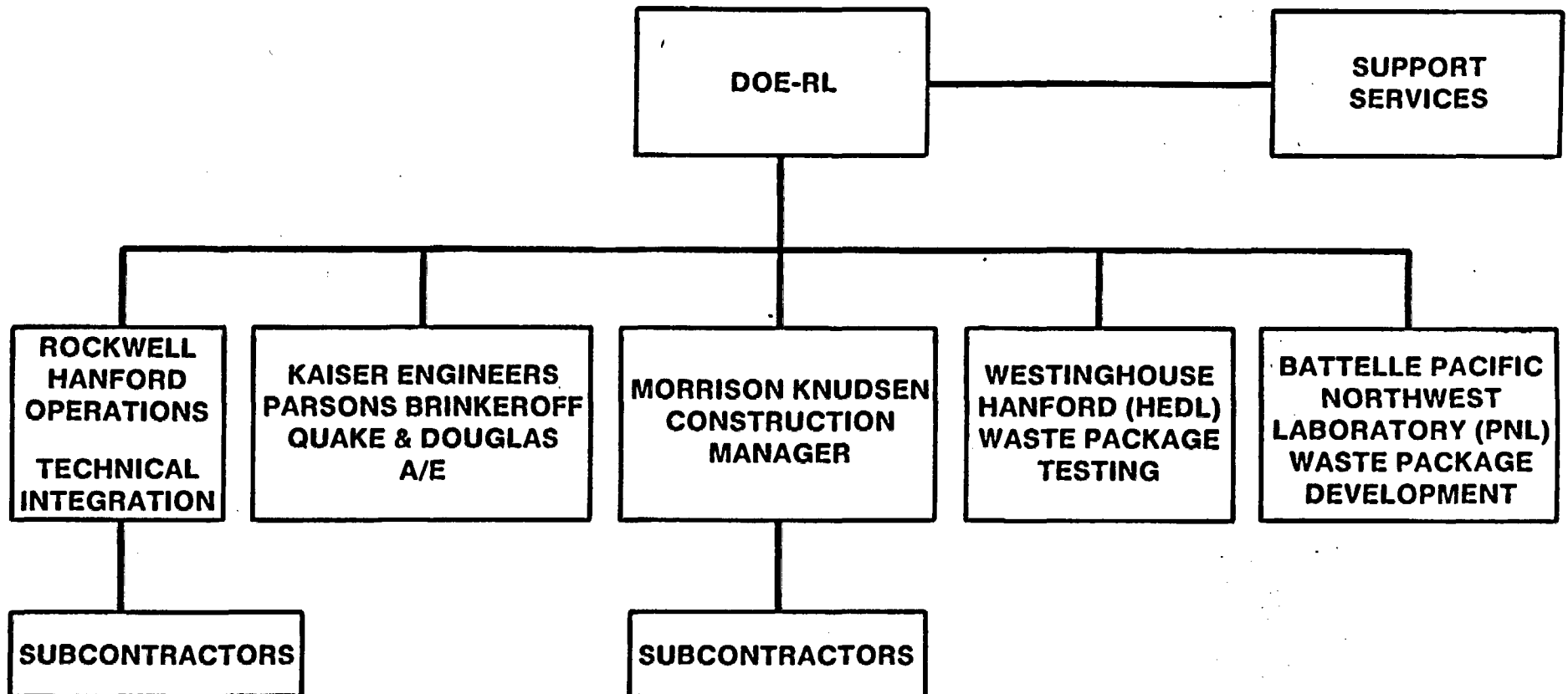
20 min.	Introductions	DOE/NRC
	Opening Remarks	DOE/NRC
	Objectives	DOE/NRC
20 min.	BWI Division Organization	DOE
20 min.	NRC/Waste Management Organization	NRC
60 min.	NRC Plans	NRC
	Summary of 5 Year Plan	
	Status of Generic Planning	
	Status of Site Specific Project Planning	
	Summary	
	Preliminary Significant Issues	
	Technical Meeting Topics	
90 min.	<u>BWI Division Plans (SCP)</u>	
	o History, Milestones And Schedule	DOE
	o Issues/Resolution - Strategies	DOE
	o Pre SCP Meetings Topics/Timing	DOE
60 min.	Release of BWI Division Data And Documentation	DOE
120 min.	Planning and Conducting Meetings Management Meetings Technical Meetings	NRC/DOE
30 min.	Planning and Conducting Appendix 7 Assignments	NRC/DOE
	Preparation of Meeting Minutes	NRC/DOE

