

**U.S. DEPARTMENT OF ENERGY
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT**

**PRESENTATION TO
THE NUCLEAR WASTE TECHNICAL REVIEW BOARD**

SUBJECT: PROJECT OVERVIEW

PRESENTER: CARL P. GERTZ

**PRESENTER'S TITLE
AND ORGANIZATION: PROJECT MANAGER
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT
LAS VEGAS, NEVADA**

**PRESENTER'S
TELEPHONE NUMBER: (702) 794-7920**

SEPTEMBER 18 - 19, 1991

PROJECT STATUS

- **1991 ACCOMPLISHMENTS**
- **1992 PLANS AND PRIORITIES**
- **STATUS OF LAWSUITS**
- **STATUS OF PERMITS**

**YUCCA MOUNTAIN PROJECT READY
TO START MAJOR NEW SITE
CHARACTERIZATION ACTIVITIES**

1991 MAJOR ACCOMPLISHMENTS

- **STARTED LIMITED NEW WORK AT YUCCA MOUNTAIN
JULY 8, 1991, AT 3:20 P.M.**
- **DEVELOPED SITE SUITABILITY METHODOLOGY,
CRITERIA AND DATA REQUIREMENTS**
- **CONTINUED NON-SURFACE DISTURBING ACTIVITIES**
- **COMPLETED FOUR ON-GOING MAJOR STUDIES:**
 - **TEST PRIORITIZATION TASK**
 - **EXPLORATORY STUDIES FACILITY (ESF) ALTERNATIVES STUDY**
 - **CALICO HILLS RISK/BENEFIT ANALYSIS**
 - **ALTERNATIVE LICENSE APPLICATIONS STRATEGY**
- **COMPLETED REVISED ESF TITLE I DESIGN SUMMARY
REPORT**

MAJOR 1992 PRIORITIES

(REVISED SEPTEMBER 1991)

- 1. COMPLETE INITIAL EARLY SITE SUITABILITY EVALUATION ACTIVITIES; CONTINUE ONGOING EFFORT**
- 2. CONDUCT MINIMAL SURFACE-BASED TESTING ACTIVITIES**
- 3. CONTINUE ONGOING CHARACTERIZATION ACTIVITIES**
- 4. BEGIN LIMITED ESF TITLE II DESIGN IN OCTOBER 1991**
- 5. START CONSTRUCTION ON ESF PADS AND ROADS IN NOVEMBER 1992**

MAJOR 1992 PRIORITIES

(CONTINUED)

