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**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**

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DIV. OF WATER &
LAND DEVELOPMENT

September 24, 1991

Janet - file
RECEIVED

MEMORANDUM

TO: The Honorable William Paty, Jr., DLNR
The Honorable John C. Lewin, DOH
The Honorable Harold Matsumoto, OSP
Mr. Brian Choy, OEQC
Mr. Richard Paglinawan, OHA

From: Murray E. Towill

Subject: Meeting on October 8, 1991, concerning the preparation of an Environmental Impact Statement for the Hawaii Geothermal Project.

You and/or your representative are requested to attend and participate in a meeting with Dr. Lloyd Lewis of the U.S. Department of Energy concerning the preparation of an EIS for large scale (up to 500 MW) of geothermal energy development on the island of Hawaii. As you may know DOE has been identified as the lead agency in preparing the EIS.

Date: Tuesday, October 8
10 am - 12 noon

*all agencies -
10/1 - and agency - staff -
specific info*

Place: DBED Conference Room
11th Floor Central Pacific Bank Bldg.
220 South King Street

* You will be contacted by phone to confirm your attendance and also to arrange for separate meetings afterwards as requested by Dr. Lewis. We will be sending you by separate mail the formal announcement of the scope of the EIS and DOE's role.

SKAEM

Murray

Pls call Betty, 8-3275 to schedule this meeting w/ Dr. Lewis. I told her that Manabu would rep. boss @ the Oct 8th, 10-12 ending. Thanks.

lt

10/8/91
DBB07

- Lloyd Lewis
- Patricia Phillips

Hawaii Geothermal Project: Environmental Impact Statement

Information Meetings with Hawaii Agencies

Hilo and Honolulu, Hawaii

October 1991

Dr. Lloyd F. Lewis, U.S. DOE-HQ
Ms. Patricia W. Phillips, U.S. DOE-OR



PROGRAM OBJECTIVE

"To prepare an Environmental Impact Statement (EIS) for Phases 3 and 4 of the Hawaii Geothermal Project (HGP) as defined by the State of Hawaii in its proposal to Congress in 1989."

MEETING OBJECTIVE

To secure the participation of Hawaii Agencies in the preparation and review of the HGP EIS.