**BWI
DIVISION
ORGANIZATION**

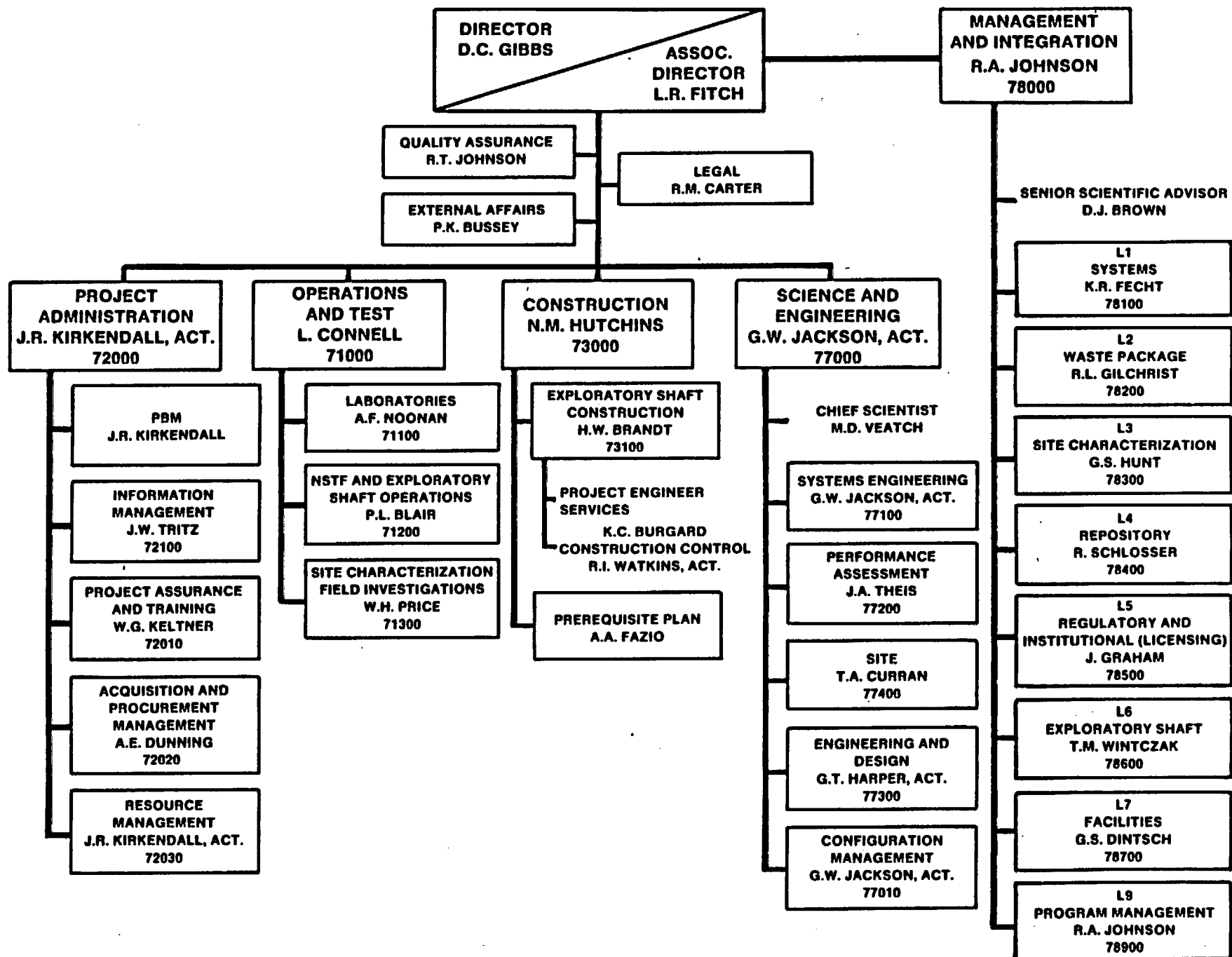
BASALT WASTE ISOLATION PROJECT PROJECT MANAGEMENT ORGANIZATION



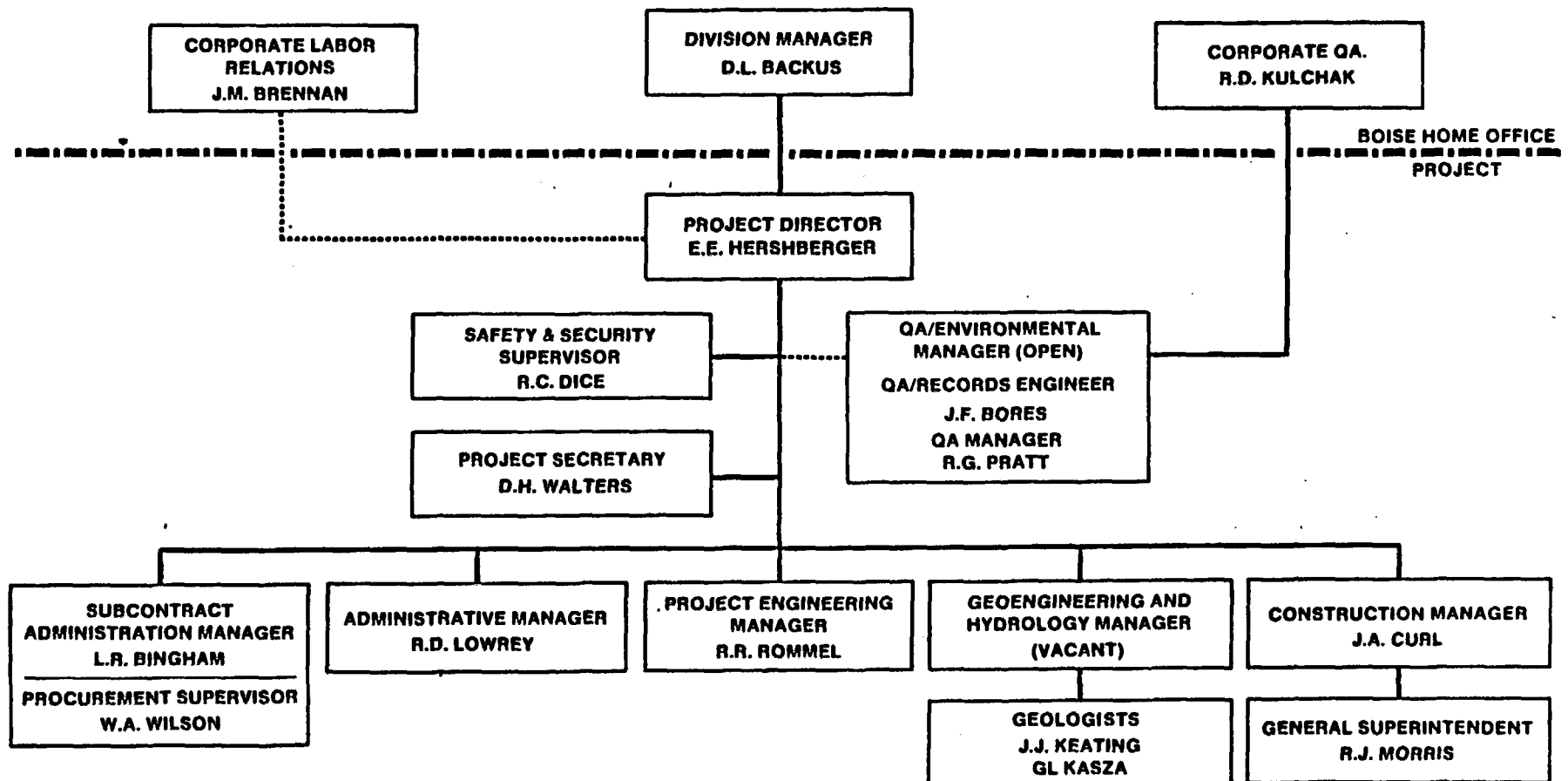
BWIP MAJOR CONTRACTORS



BASALT WASTE ISOLATION PROJECT ORGANIZATION

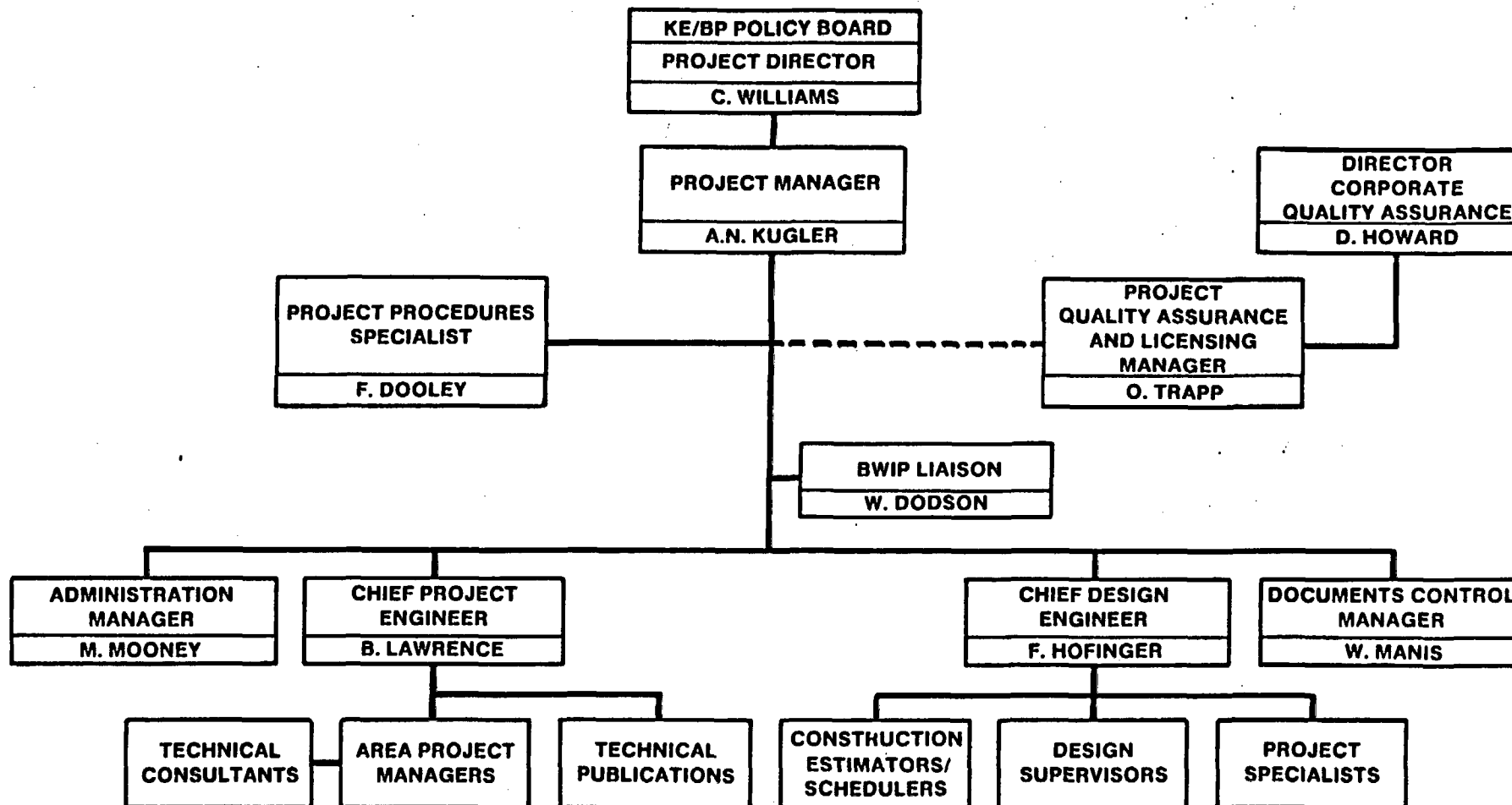


MORRISON-KNUDSEN COMPANY, INC.
M-K BWIP ORGANIZATION



KAISER ENGINEERS PARSONS BRINKERHOFF QUADE & DOUGLAS, INC.

KE/PB BWIP ORGANIZATION



TECHNICAL COMMUNICATORS

<u>TOPIC</u>	<u>BWI COMMUNICATORS</u>	<u>NRC</u>
PROJECT MANAGEMENT	JOHN KOVACS JIM MECCA	PAUL HILDENBRAND
ENVIRONMENT/ TRANSPORTATION	STEVE WHITFIELD JIM MECCA	BILL LILLEY
GEOCHEMISTRY	MARV FURMAN JOE KRUPAR	DAVID BROOKS
GEOLOGY	DAVE DAHLEM JIM MECCA	HAROLD LeFEVRE
DRILLING	ART LASSILA	
HYDROLOGY	MIKE THOMPSON JIM MECCA	MICHAEL WEBER
PERFORMANCE ASSESSMENT	TONY KNEPP JOHN KOVACS	JOHN LIBERT
REPOSITORY DESIGN	BRUCE NICOLL JOHN KOVACS	JOHN BUCKLEY
WASTE PACKAGE	PHIL LaMONT JOE KRUPAR	KIEN CHANG
QUALITY ASSURANCE	PIERRE SAGET JOE KRUPAR	JAMES KENNEDY

NEAR TERM NRC MEETINGS

- **GEOHYDROLOGY**

SEPT/OCT

- **PA PROGRAM AND SCP CONTENT**

NOV/DEC

**HISTORY
MILESTONES
AND
SCP SCHEDULE**

HISTORY - COMMERCIAL HIGH LEVEL RADIOACTIVE WASTE MANAGEMENT PROGRAMS

NATIONAL ACADEMY OF SCIENCE EVALUATION	1955-1957
PROJECT SALT VAULT - LYONS, KANSAS	1963-1967
PRELIMINARY EVALUATION OF BASALT & BEDROCK FOR DISPOSAL OF DEFENSE WASTES	1968-1972
LYONS FEDERAL WASTE REPOSITORY	1970-1972
ALTERNATIVE CONCEPTS ANALYSIS	1972-1975
RETRIEVABLE SURFACE STORAGE CONCEPT	1972-1974
TECHNICAL ALTERNATIVES DOCUMENT	1975-1976
NATIONAL WASTE TERMINAL STORAGE PROGRAM	1976-
CARTER NONPROLIFERATION STATEMENT	1977
BWIP OFFICE ESTABLISHED	1977
GEIS ISSUED	1980
NWPA WAS SIGNED INTO LAW	1983
DOE IDENTIFIED 9 SITES IN 6 STATES AS PAS FOR 1ST REPOSITORY	1983

HISTORY - COMMERCIAL HIGH LEVEL RADIOACTIVE WASTE MANAGEMENT PROGRAMS (CONT.)

NAS ISSUED - "A STUDY OF THE ISOLATION SYSTEM FOR GEOLOGIC DISPOSAL OF RADIOACTIVE WASTES."	1983
DOE IDENTIFIED 17 STATES WITH CRYSTALLINE ROCK FORMATIONS FOR THE 2ND GENERATION OF GEOLOGIC REPOSITORY SITES	1983
DRAFT MISSION PLAN ISSUED	1984
NINE DRAFT EAs ISSUED FOR COMMENT	1984
FINAL SITING GUIDELINES ISSUED	1984
FINAL MISSION PLAN ISSUED	1985
DOCUMENT ISSUED COVERING EVALUATION OF DEFENSE AND COMMERCIAL WASTES IN SAME REPOSITORY	1985
SEVEN STATES IDENTIFIED AS PROPOSED POTENTIALLY ACCEPTABLE SITES (12 BLOCKS OF GRANITE)	1986
FINAL EAs ISSUED (MAY 1986)	1986
RECOMMENDATION & NOMINATION OF 3 SITES FOR DETAILED SITE CHARACTERIZATION (MAY 1986)	1986

**BASALT WASTE ISOLATION PROJECT
NEAR TERM
PROGRAMMATIC MILESTONES**

MILESTONES

- **ISSUE FINAL ENVIRONMENTAL ASSESSMENT** 5/86
- **SITE NOMINATION AND RECOMMENDATION** 5/86
- **PRESIDENTIAL APPROVAL OF SITES** 5/86
- **ISSUE SCP TO PUBLIC** 3/87
- **START WASTE PACKAGE ADVANCE CONCEPTUAL
DESIGN** 1/87
- **START REPOSITORY ADVANCED CONCEPTUAL DESIGN** 1/87
- **START ES CONSTRUCTION** 8/87

ISSUE RESOLUTION STRATEGY PROCESS

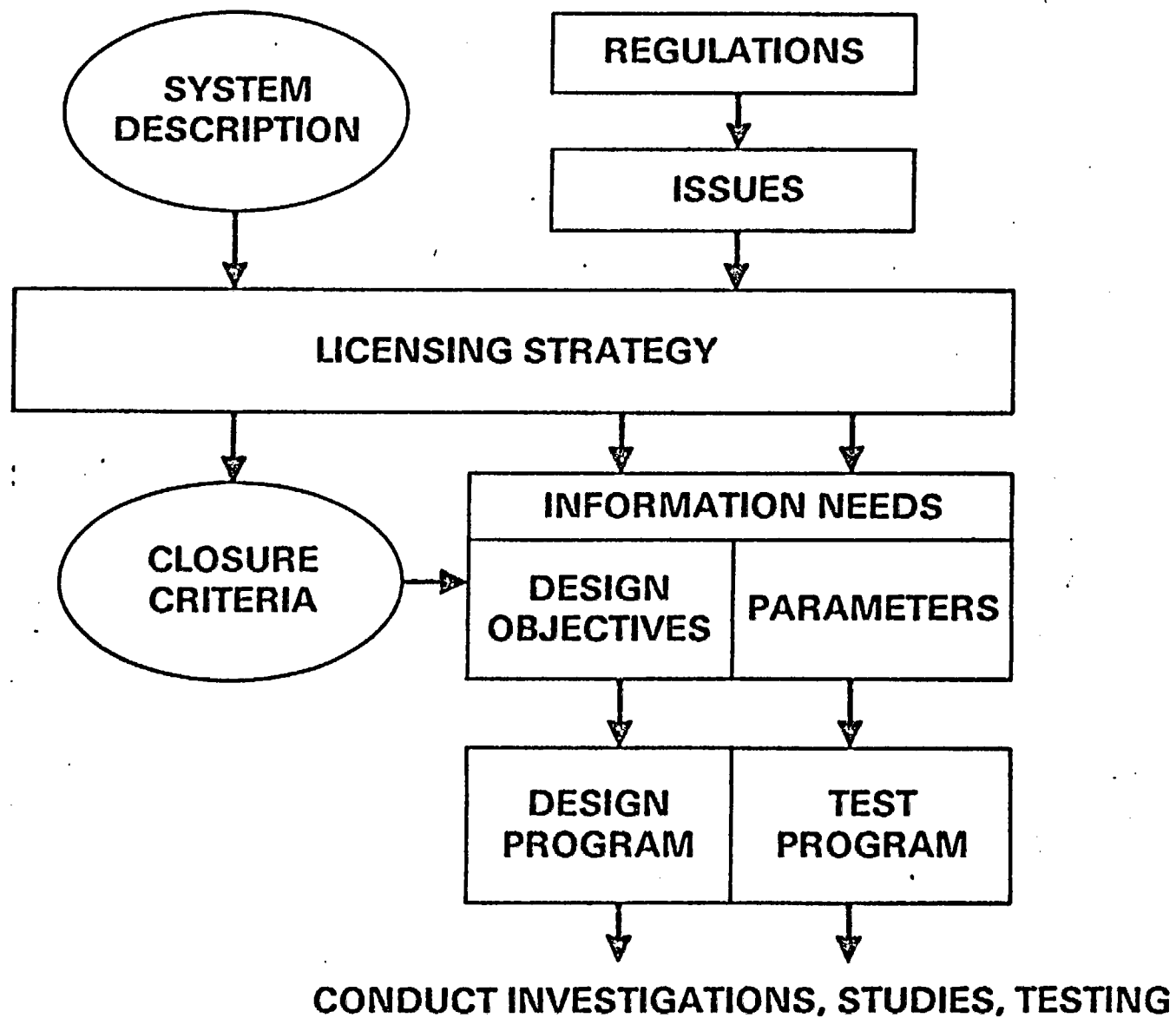
- **Types of issues**
- **Resolution methodology**
- **Performance allocation**
- **Example issues**

TYPES OF ISSUES

- **Performance**
- **Design**
- **Characterization**

KEY ISSUES

- 1. Postclosure performance**
- 2. Preclosure radiological safety**
- 3. Environment, socioeconomic, and transportation**
- 4. Design, cost, technical feasibility**



Issue Number:

Control Number:

Page 1 of

ISSUE:

BACKGROUND:

LICENSING STRATEGY:

CLOSURE CRITERIA:

(Goals and indications of confidence)

INFORMATION NEEDS AND ANALYTICAL TOOLS:

PREPARED BY:

DATE:

APPROVED BY:

Issue Number:

Control Number:

Page 1 of

INFORMATION NEED/ANALYTICAL TOOL:

BACKGROUND:

PARAMETERS/DESIGN OBJECTIVES:

(Goals and indications of confidence)

INFORMATION NEEDS II/PARAMETER NEEDS:

Parameter

Goal (Expected Range)

Indication of Confidence on Goal

PREPARED BY:

DATE:

APPROVED BY:

PERFORMANCE ALLOCATION

Issue	Technical criteria	Constraint
1.1	EPA Cumulative release	10,000
1.4	WP Container lifetime	300-1,000
1.5	EB Release rate	1<100,000
1.6	PWE Groundwater travel time	1,000
1.10	DOE Higher level findings	100,000

ISSUE:

Waste Package Container Lifetime

BACKGROUND: 10 CFR 60.113a

Anticipated Processes & Events - Substantially Complete Containment for 300-1,000 years

LICENSING STRATEGY:

- A. 1,000 year container - H.I.C.
- B. Hydrostatic Loads & Corrosion
- C. Essential No Lithostatic Loads
- D. Reducing Environment

CLOSURE CRITERIA:

(Goals and Indications of confidence)

Substantially Complete Containment for 300-1,000 years with High Indication of Confidence

INFORMATION NEEDS AND ANALYTICAL TOOLS:

- | | |
|--|-------------------------------------|
| 1. Corrosion Behavior of Container Material | 5. Container Loading due to Packing |
| 2. Temperature History | 6. Container Material Specification |
| 3. Hydrostatic Loading | 7. Design Description |
| 4. Rock Mass Deformation Modes & Characteristics | |