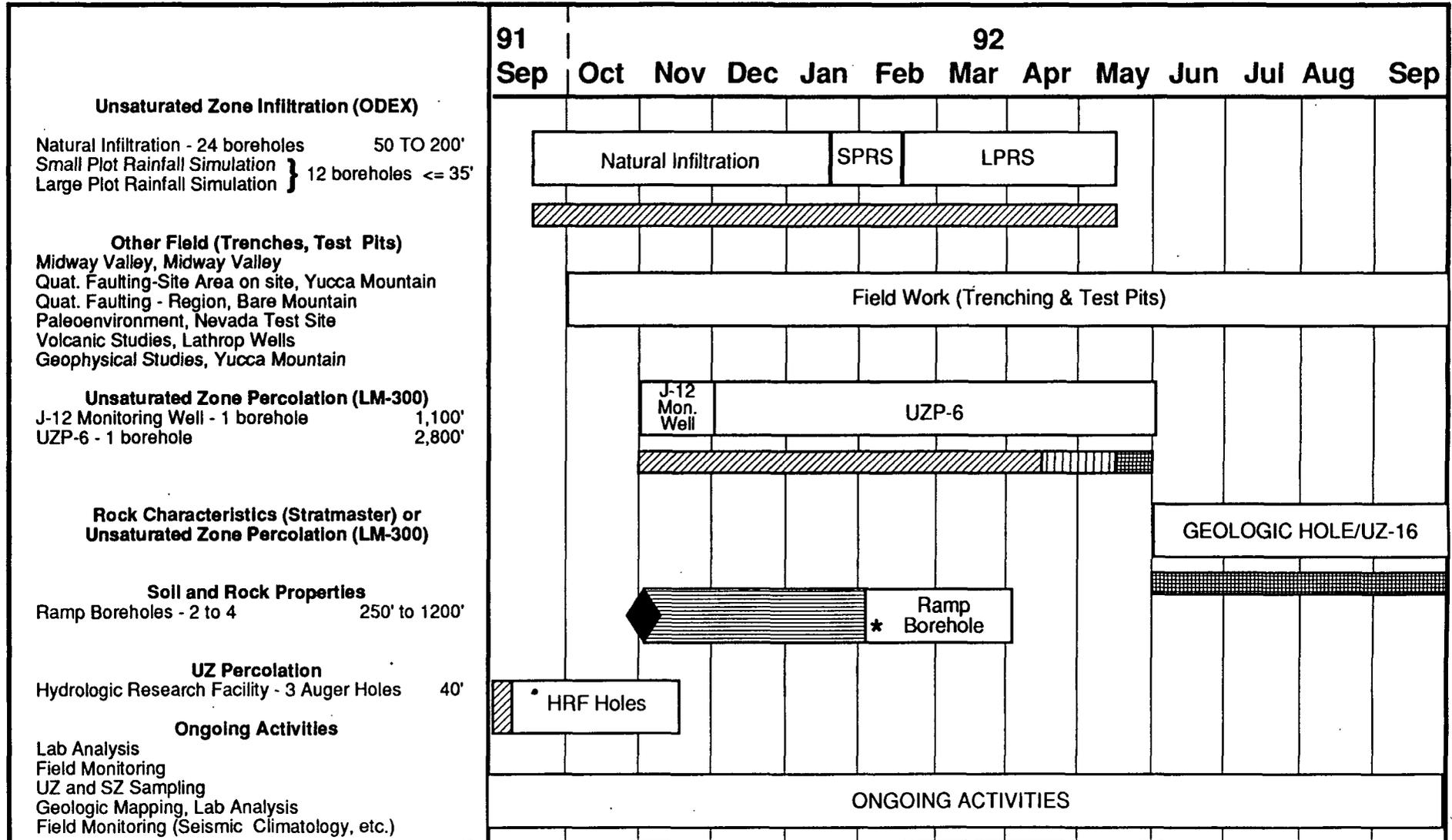
- 6. MAINTAIN A SOUND ENVIRONMENTAL PROGRAM AND PROVIDE SUPPORT TO FIELD ACTIVITIES AS NECESSARY**
- 7. CONDUCT PERFORMANCE ASSESSMENT TO SUPPORT PROJECT PRIORITIES/ACTIVITIES**
- 8. CONTINUE TO FULLY IMPLEMENT A YMP-WIDE QUALITY ASSURANCE PROGRAM AND COST/SCHEDULE CONTROL SYSTEM (PACS)**
- 9. CONDUCT A MINIMAL WASTE PACKAGE/EBS/NEAR-FIELD ENVIRONMENT/WASTE FORM CHARACTERIZATION PROGRAM**

MAJOR 1992 PRIORITIES

(CONTINUED)

- 10. MAINTAIN INFRASTRUCTURE (i.e. ROADS/
BUILDINGS, RECORDS CENTERS, etc.)**
- 11. CONDUCT INSTITUTIONAL/OUTREACH PROGRAMS**
- 12. TRANSITION M&O INTO PROJECT ACTIVITIES**