MEETING GOALS

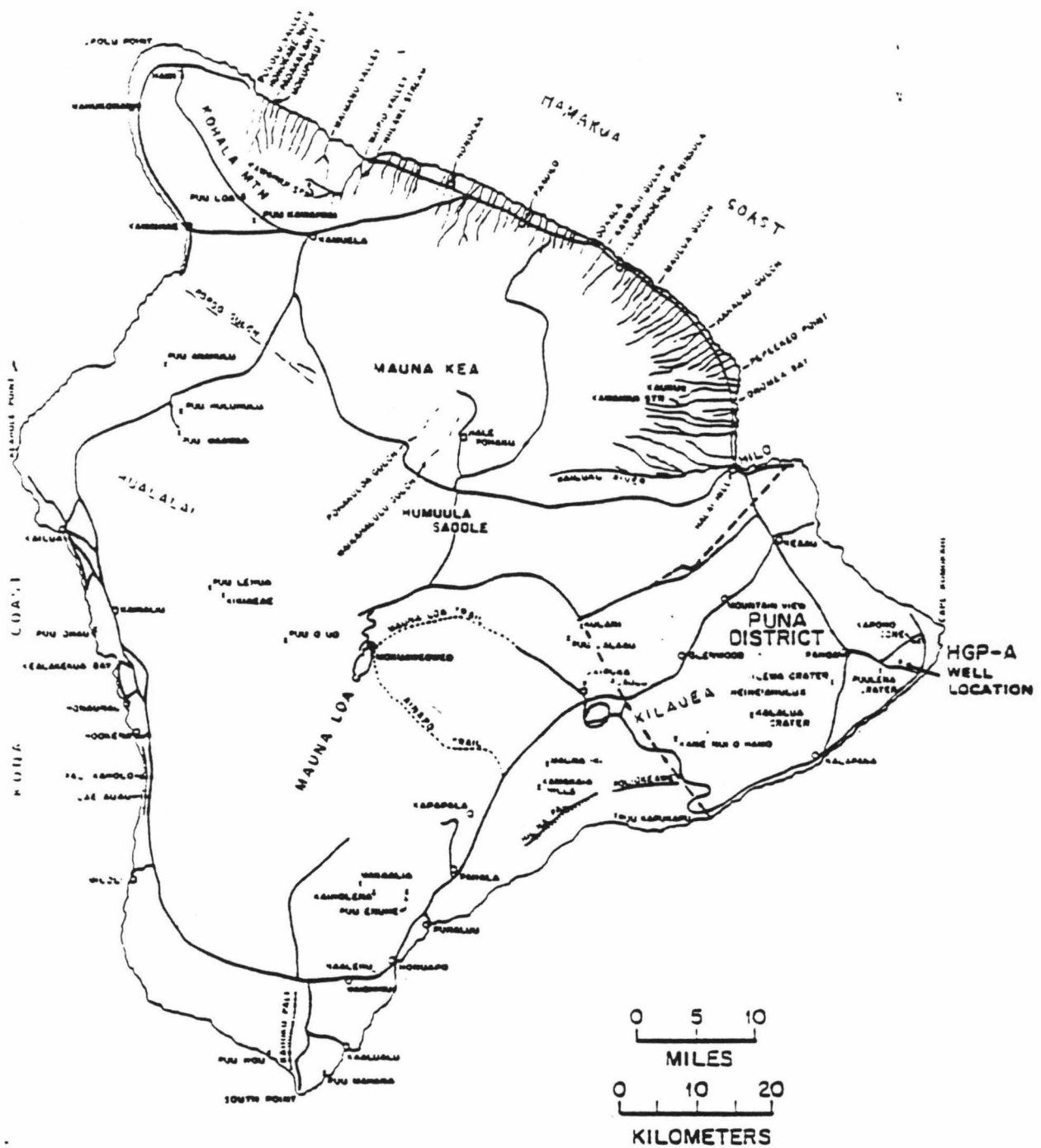
1. Define the roles of DOE as lead agency.
2. Define the roles of Hawaii Agencies.
3. Define the mechanisms to accomplish these goals.
 - Interagency agreements
 - Cooperating agency status
 - Regulatory and/or jurisdictional responsibility
 - Data provision
 - Comment and/or advise

HAWAII GEOTHERMAL PROJECT BACKGROUND/PROJECT DESCRIPTION

- Project consists of four phases:
 - (1) Exploration
 - (2) Deep-water cable demonstration
 - (3) Verification and characterization of the resource
 - (4) Construction and operation of geothermal power plants
- Project location: Puna District on Big Island
- Geothermal resource derived from Kilauea volcano
- Geothermal exploration and underwater cable demonstration completed with DOE, NSF, state support
- DOE NEPA documentation for prior efforts

---Geothermal well testing, demonstration at 3-MW Geothermal Power Plant (Hawaii Geothermal Research Station): ERDA, 1976; DOE/EA-0071 (1979)

---Underwater cable demonstration: Memorandum to File (9/83)