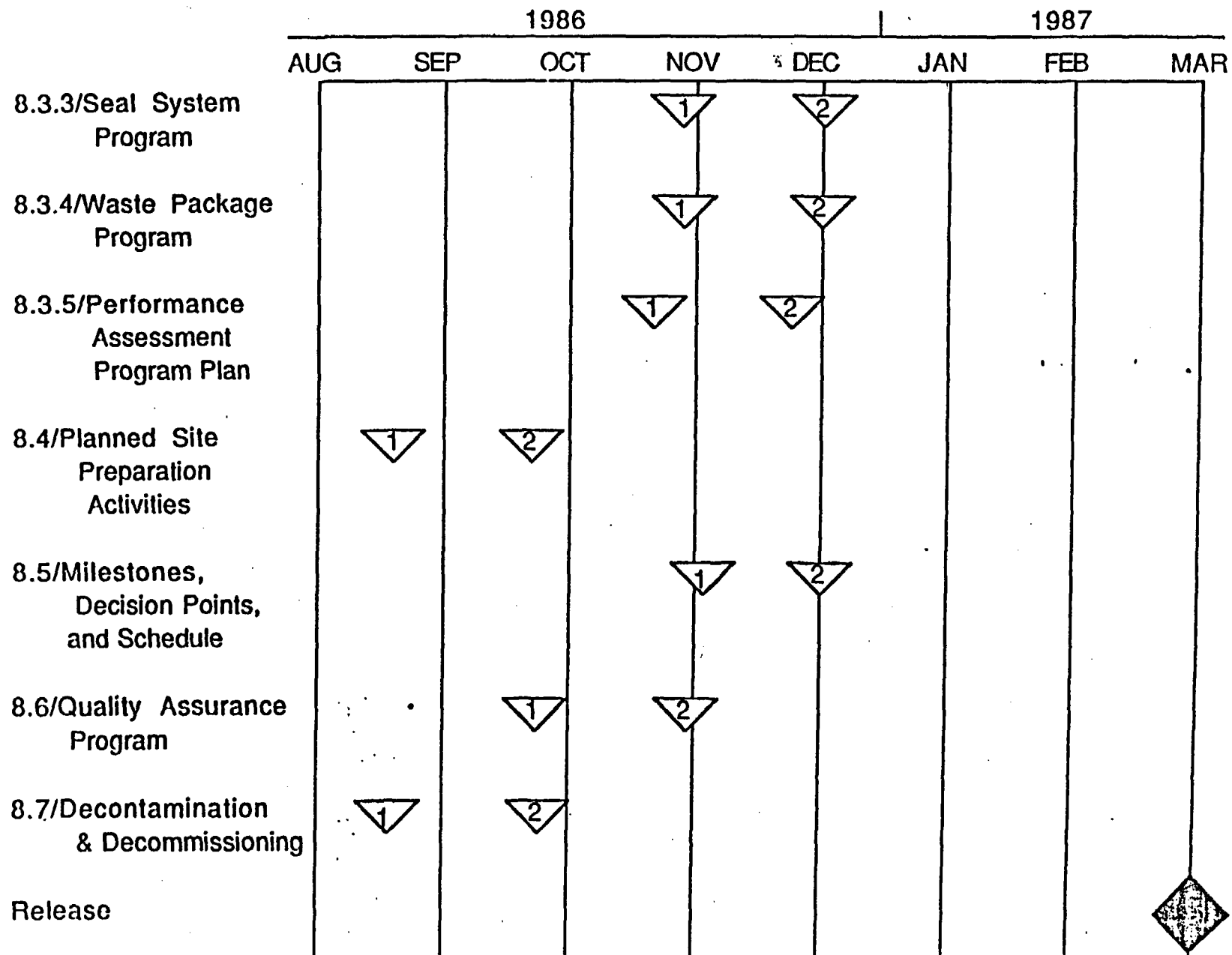
PREPARED BY:**DATE:****APPROVED BY:**

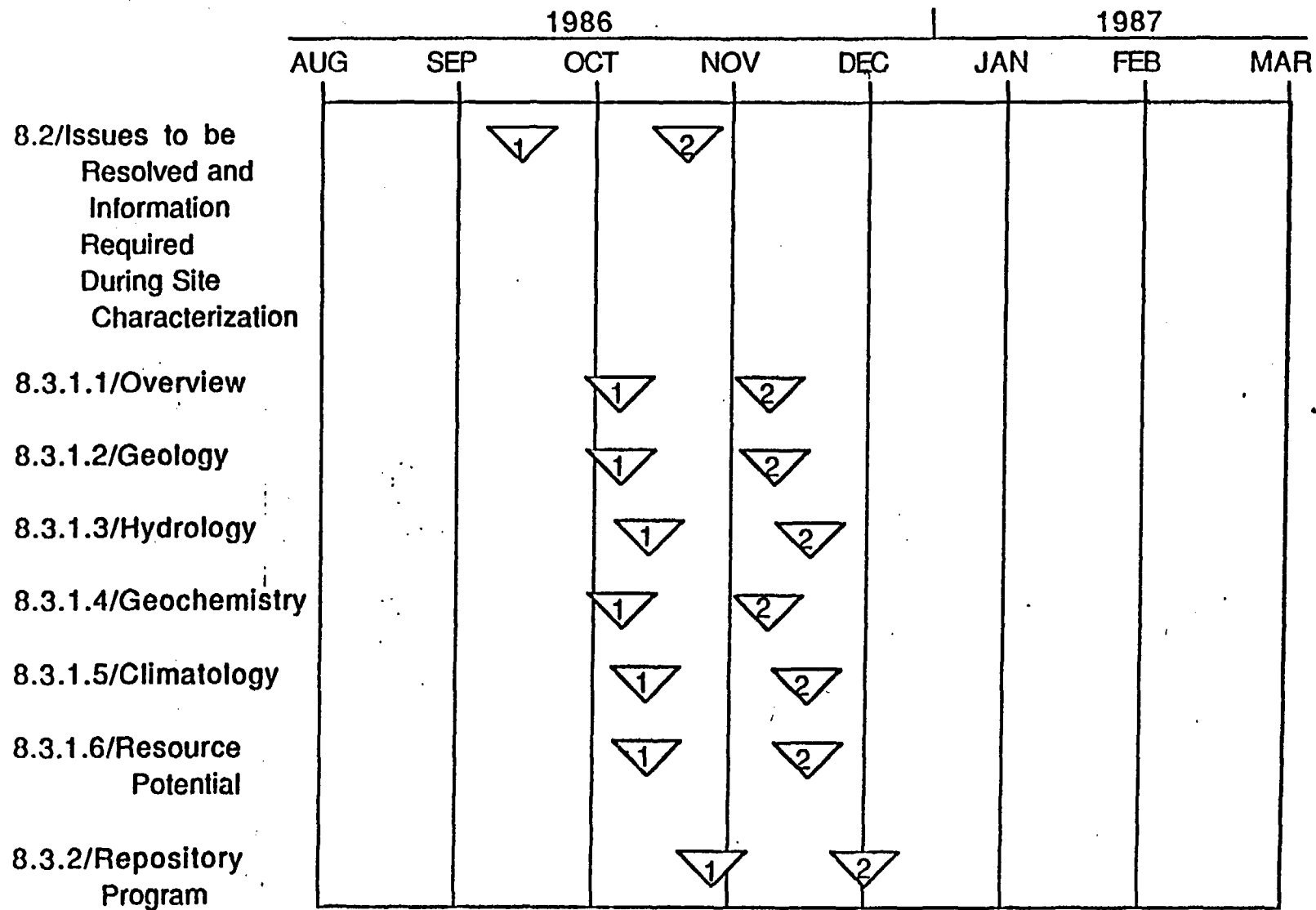
BWID SCP SCHEDULE

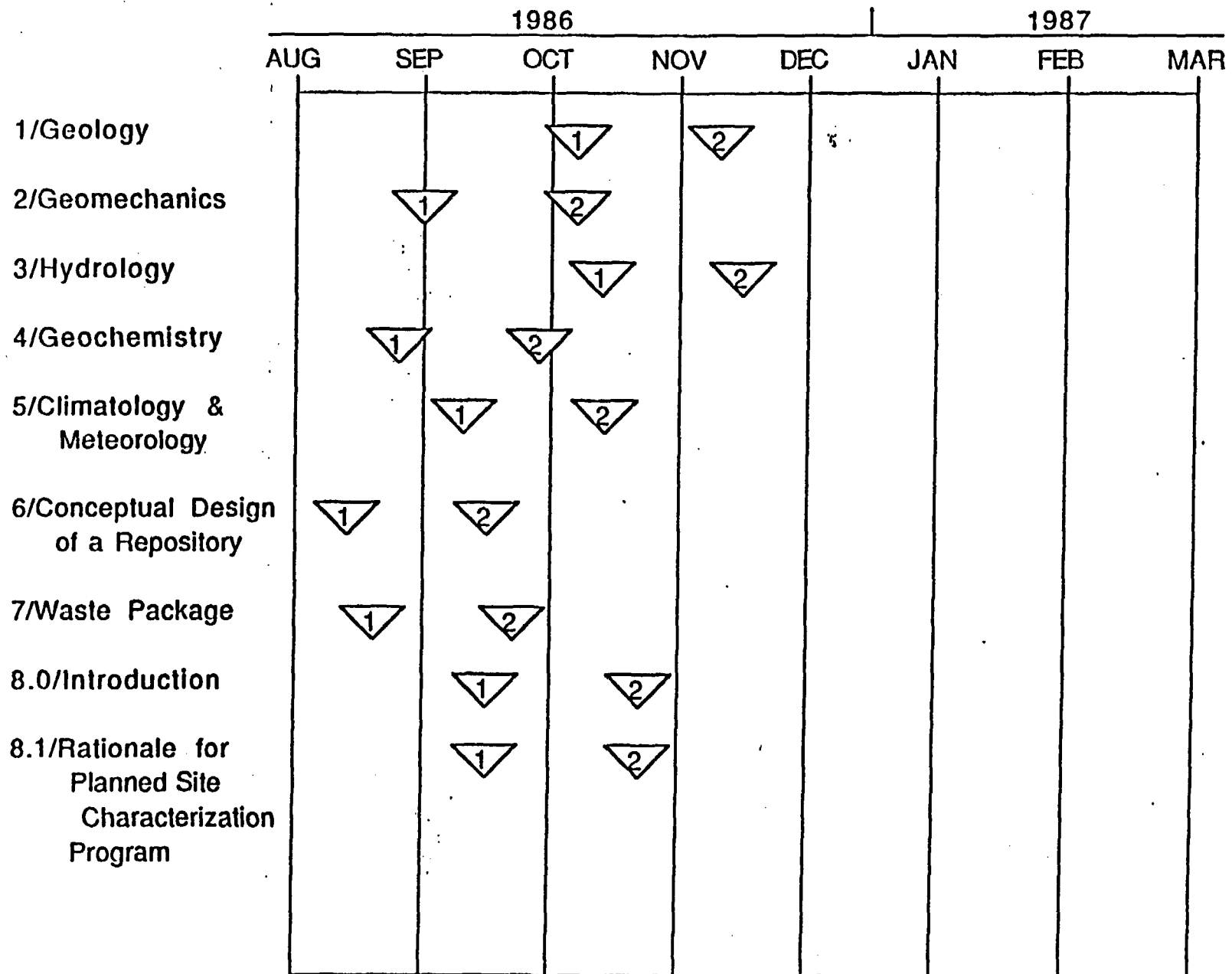
▽₁ = 1st Draft

▽₂ = 2nd Draft

◆ = Release







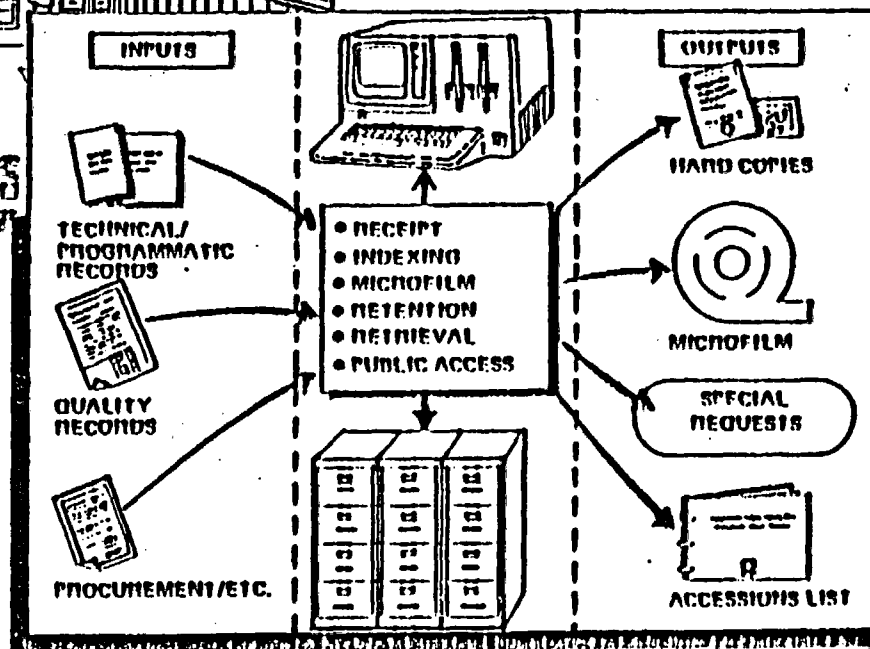
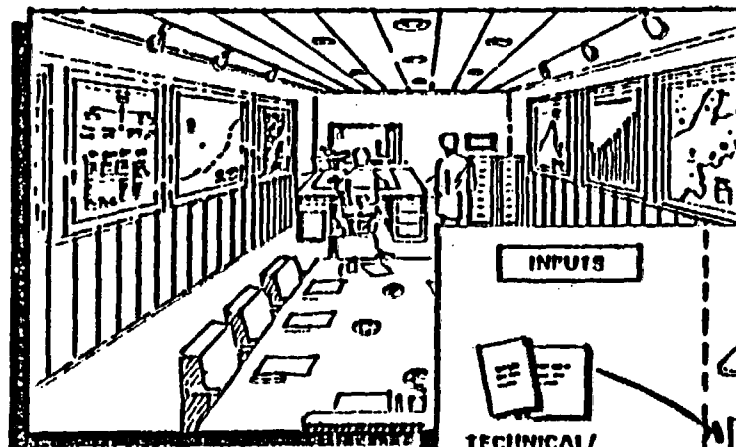
**BASALT WASTE ISOLATION PROJECT
(BWIP)
ENGINEERING MANAGEMENT SYSTEMS
(EMS)**

**R. E. MAY,
MANAGER**

**ENGINEERING MANAGEMENT SYSTEMS
BASALT WASTE ISOLATION PROJECT
ROCKWELL HANFORD OPERATIONS**

BASALT RECORDS MANAGEMENT CENTER (BRMC)

PURPOSE: SERVES AS THE SINGLE ENTITY, WITHIN BWIP, FOR ADMINISTRATIVELY COLLECTING, PROCESSING, AND CONTROLLING DOCUMENTATION/RECORDS. ALSO SERVES AS FOCAL POINT FOR THE PUBLIC RELEASE SYSTEM.