PROPOSED FY92 SURFACE DISTURBING ACTIVITIES

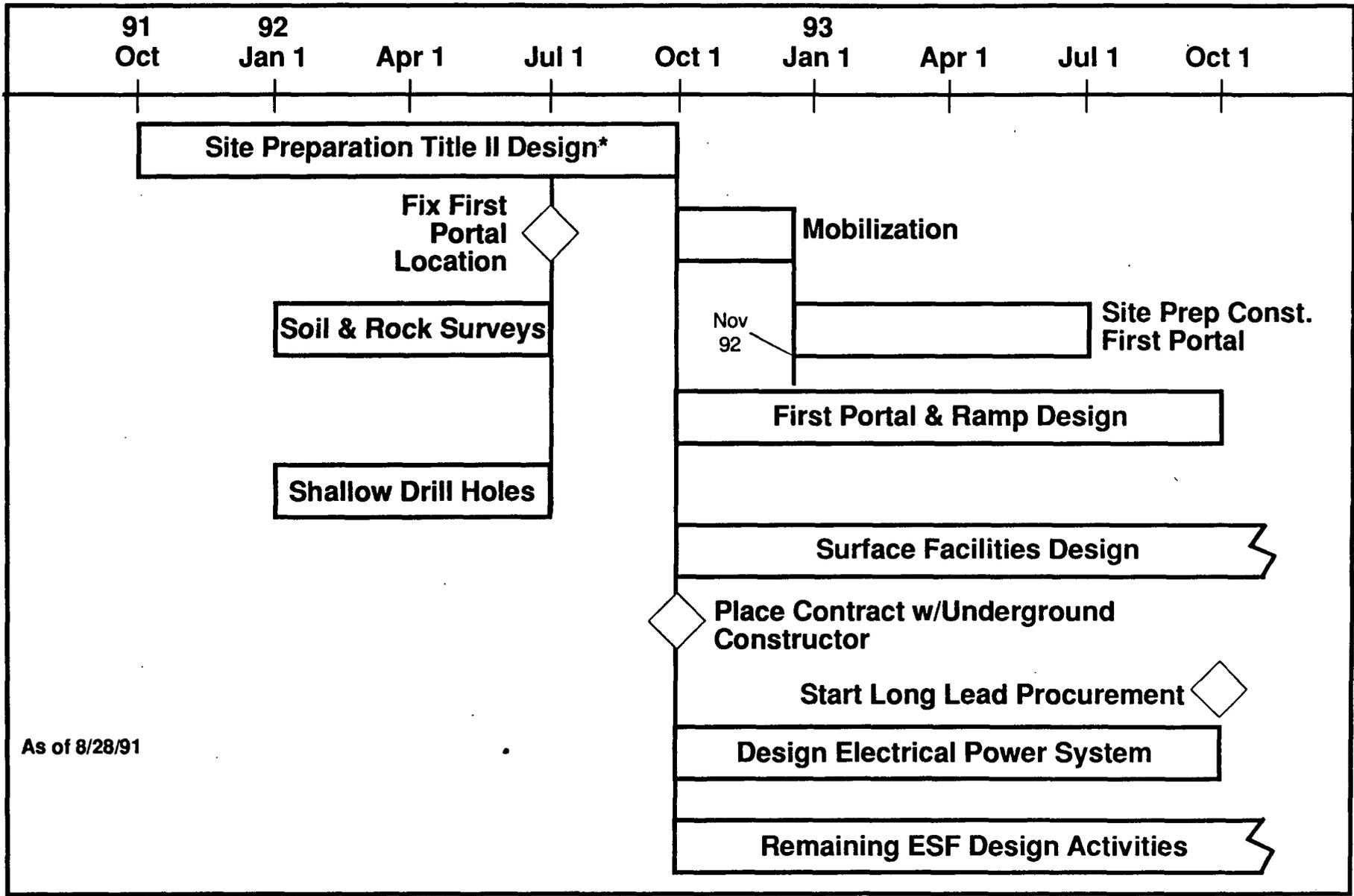


RIG WORK SCHEDULE

-  8 Hours/Day, 5 Days/Week
-  16 Hours/Day, 5 Days/Week
-  24 Hours/Day, 5 Days/Week