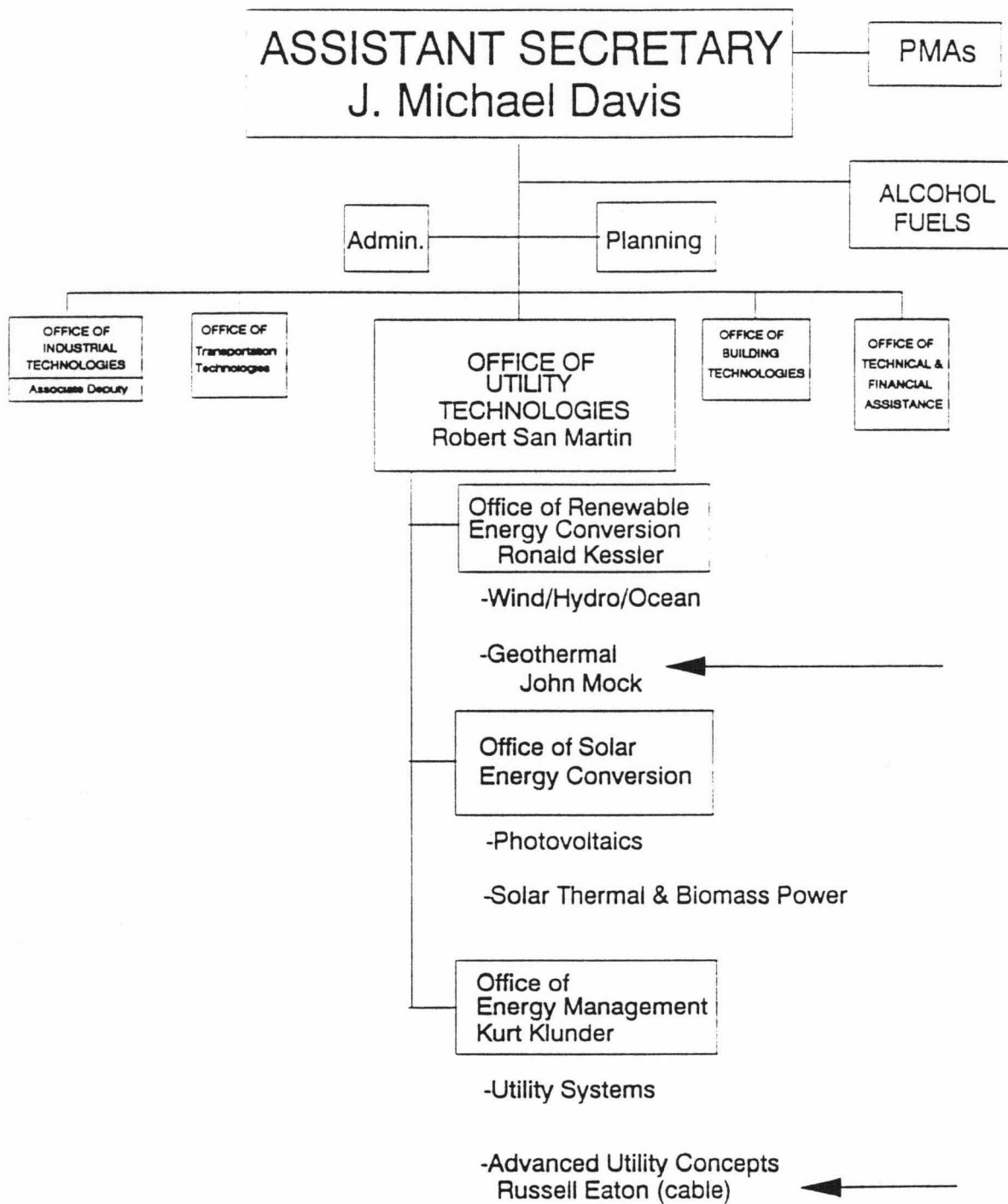


Location of HGP-A well within Puna district of the Island of Hawaii. Source: R. M. Kamins, *Environmental Impact Statement for the Hawaii Geothermal Research Station Utilizing the HGP-A Well at Puna, Island of Hawaii*, prepared for the Department of Planning and Economic Development, State of Hawaii, March 1978.