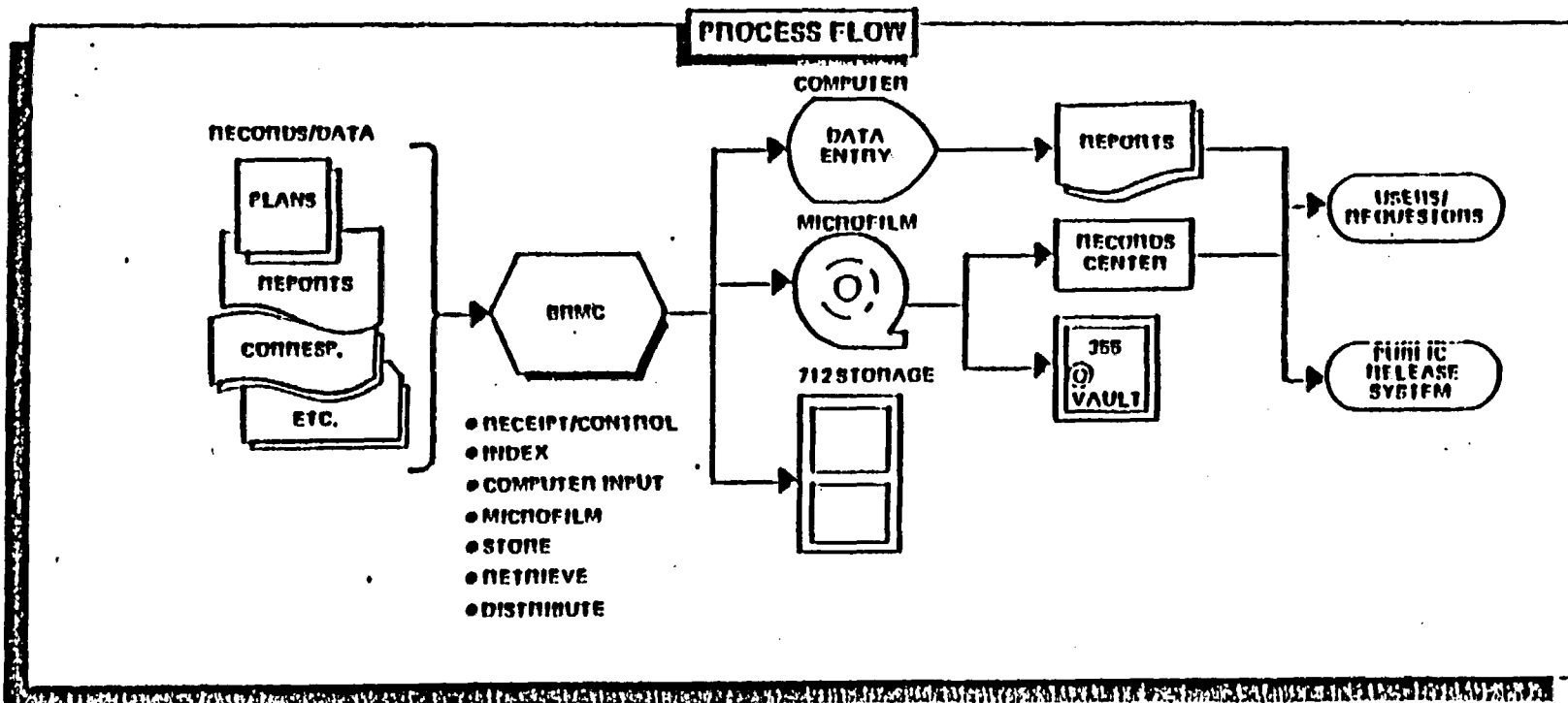


BASALT RECORDS MANAGEMENT CENTER (BRMC)

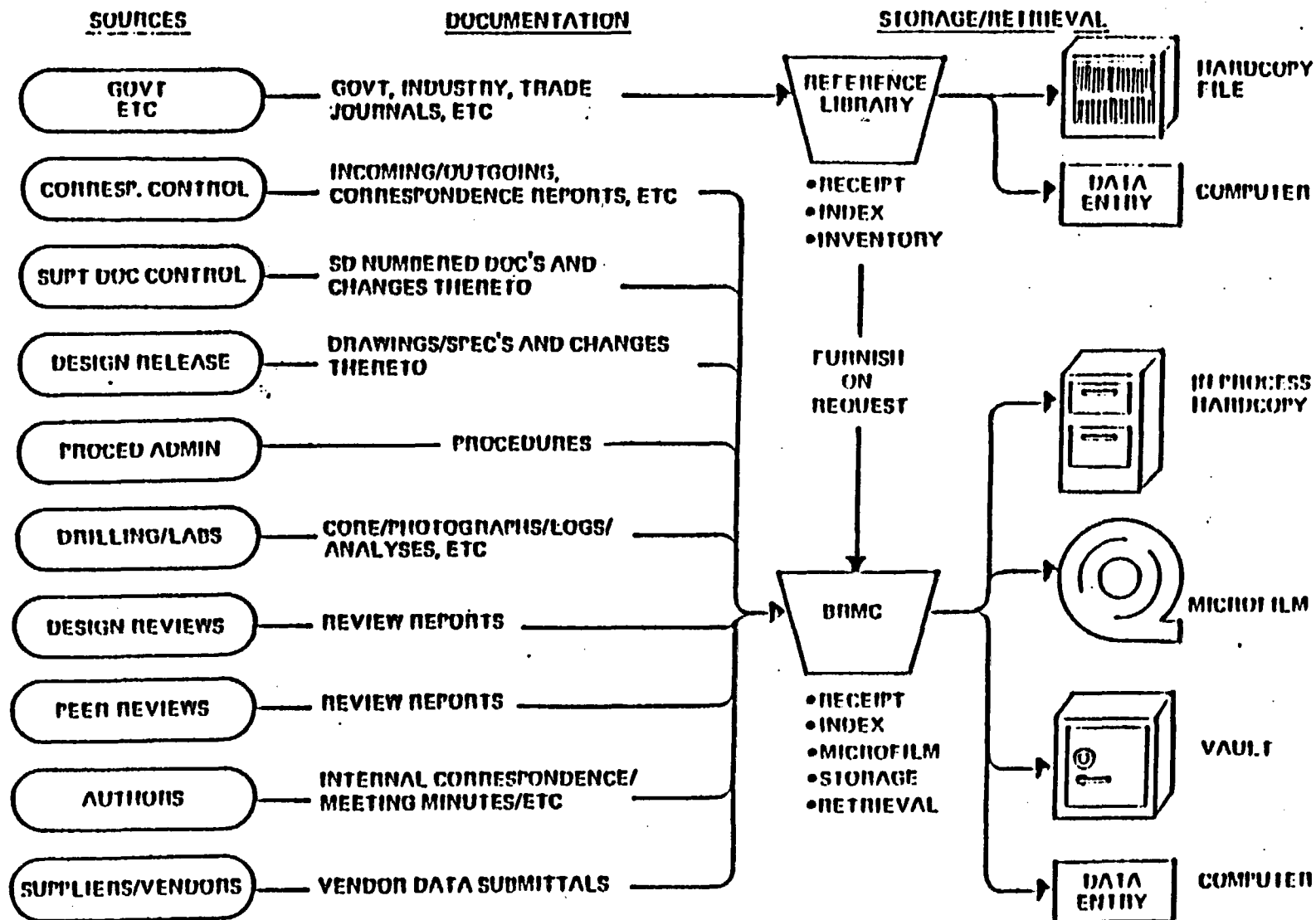
PURPOSE: PROVIDES OVERALL MANAGEMENT, COORDINATION AND CONTROL OF BWIP DOCUMENTATION/RECORDS

GOVERNING REQUIREMENTS/PROCEDURES:

- 10 CFR 60/10 CFR 60
- DOE ORDER 5700-1A
- DOE ORDER 5700-0A
- PROGRAM GUIDANCE TO NWTs PROJECTS ITS1
- REG. GUIDE 1.28
- ANSI/ASME NQA-1 - 1983
- BWIP RECORDS MANAGEMENT PLAN (SD-BWI-AP-001)
- OAPP 17-101, "BWIP RECORDS MANAGEMENT SYSTEM"
- OAPP 17-102, "RECORDING DATA FOR QA RECORDS/RECORDS CONNECTION"
- DATA MANAGEMENT DESK INSTRUCTIONS - VOLUMES 1 AND 2



RECORDS/DOCUMENTATION/DATA INTEGRATION OVERVIEW

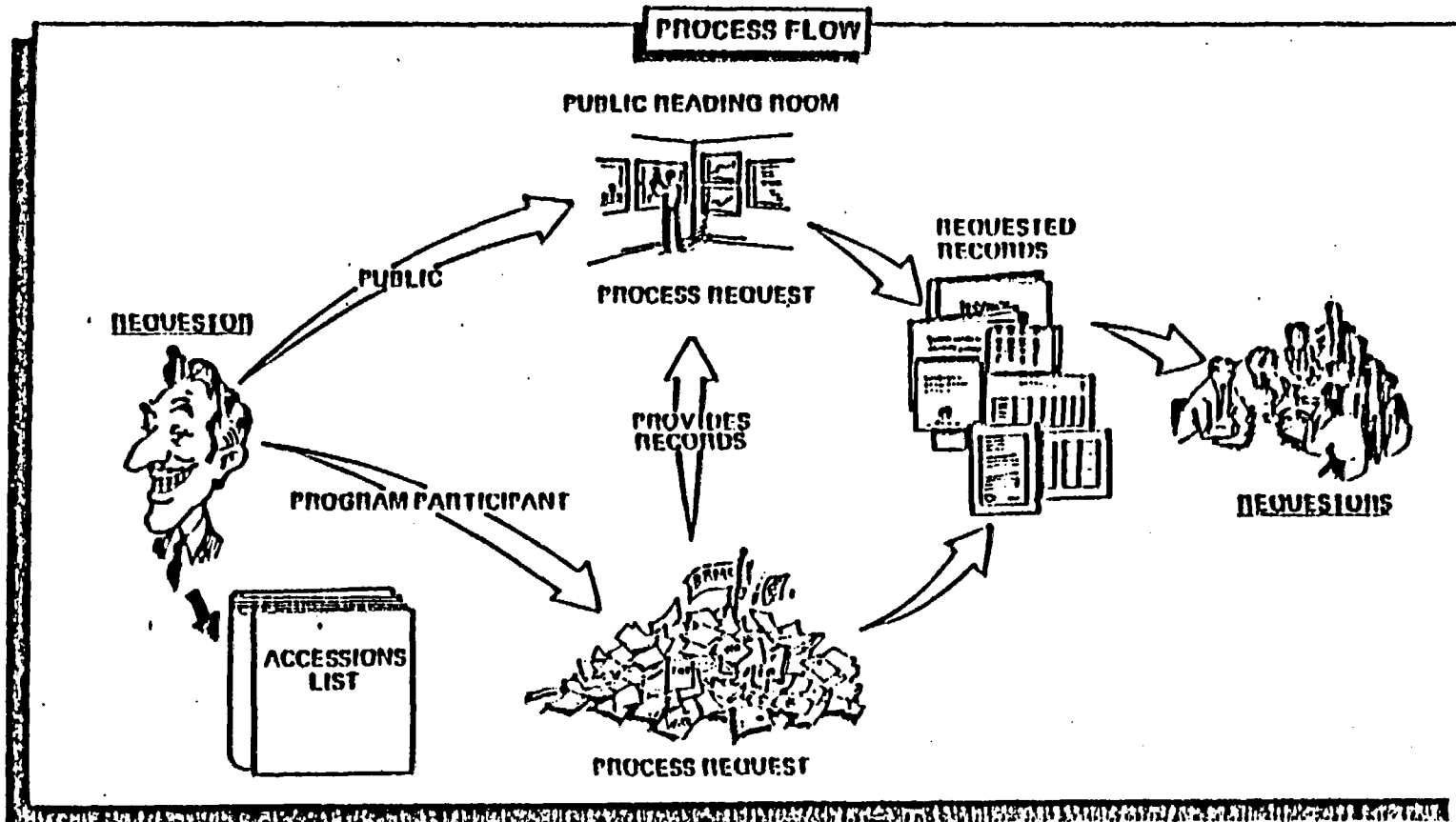


BRMC PUBLIC RELEASE SYSTEM ACTIVITIES

PURPOSE: PROVIDE PROGRAM PARTICIPANTS AND THE GENERAL PUBLIC WITH DOCUMENTS/RECORDS NECESSARY TO MONITOR AND PARTICIPATE IN THE BWIP CHARACTERIZATION AND DESIGN PROCESS.