-  YMPO APPROVE STUDY PLAN
-  PREREQUISITE COMPLETION
-  SCHEDULE TBD

PROPOSED ESF DESIGN/CONSTRUCTION ACTIVITIES FY92 & 93

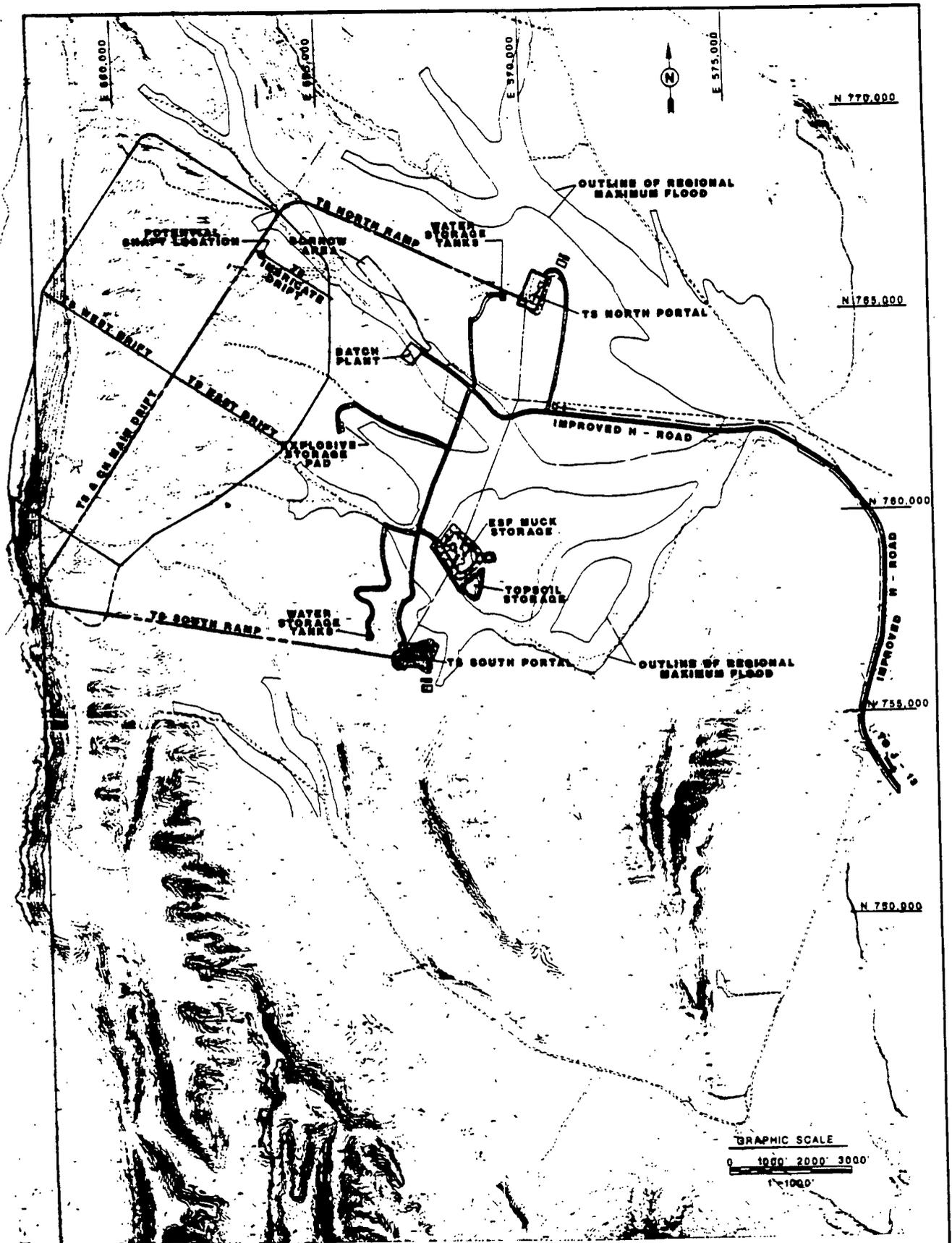


- * INCLUDES
- o PORTAL DESIGN SUFFICIENT FOR BLASTING
 - o AREA DESIGN SUFFICIENT FOR BLASTING AND SITE GRADING
 - o TOPSOIL AND SUBSOIL STORAGE

- o WASTE WATER DISPOSAL
- o POTABLE AND INDUSTRIAL WATER DISTRIBUTION
- o ELECTRICAL SUBSTATION ENVELOPE
- o FACILITY LAYOUTS
- o BUILDING ENVELOPES

ESF MISSION

PROVIDE ACCESS TO GEOLOGIC HORIZONS AT YUCCA MOUNTAIN, SO TESTS CAN BE CARRIED OUT IN THE "UNDERGROUND LABORATORY" TO PROVIDE DATA TO EVALUATE THE SUITABILITY OF THE GEOLOGIC BARRIERS TO ISOLATE WASTE FROM THE ACCESSIBLE ENVIRONMENT AND OBTAIN INFORMATION FOR THE DESIGN OF A POTENTIAL REPOSITORY



EXPLORATORY STUDIES FACILITY
Proposed - General Arrangement

SUMMARY

- **ADEQUATE DESIGN CONTROL PROCESS IS IN PLACE (MEETS QA REQUIREMENTS)**
 - **APPROACH FOR COMPLIANCE WITH 10 CFR PART 60 REQUIREMENTS**
 - **QA**
 - **PLANNING AND COORDINATION OF THE ESF DESIGN AND CONSTRUCTION WITH THE GROA DESIGN**
 - **CONSIDERATION OF ALTERNATIVES FOR DESIGN FEATURES**
 - **EXCAVATION METHODS**
 - **TEST INTERFERENCE**
 - **ESTABLISHMENT OF RANGES OF SITE PARAMETERS**