GOVERNING PROCEDURES:

- AG 4-101, "CLEARANCE OF BWIP DOCUMENTATION FOR EXTERNAL DISTRIBUTION AND PUBLIC ACCESS"
- AG 4-102, "BWIP DOCUMENT ACCESSIONS LIST MAINTAINANCE AND CONTROL"



BWIP DOCUMENTS ACCESSIONS LIST

BASALT

WASTE ISOLATION PROJECT



DOCUMENTS ACCESSIONS LIST MARCH 1985

ROCKWELL HANFORD OPERATIONS
P.O. BOX 800
RICHLAND, WA 99352

Published by
BWIP Engineering Management Systems

PURPOSE:

- INTENDED TO PROVIDE PROGRAM PARTICIPANTS ACCESS TO PERTINENT DOCUMENTS AVAILABLE FOR REVIEW IN SUPPORT OF THEIR EFFORTS IN MONITORING BWIP'S PROGRESS
- ACCESSIONS LIST IS ALSO PROVIDED TO PUBLIC READING ROOM FOR GENERAL PUBLIC ACCESS

BWIP DOCUMENTS ACCESSIONS LIST CONTENTS

BASALT WASTE ISOLATION PROJECT DOCUMENT ACCESSION LIST QUARTERLY REPORT PERIOD ENDING 03/25/85

• • NEW/REVISED ACCESSIONS

PAGE 200

REPOSITORY - L4

ENGINEERING STUDY/REPORT - (2031)

SD-BWI-ER-003

REV:0-0

DATE:05/16/1983

SHT:0072

REC NO:0022376

CART/FRAME:1083/0410

TITLE:

DESIGN REVIEW REPORT FOR CONCEPTUAL
DESIGN OF SUBSURFACE VENTILATION SYSTEM
HWRB

ORIG:DAVIS JH

ORG/CO:BWIP

ABSTRACT:

THE VENTILATION SYSTEM DESIGN USED FOR THE CONCEPTUAL
DESIGN OF THE NUCLEAR WASTE REPOSITORY IN BASALT IS
DESCRIBED IN DETAIL. ALL CRITERIA ARE DESCRIBED & DESIGN
SOLUTIONS ARE DETAILED WITH SUPPORTING CALCULATIONS &
ASSUMPTIONS TO ENABLE GOOD COST ESTIMATES TO BE MADE

SORTED BY
END FUNCTION

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*SD-BWI-ER-007

REV:A000

DATE:01/04/1985

SHT:0034

REC NO:0050046

CART/FRAME:1322/2152

TITLE:

LARGE SHAFT DEVELOPMENT STUDY

ORIG:MCILINNEY SH

ORG/CO:BWIP/DTG

ABSTRACT:

THE PURPOSE OF THIS STUDY IS TO DETERMINE THE LARGEST
DIAMETER SHAFT THAT CAN BE DRILLED AT HANFORD UTILIZING
DRILLING EQUIPMENT CURRENTLY ON-SITE, IN A SINGLE PASS,
WITH REASONABLE ASSURANCE OF SUCCESS.

TYPES OF DOCUMENTS ON ACCESSIONS LIST

PAGE NO. 00001

07/22/85

RECORDS RETENTION PRS DOCUMENT TYPE LIST

<u>TYPE CODE</u>	<u>DOCUMENT TYPE</u>	<u>Q/NQ</u>
0143	SUBCONTRACTOR DATA/REPORT	Q
0312	SAFETY ANALYSIS REPORT	Q
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2003	TEST REPORT	Q
2010	CONCEPTUAL DESIGN REPORT/PLAN	Q
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- NEGATIVES
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- MULTICOLOR MAPS
- MAP OVERLAYS

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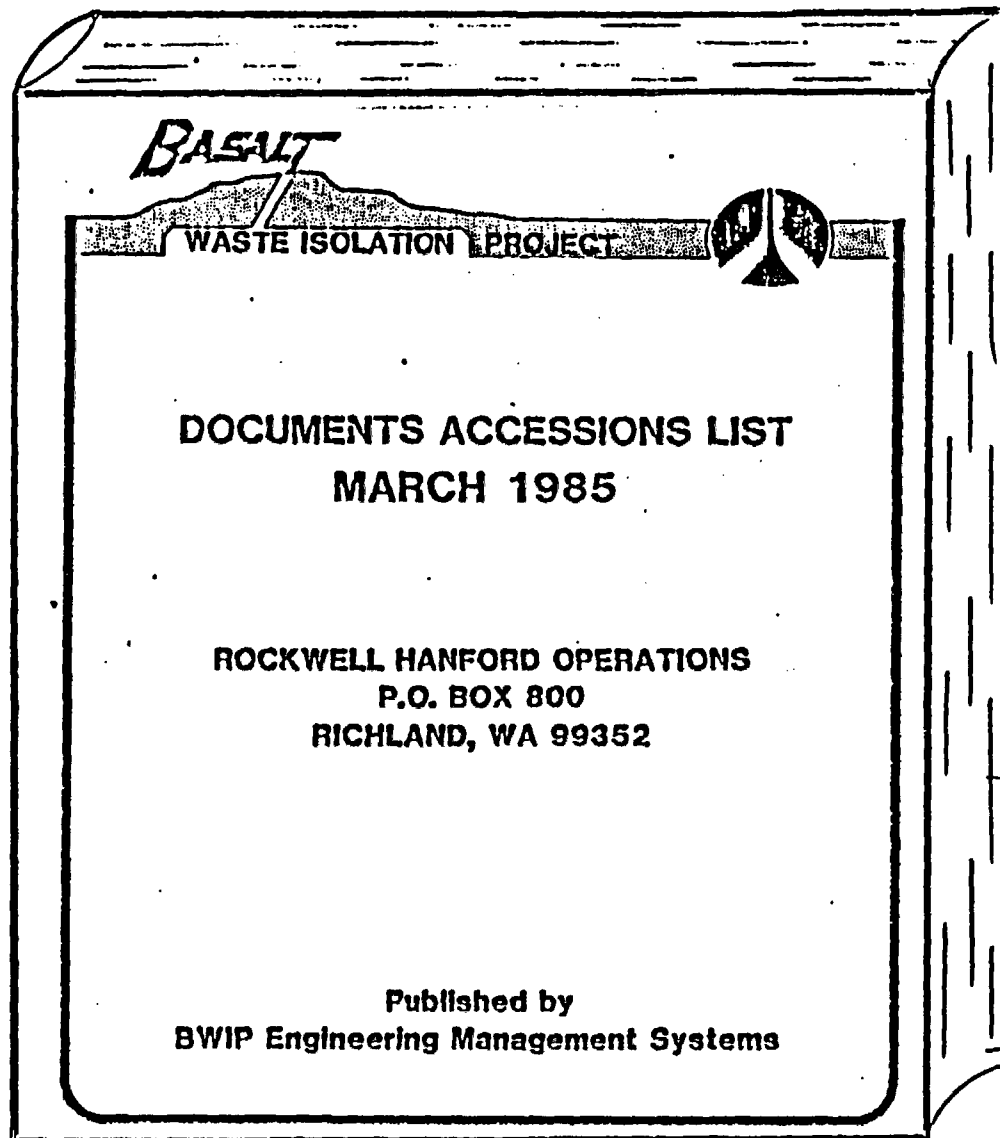
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Supplement

PUBLIC NOTICE

This Supplement to the Basalt Waste Isolation Project's (BWIP) Document/ Data Accessions List has been compiled to provide visibility of raw data gathered from various tests performed by the BWIP. This data, upon evaluation, will become a formal published document and entered into the main body of the Accessions List. Concurrently, the applicable raw data form will be removed from this list.

Presently this list contains Data Acquisition Packages/Records (DAP's/DAR's). The following definition applies:

Data Acquisition Package

The DAP's are collections of raw data outputs from engineering, testing, and site characterization data acquisition activities for inclusion in the project technical data base and the Basalt Records Management Center (BRMC). The DAP's ensure that BWIP data is consistently identified, that it is traceable to the criteria applying to its collection, that it is traceable to the science or engineering plan describing the requirements/methods for the data acquisition activity, and to the resources, procedures, and personnel used in the acquisition process.

The DAR's are those document types typically included in the DAP. DAR's include, but are not limited to, data sheets, strip charts, shift reports, geophysical logs, geologic logs, user calibration records, tables, laboratory notebooks, field notes, maps, etc., which document the results of tests, engineering analysis or site characteristic studies. Material samples and one-of-a-kind items (e.g., core sections, water samples, computer tapes, radiographs, etc.) are also collected as DAR's. However, in these cases the item itself is not physically attached, but is referenced in the DAP.

In requesting any of the listed data, Program Participants should ask themselves:

- Will the raw data be useful and/or interpretive without assistance from the data gathering contractor(s)?

DAR/DAP REPORT PERIOD ENDING 05/05/86
DOCUMENT NO. TITLE

PAGE 1

DAP-02-00107 PAGES 0087	LABORATORY DATA FOR HYDRAULIC CONDUCTIVITY SUPERSEDES PAGES 62 THRU 152 OF B056773
DAP-02-00117 PAGES 0010	NON UNIFORM PENETRATION OF WROUGHT STEEL SPECIMENS OXIC ENVIRONMENT
DAP-02-00118 PAGES 0005	WHC FY 1983 & 1984 WORK CONDUCTED FOR BWIP HYDROTHERMAL TESTING CARTRIDGES & 1 BOX DISKETTES
DAP-03-00001 PAGES 0005	DAILY SHIFT REPORTS WITH REMARKS REGARDING ACTIVITIES MATERIALS USED DEPTH DRILLED CASING INFORMATION DATED 01/14-17/1986 CABLE TOOL RIG
DAP-03-00002 PAGES 0328	BOREHOLE INFORMATION SHEETS BOREHOLES HYDRAULIC HEAD
DAP-03-00003 PAGES 0219	WATER LEVEL DATA BOREHOLES HYDRAULIC HEAD
DAP-03-00004 PAGES 0359	PRESSURE DATA BOREHOLES HYDRAULIC HEAD
DAP-03-00005 PAGES 0039	BOREHOLE INFORMATION SHEETS PERIOD ENDING 06/30/1985 BOREHOLE HYDRAULIC HEAD
DAP-03-00006 PAGES 0214	WATER LEVEL DATA PERIOD ENDING 06/30/1985 BOREHOLES HYDRAULIC HEAD
DAP-03-00007 PAGES 0745	PRESSURE DATA PERIOD ENDING 06/30/1985 BOREHOLES HYDRAULIC HEAD
DAP-03-00008 PAGES 0040	BOREHOLE INFORMATION SHEETS PERIOD ENDING 06/30/1985 BOREHOLES HYDRAULIC HEAD
DAP-03-00009	WATER LEVEL DATA PERIOD ENDING

DATA ACQUISITION PACKAGE (DAP)

R051618

DATA ACQUISITION RECORD

DAR NO. 91-07031 DATE DAR COMPLETED June 7, 1995

Science/Engineering Plan SD-MW-GSP-M1

Chapter/Section 2.1.4.3.1 Rev./Date 7/ 2/1/85

DAR Subj./Title Magnetotelluric Investigation of Rattlesnake Mountain

SRT Cell(s) N/A

Borehole No. N/A

Stratigraphic Level(s) N/A

Sample Identification N/A

Other Retrieval Info N/A

a) Procedure(s) used (Title) See Statement of Work

Procedure Revision/Date N/A

Description of DAR.* (Attach pages as necessary)

Z-Axis Exploration Inc. collected magnetotelluric data under subcontract to Rockwell. This DAR includes the Statement of Work for the work performed and the Final Report.

List of Attachments to DAR

Statement of Work, Final Report (Three volumes I, II, III).

Investigator Name K. A. Bergstrom Org. 10119

Investigator Signature K. A. Bergstrom Date 6-10-95

Reviewer(s) Approvals (if Req'd) K. A. Bergstrom

* Description should include: Instrumentation used, Calibrations, Date(s) of Test(s), and deviations from procedures listed above, description of any data reduction and data reduction methods used. If work not done by Rockwell BWIP personnel, description should include: Procurement document number, organization, and individual.

COLLECTIONS OF RAW DATA OUTPUTS FROM ENGINEERING, TESTING, AND SITE CHARACTERIZATION DATA ACQUISITION ACTIVITIES. DAP'S ENSURE THAT DATA IS TRACEABLE TO THE CRITERIA APPLYING TO ITS COLLECTION, THAT IT IS TRACEABLE TO THE SCIENCE OR ENGINEERING PLAN DESCRIBING THE REQUIREMENTS/METHODS FOR THE DATA ACQUISITION ACTIVITY, AND TO THE RESOURCES, PROCEDURES, AND PERSONNEL USED IN THE ACQUISITION PROCESS.