- **DOE READY TO PROCEED WITH TITLE II DESIGN**

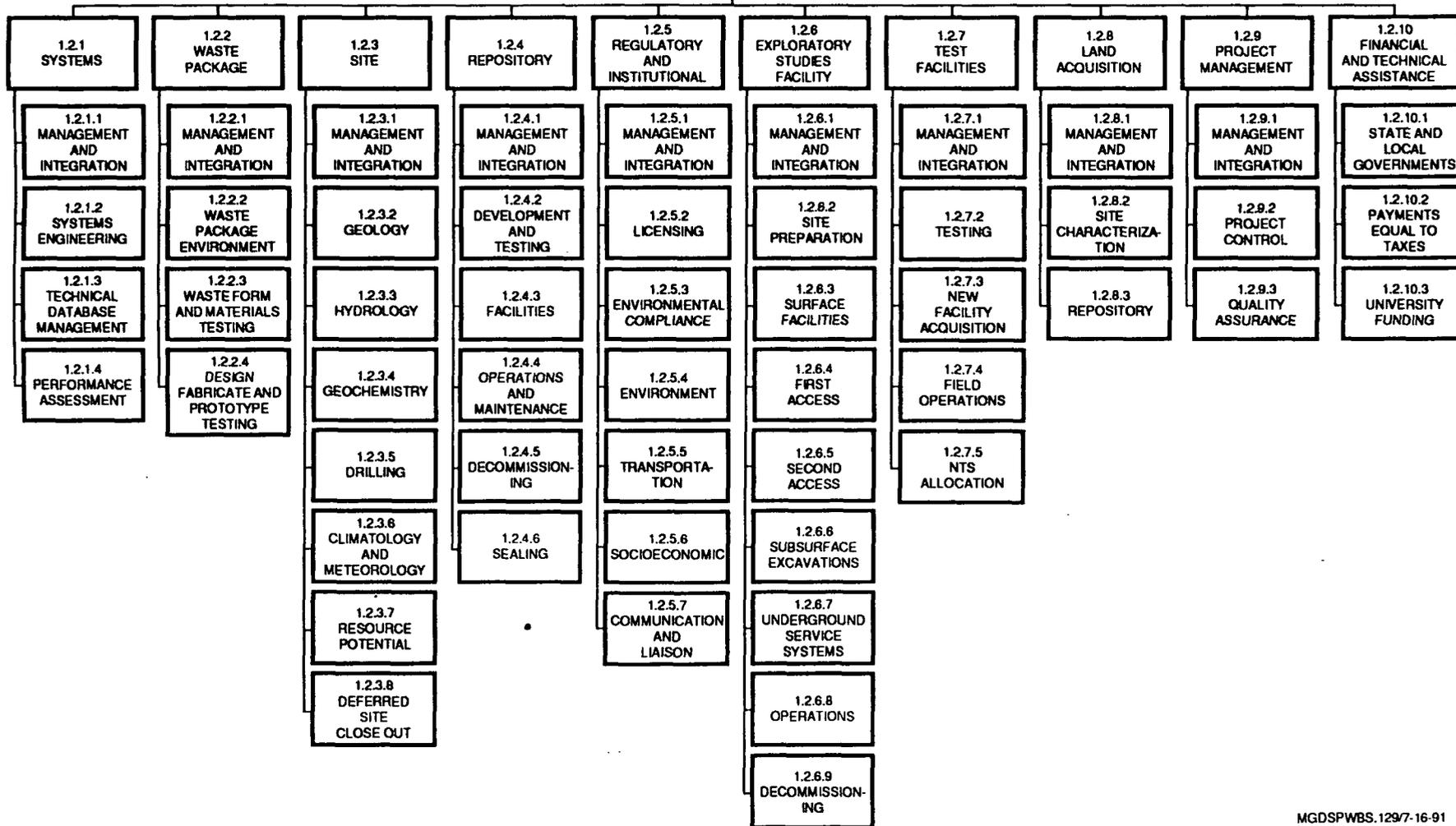
YMP WORK BREAKDOWN STRUCTURE

LEVEL
2

MINED
GEOLOGIC
DISPOSAL
SYSTEM

LEVEL
3

LEVEL
4



WBS NUMBERS

- 1.2.1 SYSTEMS, PERFORMANCE ASSESMENT,
TECHNICAL DATA
- 1.2.3 WASTE PACKAGE/NEAR-FIELD ENVIRONMENT
- 1.2.3 SITE INVESTIGATION
- 1.2.4 REPOSITORY/ESF INTERFACES
- 1.2.5 REGULATORY, INSTITUTIONAL, ENVIRONMENT
- 1.2.6 EXPLORATORY STUDIES FACILITY
- 1.2.7 FACILITIES
- 1.2.9 PROJECT MANAGEMENT
 - MANAGEMENT
 - ADMINISTRATION
 - PROJECT CONTROL
 - QUALITY ASSURANCE

YMP COST COMPARISONS

<u>WBS</u>	<u>FY 1991 ACTUALS</u>	<u>FY 1992 PLANNING</u>
1.2.1 (SYSTEMS)	24.7	19.6
1.2.2 (WASTE PKG.)	10.8	5.2
1.2.3 (SITE)	40.8	45.6
1.2.4 (REPOSITORY)	4.8	4.2
1.2.5 (REGULATORY/INSTITUTIONAL)	20.3	18.2
1.2.6 (ESF)	13.9	7.0
1.2.7 (FACILITIES)	6.7	6.0
1.2.8 (LAND)	.2	.2
1.2.9		
Management	8.4	8.0
Administration	23.7	20.5
Project Control	7.3	8.1
Quality Assurance	13.5	11.6
Project Subtotal	175.1	154.2
1.2.10 (ASSISTANCE)	30.5	15.5
TOTAL	205.6	169.7

FY-92 PLANNING PRIORITIES

1.2.1 SYSTEMS, PERFORMANCE ASSESSMENT, TECHNICAL DATA

- **PROVIDE CONFIGURATION MANAGEMENT SUPPORT**
- **PROVIDE PLANS AND PROCEDURES SUPPORT**
- **PROVIDE PERFORMANCE ASSESSMENT SUPPORT TO
SURFACE-BASED TESTING AND ESF**
- **ENHANCE TECHNICAL DATA BASES**
- **SUPPORT SYSTEMS ENGINEERING/REQUIREMENTS
DEVELOPMENT**

FY-92 PLANNING PRIORITIES

1.2.2 WASTE PACKAGE/NEAR-FIELD ENVIRONMENT

- **CONTINUE ONGOING WASTE FORM TESTING**
- **COMPLETE SYSTEMS APPROACH TO EBS DESIGN CONCEPTS FOR ACD**
- **PROVIDE NEAR-FIELD ENVIRONMENT, WASTE FORM AND MATERIALS PROPERTIES REPORTS**

FY-92 PLANNING PRIORITIES

1.2.3 SITE INVESTIGATION

- **CONTINUE MIDWAY VALLEY, TRENCH-14, AND VOLCANIC INVESTIGATIONS**
- **CONTINUE ONGOING SURFACE-BASED SITE CHARACTERIZATION ACTIVITIES**
- **INITIATE NEW SURFACE DISTURBING (DRILLING) SITE CHARACTERIZATION ACTIVITIES INCLUDING:**
 - **PROTOTYPE DRILLING ON THE NTS**
 - **PARK SERVICE MONITORING BOREHOLE**
 - **UNSATURATED ZONE BOREHOLES**
 - **GEOLOGIC INVESTIGATION BOREHOLES**

FY-92 PLANNING PRIORITIES

1.2.4 REPOSITORY/ESF INTERFACES

- **PROVIDE REPOSITORY/ESF DESIGN INTERFACE SUPPORT**
- **PROVIDE LIMITED GEOMECHANICAL TESTING AND THERMOMECHANICAL DEVELOPMENT**

FY-92 PLANNING PRIORITIES

1.2.5 REGULATORY, INSTITUTIONAL, ENVIRONMENT

- **SUBMIT THE EARLY SITE SUITABILITY EVALUATION REPORT TO OCRWM**
- **PROVIDE ENVIRONMENTAL SUPPORT TO SURFACE-BASED TESTING**
- **CONDUCT INSTITUTIONAL PROGRAM**
- **SUPPORT NRC, ACNW, AND NWTRB INTERACTIONS**