MEETING OBJECTIVES

- 0 PRESENT NRC FIVE YEAR PLAN
- 0 IDENTIFICATION OF AND AGREEMENT ON SIGNIFICANT PRE-SCP TECHNICAL CONCERNS
- 0 IDENTIFICATION OF AND AGREEMENT ON NRC/DOE INTERACTIONS NEEDED TO ADDRESS SIGNIFICANT PRE-SCP CONCERNS
- 0 REVIEW ASPECTS OF SITE SPECIFIC PROCEDURAL AGREEMENT

NRC DIVISION OF WASTE MANAGEMENT HIGH-LEVEL WASTE PROGRAM
FIVE-YEAR PLAN FY 86 - FY 90

NRC-DOE BWIP MANAGEMENT MEETING
AUGUST 4, 1986

JOHN LINEHAN

FIVE YEAR PLAN - HIGH LEVEL WASTE REPOSITORY PROGRAM

0 GOALS AND OBJECTIVES

- AGGRESSIVE PROGRAM FOCUSED ON ACTIVITIES NECESSARY TO PROVIDE SUFFICIENT LICENSING GUIDANCE TO DOE AND SUFFICIENT INTERACTION WITH DOE, STATES, INDIAN TRIBES, AND OTHER AGENCIES IN ORDER TO IDENTIFY LICENSING OPEN ITEMS AND BEGIN THE PROCESS OF RESOLVING THEM.
- AGGRESSIVE PROGRAM THAT STRIVES TO ASSURE A FORMAL RESOLUTION OF LICENSING OPEN ITEMS PRIOR TO THE LICENSING HEARING, TO THE EXTENT PRACTICABLE.
- DEVELOP AN INDEPENDENT TECHNICAL CAPABILITY TO REVIEW DOE'S LICENSE APPLICATION WITHIN A 3-4 YEAR TIME FRAME.
- IDENTIFY AND ELIMINATE, TO THE EXTENT POSSIBLE, IMPEDIMENTS TO MEETING NRC'S STATUTORY TIME FRAME FOR LICENSE PROCEEDING AND IDENTIFY AND IMPLEMENT EFFICIENCIES IN THE LICENSING PROCESS.

KEY ELEMENTS OF THE FIVE YEAR PLANNING APPROACH

- 0 PROACTIVE AS OPPOSED TO REACTIVE.
- 0 FOCUS THE PROGRAM ON THE KEY LICENSING DECISIONS THAT MUST BE MADE WITH RESPECT TO 10 CFR 60 PERFORMANCE OBJECTIVES AND SITING AND DESIGN CRITERIA.
- 0 OPEN AND DOCUMENTED PROCESS FOR DEVELOPMENT OF GUIDANCE AND EARLY IDENTIFICATION, PRIORITIZATION AND RESOLUTION OF OPEN ITEMS. SCP/SCA PROCESS IS PRINCIPAL FORM.
- 0 PROVISION FOR EARLY AND FULL INVOLVEMENT WITH DOE, STATES, INDIAN TRIBES.
- 0 DEVELOPMENT OF A FORMAL MECHANISM FOR IMPLEMENTATION.

EARLY IDENTIFICATION AND CLOSURE OF OPEN ITEMS

- 0 OPEN ITEM IDENTIFICATION AND PRIORITIZATION.
- 0 DEVELOP MECHANISM TO FOCUS DEVELOPMENT OF GUIDANCE AND NRC/DOE INTERACTIONS ON FORMAL CLOSURE OF OPEN ITEMS.

MECHANISMS FOR FORMAL CLOSURE

- 0 FOCUS NRC/DOE INTERACTIONS ON RESOLUTION OF OPEN ITEMS
 - AGREE ON CONSULTATION POINTS
DOE, STATES AND TRIBES
 - DEVELOP AGENDAS THAT FOCUS ON DEVELOPMENT OF APPROACHES FOR RESOLVING
ISSUES
 - EFFECTIVE STATE AND TRIBAL PARTICIPATION
 - MINUTES THAT REFLECT PROGRESS TOWARDS OPEN ITEM RESOLUTION, AGREEMENTS,
DISAGREEMENTS, AND IDENTIFY ACTIVITIES NEEDED TO ACHIEVE RESOLUTION

MECHANISMS FOR FORMAL CLOSURE (CONTINUED)

0 FORMAL AND DOCUMENTED TECHNICAL POSITIONS.

- MECHANISM TO ESTABLISH AND DOCUMENT CONSENSUS ON AGREEMENTS REACHED AT MEETINGS
- VENTILATE POSITIONS TO ESTABLISH TECHNICAL CONSENSUS
 - PEER REVIEW
 - PUBLIC COMMENT
 - TARGET GROUPS
- DOCUMENT CONSENSUS/AGREEMENTS IN FINAL TECHNICAL POSITIONS
 - DOE, STATES AND TRIBES
- TYPES OF TECHNICAL POSITIONS
 - STRATEGIES - DEVELOP CRISP BASELINE/GROUND RULES.
E.G., HYDROLOGIC TESTING
 - METHODOLOGIES - IMPLEMENTATION OF EPA STANDARD.

MECHANISMS FOR FORMAL CLOSURE (CONTINUED)

0 RULEMAKING

- IDENTIFY TOPICS FOR RULEMAKING

- CRITERIA

- RIPE, WELL VENTILATED, MATURE
 - MOST CONTENTIOUS
 - LONG LEAD TIME

- POSSIBLE TOPICS

- DISTURBED ZONE
 - METHODOLOGY FOR IMPLEMENTATION OF EPA STANDARD

DEVELOPMENT OF INDEPENDENT TECHNICAL REVIEW CAPABILITY

0 ESTABLISH REVIEW CRITERIA AND REVIEW APPROACH

- FOR EACH COMPLIANCE DEMONSTRATION ISSUE
- FOR VARIOUS PHASES OF THE PROGRAM

SCP
SCP UPDATES
LICENSE APPLICATION

- MODELING STRATEGY DOCUMENT

OPEN ITEM IDENTIFICATION AND PRIORITIZATION

- 0 GENERIC COMPLIANCE DEMONSTRATION ISSUES
- 0 SITE SPECIFIC OPEN ITEMS
- 0 CONSULT WITH DOE, STATES AND TRIBES
- 0 PRIORITIZATION
 - DETERMINE WHERE GUIDANCE AND WORK ON OPEN ITEM RESOLUTION IS MOST NEEDED
 - MOST CONTENTIOUS OPEN ITEMS
 - CRITICAL TO EARLY PHASES OF PROGRAM
 - LONG-LEAD TIME ITEMS
 - TIMING WITH RESPECT TO OVERALL PROGRAM SCHEDULES

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MEMORANDUM FOR: Malcolm R. Knapp, Chief
 Geotechnical Branch, DWM

John T. Greeves, Chief
 Engineering Branch, DWM

FROM: John J. Linehan, Acting Chief
 Repository Project Branch, DWM

SUBJECT: IMPLEMENTATION OF FIVE YEAR PLAN

On January 29, 1986, WM presented a briefing to Mr. Davis on the Division's HLW Strategic Plan for the next five years. The Five-Year Plan, as approved by Mr. Davis, is attached. The plan sets forth the major goals and actions for the Division in the HLW area and focuses on the formal resolution of licensing issues.

In order to begin implementing the plan, it is necessary that work plans be developed that detail the process for formal resolution of the specific compliance demonstration issues (key licensing findings that must be made by NRC) contained in 10 CFR Part 60. Each work plan should include all activities related to resolution of the issue in question (e.g., development of GTP's; development of review capability for SCP's, bi-annual SCP updates and license application, including development or use of models and codes; and any direct interactions with DOE, States, Tribes and peer review groups needed to support these activities) and a schedule for completion, as required, prior to the submittal by DOE of the license application in 1991. Also, each work plan should provide milestones intended to assure that products are well scoped out and coordinated at both staff and management levels at an early stage and throughout product development and that in all activities, appropriate attention is paid to technical integration throughout. The first activity under the WMRP systems integration task will be one of assuring that appropriate interfaces are maintained in these work plans. The required work plans and lead responsibility are as follows:

Work PlanLead Responsibility

- | | |
|---|---------------|
| 1) Pre-Closure Protection Against Exposures and Releases | John Greeves |
| 2) Retrievability | John Greeves |
| 3) Containment of HLW within Waste Packages | John Greeves |
| 4) Radionuclide Release Rate from Engineered Barrier System | John Greeves |
| 5) Pre-Waste Emplacement Groundwater Travel Time | Malcolm Knapp |
| 6) Post-Closure Groundwater Protection | Malcolm Knapp |
| 7) Post-Closure Individual Protection | Malcolm Knapp |

- | | |
|--|--------------|
| 8) Post-Closure EPA Containment Standard | John Linehan |
| 9) Systems Integration | John Linehan |
| 10) Quality Assurance | John Linehan |
| 11) Format and Content Guide For License Application | John Linehan |
| 12) Standard Review Plan For License Application | John Linehan |

In addition to the above work plans, each Branch Chief needs to identify other key compliance demonstration issues that need to be formally resolved prior to receipt of the DOE license application. In developing and identifying your work plans, please show the relationship of each additional issue to the key licensing findings of Part 60 listed above.

In developing the work plans, focus on the milestones and schedules required. Resource needs must also be considered and developed. Each branch should also identify points of contact in their branch for all of the above work plans. Development of these generic work plans should be closely coordinated with the ongoing activity by RP's project managers and project team members of developing work plans and activities for the three project teams (see attached document, HLW Site-Specific/Project Planning) and issues which are currently being identified by your staff through the Pilot Project Task Group in preparation for input into the Open Item Tracking System. A draft set of open items for NNWSI in the areas of waste package and seismology have been completed and will be distributed by the task group next week for review.

A planning session for development of these work plans will be held next week for Branch Chiefs and involved staff to coordinate the objectives and approach and to assure appropriate interaction is achieved. Please prepare and submit work plans for the activities identified above and a listing of additional work plans to be developed to me (w/cc to R. Browning) by March 21, 1986. I will review the twelve work plans and prioritize proposed additional work plans by March 28, 1986, and schedule briefings on this activity for Mr. Browning and for Mr. Davis during the following week.

[Signature]

John J. Linehan, Acting Chief
Repository Projects Branch
Division of Waste Management

Enclosures:

1. Five-Year Plan
2. HLW Site-Specific/Project Planning

HLW 5-YR PLAN/DUP

- 1 -

DIVISION OF WASTE MANAGEMENT
HIGH-LEVEL WASTE PROGRAM
FIVE-YEAR PLAN
FY86-FY90

MISSION:

NRC's mission in the National High-Level Waste Program is derived from the Nuclear Waste Policy Act of 1982 (NWPAct). A key element of the NWPAct is to have the first licensed geologic repository available to begin permanent disposal of spent fuel and high-level waste by 1998. As directed by the NWPAct, DOE has lead responsibility for siting, designing, constructing, and operating the repository, with full participation by affected States and Indian Tribes. NRC is responsible for licensing the repository (its construction and operation) in accordance with its licensing criteria contained in 10 CFR Part 60. According to the NWPAct, NRC must reach a licensing decision within 3-4 years of receipt of DOE's license application, during which time NRC will be on the critical path of the national program. According to DOE's latest published estimates, a license application for the first repository (out of two currently planned) will be submitted to NRC in 1991 and the repository will begin accepting high-level waste in 1998, the date specified by the NWPAct. The major parties to the NRC licensing hearing will be the NRC, DOE, the host State and affected Indian Tribes.

As part of its mission to license the repository, NRC's activities in the next five years will be based on developing licensing guidance for DOE; resolving, to the extent practicable, licensing issues prior to the hearing; developing the staff's independent licensing assessment capability; and identifying and implementing ways to make the licensing process more efficient. All of NRC's activities will be carried out in an open manner, assuring the necessary interaction with affected States, Indian Tribes and other agencies.

MAJOR FIVE-YEAR GOALS:

In five years from now, NRC's high-level waste program should be in a position whereby all necessary licensing guidance has been provided to DOE; major licensing issues have been adequately ventilated among all parties involved and resolved, to the extent practicable; and the NRC staff has the technical competence and ability to conduct a thorough review of DOE's licensing

application and complete its licensing hearings within the mandated 3-4 year time frame. In order to achieve this strategic position within five years, NRC has the following major goals:

1. Develop and maintain an aggressive program focused on activities necessary to provide sufficient licensing guidance to DOE and sufficient interaction with DOE, States, Indian Tribes, and other agencies in order to identify licensing issues and begin the process of resolving them.
2. Develop and maintain an aggressive program that strives to assure the formal resolution of licensing issues prior to the licensing hearing, to the extent practicable.
3. Develop the staff's technical capability to review DOE's licensing application within a 3-4 year time frame and to adequately defend NRC's position on all licensing issues.
4. Identify and eliminate, to the extent possible, impediments to meeting NRC's statutory time frame for completing its licensing proceeding and identify and implement efficiencies in the licensing process.

OVERALL FIVE-YEAR STRATEGY

- o Focus the program on the key licensing decisions that must be made with respect to 10 CFR 60 performance objectives and siting and design criteria.
- o At least 70% of the staff's effort will be devoted to the formal resolution of licensing issues and in developing an independent capability to conduct the licensing review and hearing within the NWPA-mandated 3-4 year time frame.
- o In the event of year-to-year schedule delays in the DOE program (e.g., in the issuance of Site Characterization Plans), NRC resources devoted to activities dependent on DOE's schedule (no more than 30% of the staff's effort) will be freed up and diverted to formal issue resolution.

ACTION PLANS:

GOAL 1: Provide sufficient licensing guidance to DOE so that its license application will be complete, comprehensive, and of high quality and assure sufficient interaction with DOE, States, Indian Tribes, and other involved agencies in order to identify licensing issues and initiate their resolution.

Action Plans:

- A. Provide guidance to DOE and identify licensing issues through reviews of site characterization plans, environmental assessments, and other DOE plans and reports (generic and site-specific).
- B. Provide guidance to DOE on an acceptable quality assurance program and conduct audits of DOE's implementation of its quality assurance program.
- C. Provide guidance to DOE on format and content of license application documents.
- B. Review DOE's site characterization activities at the three candidate sites.
- C. Initiate resolution of licensing issues, both generic and site-specific, through documented technical meetings, workshops and data reviews.
- D. Maintain continuing liaison with State and Tribal representatives to keep them informed of NRC activities.
- E. Develop and implement specific processes and procedures to permit affected States and Indian Tribes to participate, as appropriate, in the NRC pre-licensing and licensing processes, without adversely affecting schedules and responsibilities.

GOAL 2: Develop and maintain an aggressive program that strives to assure the formal resolution of licensing issues prior to the licensing hearing, to the extent practicable.

Action Plans:

- A. Continue the development of staff technical positions (generic and site-specific) on acceptable methods, tests, and design characteristics for meeting Part 60 performance objectives and siting and design criteria.
- A. Establish and implement a procedure and process for formally resolving site characterization and licensing issues through rulemaking or other feasible alternatives.
- B. Establish and implement a procedure and process for systematically managing and tracking the identification and resolution of licensing issues.
- C. Establish and maintain a priority list and schedule of issues to be resolved through rulemaking or other formalized process.
- D. Implement rulemaking or other formalized process for selected, prioritized issues.

GOAL 3: Develop the staff's technical capability to review DOE's licensing application within a 3-4 year time frame and to adequately defend NRC's position on all licensing issues.

Action Plans:

- A. Ensure that the technical staff remains abreast of developments in the disciplines involved in high-level waste disposal.
- B. Review and verify existing models and codes for assessing long-term performance of a geologic repository system and its subsystems, in relation to Part 60 performance objectives and EPA standards.
- C. Develop selected models and codes for assessing long-term performance.
- D. Develop a standard review plan(s) for NRC's licensing review.

GOAL 4: Identify and eliminate, to the extent possible, impediments to meeting NRC's statutory time frame for completing its licensing review and hearing and identify and implement efficiencies in the licensing process.

Action Plans:

- A. Systematically examine NRC's licensing process to identify impediments.
- B. Work with DOE to develop an integrated network of a Licensing Information Management System to support NRC, DOE, States and Tribes during discovery; and establish a system for interim use.
- C. Establish a Federally Funded R&D Center to alleviate contractor conflict of interest with the DOE program and to assure continuity in technical expertise
- D. Review NRC's current system for handling allegations and adapt it to NRC's NWPA program, for both pre-licensing and post-licensing application.

ASSUMPTIONS:

- o Resources will be available to carry out NRC's responsibilities under the NWPA.
- o A license application to construct a high-level waste repository will be submitted in 1991.
- o In the event of year-to-year schedule delays by DOE, NRC will still be required by the NWPA to complete its licensing review and hearing within 3-4 years.
- o The high-level waste program will continue to be highly contentious.

MAJOR LICENSING ISSUES:

o Performance Issues

Before Permanent Closure:

- safe emplacement of HLW
- retrievability of HLW

After Permanent Closure:

- containment of HLW within waste packages
- release rate of radionuclides from engineered barrier system
- pre-waste emplacement groundwater travel time

o Site Issues

- geology
- waste package
- hydrology
- geochemistry
- design/rock mechanics
- environment
- performance assessment
- quality assurance

o Institutional/Policy Issues

- State/Tribal
- public

1986 HIGH-LEVEL WASTE SITE-SPECIFIC/PROJECT PLANNING

DEVELOPMENT OF 1986 HLW SITE-SPECIFIC/PROJECT PLAN

The 1986 HLW site-specific/project plan should be developed in the following manner. Using the broad and specific objectives, general planning assumptions and project planning assumptions provided identify for each project and discipline area* a plan which consists of the following:

- 1) Significant issues to focus pre-SCP activities (specific objective 1)
- 2) Activities/Products for each significant issue (developed from specific objectives 2-10)
- 3) Identify the specific objectives which the activity/products support
- 4) Lead staff member
- 5) Support staff members
- 6) Contractor support
- 7) General schedule of activities/products

The attached standard format (Enclosure 1) is a convenient way to show the above seven planning items. Enclosure 2 illustrates on hypothetical example of how the format could be used to present planning items. The plan should identify all the significant issues and associated activities and products that should be done to support the objectives.

*Discipline areas include: geology/geophysics, hydrology, geochemistry, waste package, design/rock mechanics, environment, performance assessment/integration, and quality assurance.

Planning is expected to be conducted in three steps: 1) explanation of planning approach to section leaders and teams; 2) informal discussions and development of the above seven planning items (including integration with generic items and project items in other disciplines) by team members, in consultation with PM's, SL's, and; 3) meeting for each discipline with team members, SL, PM, for agreement on each discipline plan (i.e., seven planning items).

Planning steps should start the first week of March and agreement meetings should be held during the third and fourth weeks of March.

BROAD OBJECTIVES

1. Prepare for and review the FEA
2. Prepare for SCP review.

SCP preparations, including interactions with DOE should not be to review, comment or agree with the entire SCP in draft form before it is released. NRC will conduct it's comprehensive review of the SCP and supporting information when the SCP is released, in subsequent SCP updates and ongoing reviews during site characterization. SCP preparations should consist primarily of selective reviews for chosen significant issues where early NRC attention and initiation of issue resolution is judged to be needed in order to prevent major changes or delays in DOE's program because of NRC comment. Significant issues can include such items as 1) topics for which there is contention or disagreement between parties (e.g., NRC/DOE, DOE/states, technical community, etc.), 2) topics with associated long lead times, 3) topics central to the performance of a site, or 4) topics with associated testing/analysis or construction methodologies that are unique and new.

SPECIFIC OBJECTIVES

Review FEA

1. Prepare to review FEA following FEA Review Plan
2. Review FEA and prepare comments following FEA Review Plan

Prepare for SCP Review

1. Identify significant issues related to characterization of the site and SCP designs (see broad objective 2)
2. Identify, review and comment on new data/analyses results from DOE/OCRWM programs and determine if there are any new issues
3. Identify, review and determine applicability to site characterization and significant issues of existing and new data and information from non OCRWM programs (e.g., WIPP, foreign, state, and industry)

4. For significant issues related to testing/analysis strategies for characterizing a site, develop and reach agreement with DOE on technical position (e.g., BWIP STP 1.1 on Hydrologic Testing) and develop internal review criteria.
5. For significant issues related to design, develop and reach agreement with DOE on technical positions and develop internal review criteria.
6. Review and comment as needed on field and lab test plans/procedures for studies to be conducted/initiated before SCP release and review (e.g., SRP Surface-based Test Plan, SRP/PNL waste package lab testing)
7. Develop staff assessment capabilities for reviewing SCP information on key issues (e.g., develop range of conceptual models, scenarios, develop capability to review numerical models/codes, and develop/apply independent analytical or numerical modeling methods)
8. Review and comment as needed on preliminary SCP material provided by DOE and at DOE request (e.g., issues hierarchy and associated information needs list, preliminary performance allocations, and draft test plans. Attention to issues/information needs and performance allocation may be necessary to do before full attention is given to test plans)
9. Support external QA activities (e.g., observe DOE audits, prepare for and conduct NRC audits)
10. Conduct technical meetings, appendix 7 visits and prepare letters to DOE needed to support the above objectives.
11. Interact with NRC's on-site representative and DOE's points of contact to the extent needed to support the above objectives.
12. Conduct routine project activities (see list on Enclosure 2) considering that all of these are necessary to support activities related to the above objectives.

GENERIC PLANNING ASSUMPTIONS

1. Current FEA release date is April 1986, therefore preparations to review the FEAs should be completed by April 30, 1986.
2. FEA review period will be two months during the April to July time frame. No pre-SCP interactions will occur during the two month review period.
3. Current SCP release dates are:

BWIP - December 1986

NNWSI - December 1986

Salt - April 1987 (one year after recommendation of the site)

4. Pre-SCP activities should focus on the Hanford, Yucca Mt., and Deaf Smith sites unless DOE recommendations change these sites

PROJECT SPECIFIC PLANNING ASSUMPTIONS (example)

1. During the March to May time period SRPO will be completing their project planning and redirection activities. During this time period they will not request meetings with NRC. Also during this time period they will be

completing their planning networks including identifying milestones and schedules and SRPO/NRC interactions.

2. Two meetings that SRPO may request before other meetings will be on SRPO's issue hierarchy and data needs and draft performance allocations for the site. These will not occur before summer.
3. During the March and April time period the salt team should focus its activities on:
 - a. refinement of our own plans based on review of SRPO networks, review of draft documents while on Appendix 7 visits to Columbus. Each technical lead and others as appropriate should arrange an Appendix 7 visit to Columbus.
 - b. prepare for FEA review - complete preparations by April 30.
4. During the May and June time period the salt team should focus its activities on a scoping review of non-OCRWM programs (e.g., WIPP, West Germany, etc.).

Enclosure 1

Significant Issue	Specific objective No	Activity / Product	Lead Staff	Support staff	Support Contractor

1986 HLW SITE-SPECIFIC/PROJECT PLAN

PROJECT:
DISCIPLINE:
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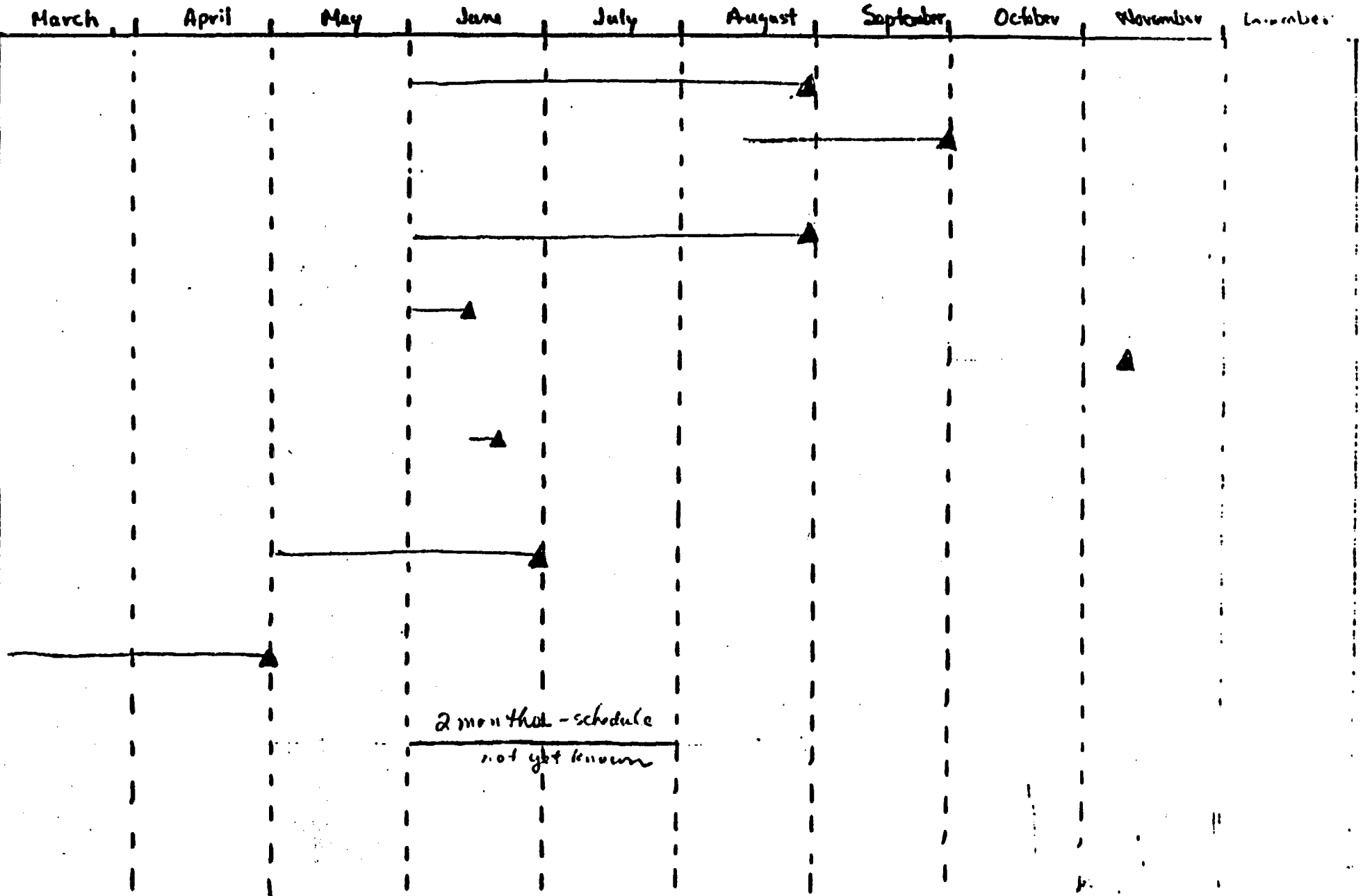
HYPOTHETICAL EXAMPLE

Significant Issue	Specific objective No	Activity / Product	Lead Staff	Support staff	Support Contractor
1.0 Dissolution	SCP 4,7	1.1 Develop range of conceptual models for existing features and potential features to be identified	Trapp	1	
	SCP 4,7,10	1.2 Technical meeting with SKI to agree on range of conceptual models	Trapp	1	
	SCP 3	1.3 Develop information requirements	Trapp	1	
	SCP 2	1.4 Review/comment on OHSJ RAA Form	Trapp		
	SCP 8	1.5 Review/comment on SKI information / data needs for design	Trapp	1	
	SCP 2,10	1.6 App 7 report to review design and data	Trapp		
2.0 -----					
3.0 -----					
4.0 General SCP Review Prop	SCP 3	4.1 Product Support review of requirements (program of work, etc.)	Trapp	1	
5.0 FEA Review	FEA 1	5.1 FEA review preparation	Trapp		
	FEA 2	5.2 Review FEAs	Trapp		

PROJECT :
DISCIPLINE :
PAGE :

Example Schedule

▲ product
— activity



ROUTINE WORK

1. Search, acquire, and place in DCC any non OCRWM new documents relevant to the project. Note that under the RP document review procedure OCRWM documents are distributed from DOE directly to NRC's Docket Control Center.
2. Maintain cognizance of new data (by using DOE data inventories and/or NRC data inventories, NRC OR and DOE points of contact).
3. Conduct scoping reviews of each new document (see document review procedure).
4. Maintain cognizance of key project activities, products, milestones, meetings (project or DOE, industry, State, other federal, foreign society) program changes, etc., using aids such as SRP/ONWI Catalogue, DOE planning documents, NRC/DOE technical contacts, OR's, society meeting lists).
5. Identify and recommend to PM new activities/products or changes to ongoing work with emphasis on identifying where timely guidance is needed to DOE.
6. Work with PM, SL to plan activities/products as needed.
7. Provide PM, OR, and team periodic work status reports as needed.
8. Attend weekly team meetings.
9. Respond to quick turn-around requests from PM of about 2 hours or less.
10. Maintain cognizance of NRC/RES projects relevant to project technical area of responsibility.
11. TA contractor interactions.