FY-92 PLANNING PRIORITIES

1.2.6 EXPLORATORY STUDIES FACILITY

- **COMPLETE ESF SITE PREPARATION TITLE II DESIGN FOR FIRST PORTAL LOCATION**
- **IMPLEMENT CONSTRUCTION MANAGEMENT IN PREPARATION FOR START OF FIRST AREA SITE PREP CONSTRUCTION**

FY-92 PLANNING PRIORITIES

1.2.7 FACILITIES

- **PROVIDE FIELD OPERATIONS CENTER SUPPORT TO SURFACE-BASED TESTING SITE CHARACTERIZATION ACTIVITIES**
- **IMPLEMENT FIELD CHANGE CONTROL PROCEDURES**
- **ASSURE SAFETY OF EXISITNG FACILITIES**

FY-92 PLANNING PRIORITIES

1.2.9 PROJECT MANAGEMENT (MANAGEMENT, ADMINISTRATION, PROJECT CONTROL, QUALITY ASSURANCE)

- **CONTINUE QA PROGRAM IMPLEMENTATION TO SUPPORT SURFACE-BASED TESTING AND ESF DESIGN**
- **CONTINUE FULL IMPLEMENTATION OF THE PLANNING AND CONTROL SYSTEM (PACS)**
- **MAINTAIN CORE COST INFRASTRUCTURE**

STATE AND DOE IN LEGAL BATTLE

- **STATE FILED LAWSUIT AGAINST DOE IN JANUARY 1990**
 - **U.S. 9TH CIRCUIT COURT OF APPEALS UNANIMOUSLY RULED IN DOE'S FAVOR SEPTEMBER 1990**
- **SUPREME COURT DENIED THE STATE'S REQUEST TO REVIEW 9TH CIRCUIT COURT DECISION MARCH 1991**
- **STATE FILED A REQUEST FOR RECONSIDERATION TO THE SUPREME COURT THAT WAS ALSO DENIED ON JUNE 14, 1991**
- **SUIT CONSIDERED CLOSED**

LAWSUITS

(CONTINUED)

- **DOE FILED LAWSUIT IN U.S. DISTRICT COURT AGAINST STATE IN JANUARY 1990 TO OBTAIN PERMITS**

- **STATE ISSUED AIR QUALITY PERMIT ON JUNE 12, 1991**
- **STATE ISSUED UNDERGROUND INJECTION CONTROL (UIC) PERMIT JULY 17, 1991**
- **STATE ENGINEER HOLDING HEARING ON WATER APPROPRIATIONS REQUEST SEPTEMBER 24, 1991; COURT CONTINUES JURISDICTION OVER THIS ACTIVITY**

**NINTH CIRCUIT COURT OF APPEALS
RECENTLY RULED IN DOE'S FAVOR ON THE
"GUIDELINES" AND "ENVIRONMENTAL
ASSESSMENT" CASES**

"In 1987, Congress ordered the Secretary to conduct site characterization at Yucca Mountain. Nothing in the NWPA suggests that this clear legislative command is contingent upon the promulgation of a valid, adequate, and sufficient EA. We hold that Congress's 1987 amendments to the NWPA have rendered moot all aspects of Nevada's challenge to the Yucca Mountain EA. Accordingly, the petition is DISMISSED."

**STATE ISSUED PERMIT ALLOWING DOE TO
USE WATER FROM WELL VH1 TO CONDUCT
SITE CHARACTERIZATION ACTIVITIES**

- **WELL IS 26 ROAD MILES FROM CURRENT
STORAGE TANKS**
- **PERMIT EXPIRES MAY 1992**

TO DEMONSTRATE FEDERAL RESOLVE DOE NEEDS ASSISTANCE

YES



- **LITIGATION AND/OR LEGISLATION TO OBTAIN PERMITS TO BEGIN NEEDED SURFACE-DISTURBING WORK**



- **ADMINISTRATION (OMB) AND DEPARTMENTAL (DOE) SUPPORT TO OBTAIN ADEQUATE RESOURCES**



- **CONGRESSIONAL SUPPORT OF FULL FUNDING**

WITHOUT ALL THREE, THE REPOSITORY PROGRAM WILL BECOME STALLED