PRE-SCP SIGNIFICANT AREAS OF CONCERN FOR DESIGN/ROCK MECHANICS

- 0 EXPLORATORY SHAFT STUDY PLAN
 - RATIONALE AND BASIS FOR PROPOSED TESTING PROGRAM
 - IMPACT OF ADVANCE CONCEPTUAL DESIGN ON PROPOSED TESTING PROGRAM
- 0 SYSTEM PERFORMANCE ANALYSIS SUPPORTING ES AND FACILITY DESIGN DECISIONS

ACTIONS: APPENDIX 7 TO REVIEW BOREHOLE TEST DATA, REVISED CONCEPTUAL DESIGN, DRAFT STUDY/TEST PLANS, AND DRAFT SCP CHAPTER 8

MEETING TO DISCUSS CONCERNS _____ ON PERFORMANCE ANALYSIS METHODOLOGY FOR THE ES AND ES FACILITY

MEETING TO DISCUSS SPECIFIC STUDY/TEST PLANS WHERE CONCERNS HAVE BEEN IDENTIFIED.

SIGNIFICANT PRE-SCP CONCERNS FOR HYDROLOGY

- 0 APPROACH TO DETERMINING GWTT
 - ADEQUACY OF DATA BASE
 - ASSUMPTIONS USED IN APPLICATION OF MODELS
- 0 HYDROGEOLOGIC TESTING STRATEGY
 - OBJECTIVES
 - PROCEDURES
 - TESTING METHODS QA PROCEDURES

ACTIONS: APPENDIX 7 ASSIGNMENT TO REVIEW DRILL CORE, TESTING DATA, REVISED HYDROLOGIC STRATEGY AND TEST PLAN TO ASSIST STAFF IN PREPARING FOR MEETING ON HYDROLOGIC TESTING, DRAFT SCP CHAPTER 8.

MEETING TO CLOSE OUT OPEN ITEMS ON HYDROLOGIC TESTING STRATEGY.

SIGNIFICANT PRE-SCP CONCERNS FOR WASTE PACKAGE

0 PERFORMANCE

- HOW DOES PROPOSED TESTING COVER THE PROJECTED RANGES OF THE GEOTECHNICAL ENVIRONMENT
 - SUSCEPTIBILITY OF STEEL CONTAINER TO NON-UNIFORM CORROSION MECHANISMS.
 - EFFECTS OF NEAR-FIELD GEOCHEMICAL REACTION KINETICS ON CONTAINER PERFORMANCE
 - EFFECTS OF ENTRAPPED MOISTURE ON PACKING PERFORMANCE AND OVERALL WASTE PACKAGE PERFORMANCE
-

ACTIONS: APPENDIX 7 ASSIGNMENT TO REVIEW TESTING DATA, DRAFT STUDY/TEST PLANS AND PROCEDURES, ADVANCED CONCEPTUAL DESIGN, PRELIMINARY RELIABILITY ANALYSIS AND DRAFT SCP CHAPTER 8

MEETING TO DISCUSS REVISED CONCEPTUAL DESIGN AND PERFORMANCE CONCERNS .

SIGNIFICANT PRE-SCP AREAS OF CONCERN FOR GEOLOGY/GEOPHYSICS

- 0 PROPOSED TESTING ACTIVITIES, SUCH AS GEOPHYSICAL SURVEYS, WHICH WILL BE UTILIZED DURING SITE CHARACTERIZATION
 - CAPABILITIES OF METHODS TO PROVIDE ADEQUATE CHARACTERIZATION INFORMATION
 - 0 SEISMOTECTONICS
 - CHARACTERISTICS OF MICROEARTHQUAKE SWARMS AND IMPACT ON PRE-CLOSURE AND POST-CLOSURE PERFORMANCE
 - FAULT ACTIVITY AND ITS IMPACT ON PRE-CLOSURE AND POST-CLOSURE PERFORMANCE
-
-
-

ACTION: APPENDIX 7 ASSIGNMENT TO REVIEW SEISMOTECTONIC AND FIELD MAPPING DATA; SEE FIELD EVIDENCE OF FAULTING AND TECTONICS; DRAFT STUDY/TEST PLANS, AND DRAFT SCP CHAPTER 8.

MEETING TO RESOLVE SPECIFIC CONCERNS RELATED TO PROPOSED SURFACE GEOPHYSICAL TESTING, MACRO AND MICROSEISMIC ACTIVITY,

SIGNIFICANT PRE-SCP AREAS OF CONCERN FOR GEOCHEMISTRY

- 0 CHARACTERIZATION OF PRE AND POST EMPLACEMENT ROCK CHEMISTRY/MINEROLOGY/PETROLOGY
- 0 CHARACTERIZATION OF PRE AND POST EMPLACEMENT GROUND WATER CHEMISTRY
- 0 CHARACTERIZATION OF PRE AND POST EMPLACEMENT REDOX CONDITIONS
- 0 CHARACTERIZATION OF RADIONUCLIDE SOURCE TERM AND RADIONUCLIDE TRANSPORT

ACTION: APPENDIX 7 ASSIGNMENT TO REVIEW DOE'S DATA NEEDS ASSESSMENT, TEST DATA, DRAFT STUDY/TEST PLANS AND DRAFT SCP CHAPTER 8.

SIGNIFICANT PRE-SCP CONCERNS FOR PERFORMANCE ASSESSMENT

- O OVERALL PERFORMANCE ALLOCATION APPROACH AND PROPOSED IMPLEMENTATION FOR EACH SYSTEM**
- O PERFORMANCE ASSESSMENT PLAN/SYSTEMS INTEGRATION PLAN**
 - STRATEGY AND APPROACH FOR IMPLEMENTING PERFORMANCE ASSESSMENT AND PROPOSAL FOR ACHIEVING CONTINUITY BETWEEN VARIOUS TECHNICAL AREAS**

ACTIONS: BRIEFING AT NRC ON SITE SPECIFIC PERFORMANCE ALLOCATION

MEETING ON BWIP PERFORMANCE ASSESSMENT METHODOLOGY FOCUSED ON SPECIFIC CONCERNS.

1986 HLW SITE-SPECIFIC/PROJECT PLAN

Enclosure 2

PROJECT:
DISCIPLINE:
PAGE:

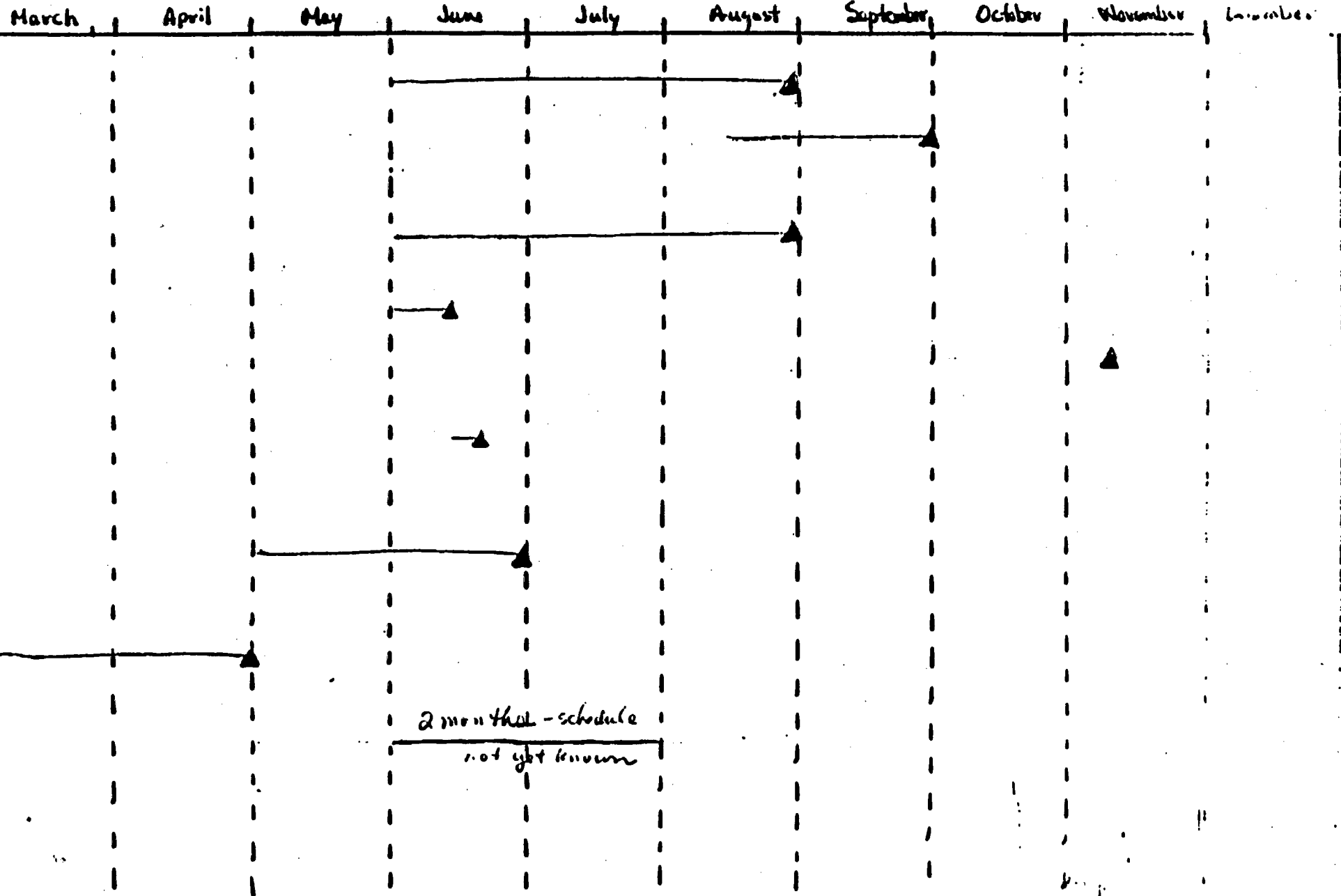
HYPOTHETICAL EXAMPLE

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	SCP 3	1.3 Develop information requirements	Trapp	1.1	
	SCP 2	1.4 Review/prepare OHSW KAA Form	Trapp	1.1	
	SCP 8	1.5 Review/prepare the SCP 1500/1600/1700 / data needs for design	Trapp	1.1	
	SCP 2,10	1.6 App. 7 report to be reviewed and signed	Trapp	1.1	
2.0					
3.0					
4.0 General SCP Review Prop	SCP 3	4.1 Product design review of the design (program of value, etc.)	Trapp	1.1	
5.0 FEA Review	FEA 1	5.1 FEA review preparation	Trapp	1.1	
	FEA 2	5.2 Review FEA's	Trapp	1.1	

PROJECT :
DISCIPLINE :
PAGE :

Example Schedule

▲ product
— activity



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ACTIONS: BRIEFING AT NRC ON SITE SPECIFIC PERFORMANCE ALLOCATION

MEETING ON BWIP PERFORMANCE ASSESSMENT METHODOLOGY FOCUSED ON SPECIFIC CONCERNS.

ENCLOSURE 1

ATTENDANCE LIST

NAME	ORGANIZATION/TITLE	PHONE
J. M. Mecca	DOE/BWIP Licensing	FTS 444-5038
Lee Olson	DOE/BWI	444-7334
John Kovacs	DOE/BWI	444-1291
Ralph May	RHO	376-7651
A. J. Bell	DOE/BWI Licensing	444-1821
K. M. Tomlinson	DOE/BWI Licensing	444-6419
Edward Regnier	DOE/HQ	252-4959
Jack Wittman	YIN	509 865-5121/397
Nancy E. Hovis	YIN	509 575-1500
Karl A Hadley	RHO Licensing	444-5597
Ron T. Halfmoon	Nez Perce Tr. NP-NWPA	208 843-2253/387
Henry W. Penny	Nez Perce Tr. NP-NWPA	208 843-2253
Glen Lane	CERT/Nez Perce & Umat. Tribes	303 832-6600
Dave Stewart-Smith	Oregon/ODOE-Rad. Mats.	503 378-3187
Jonh Graham	RHO/BWIP Licensing	376-5736
Larry R. Fitch	RHO/BWIP Ass. Director	376-5736
Don Provost	State of Washington	206 459-6718
F. R. Cook	NRC	509 946-4669
John Linehan	NRC	301 427-4177
Paul Hildenbrand	NRC	301 427-4672
Ellen Caywood	Wash. St. Inst. for Public Policy	206 866-6000/6454
J. J. Krupar	DOE/RL/BWI	444-2385
R. L. Gilchrist	RHO/BWIP	444-8135
T. Knepf	DOE/RL	-----
L. Connell	RHO	-----
M. Thompson	DOE/RL	-----