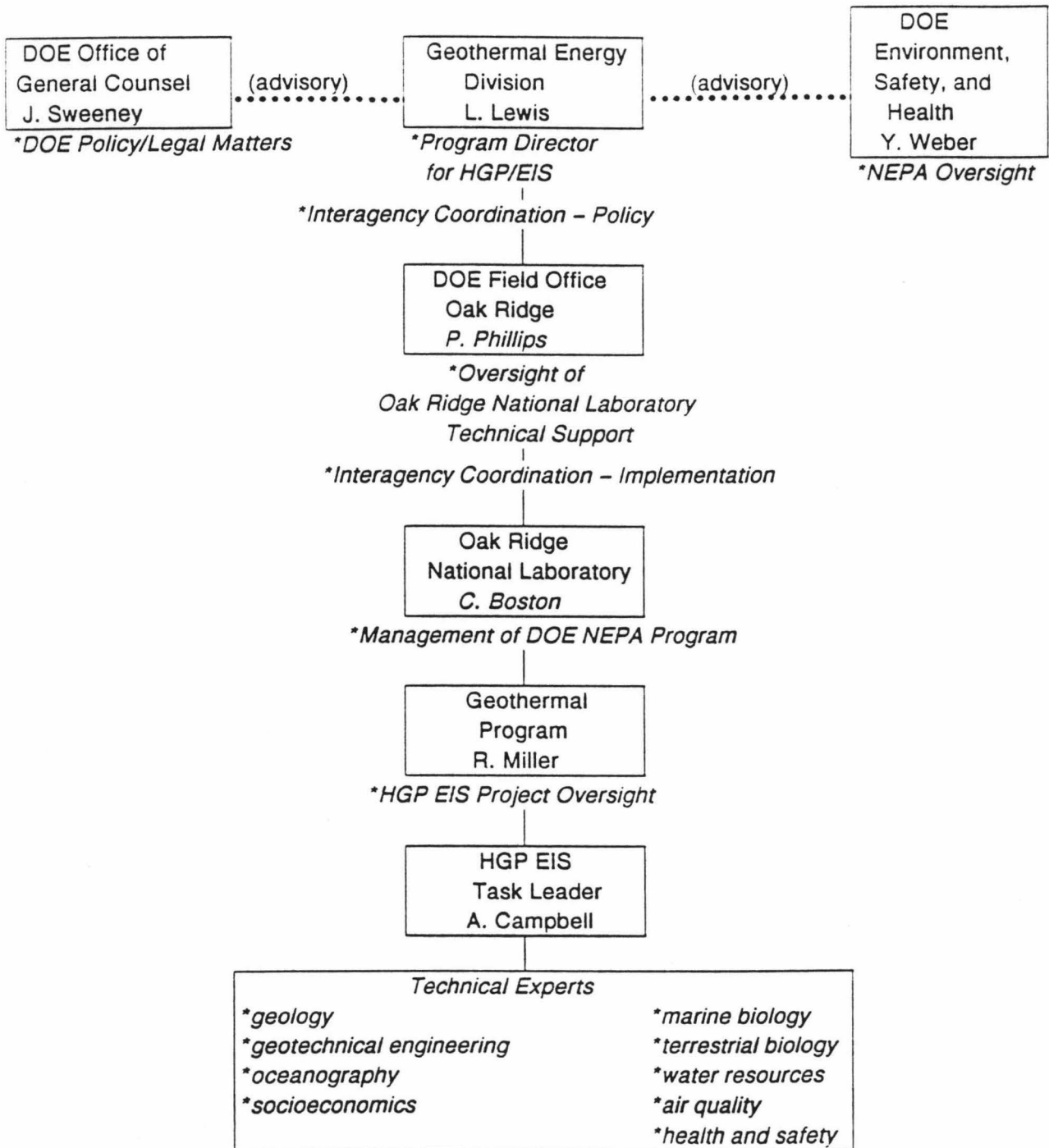
BACKGROUND/PROJECT DESCRIPTION (CONTINUED)

- Phases 3 and 4 proposed by State of Hawaii; 1989 Proposal to Congress for DOE support
 - Well drilling, logging of core holes, temperature measurement, analyzing geothermal fluids, downhole geophysical and geochemical measurements
 - Construction of 10-20 individual geothermal power plants of 25-30 MW each; overland and underwater power transmission on big island and interisland
- Congressional direction for DOE to prepare an EIS
- District court decision that DOE would prepare EIS, 6/91
- Record of Decision
- Permitting and financing to be initiated in 1991 (unlikely)
- Power on-line by 2005

CONSERVATION AND RENEWABLE ENERGY



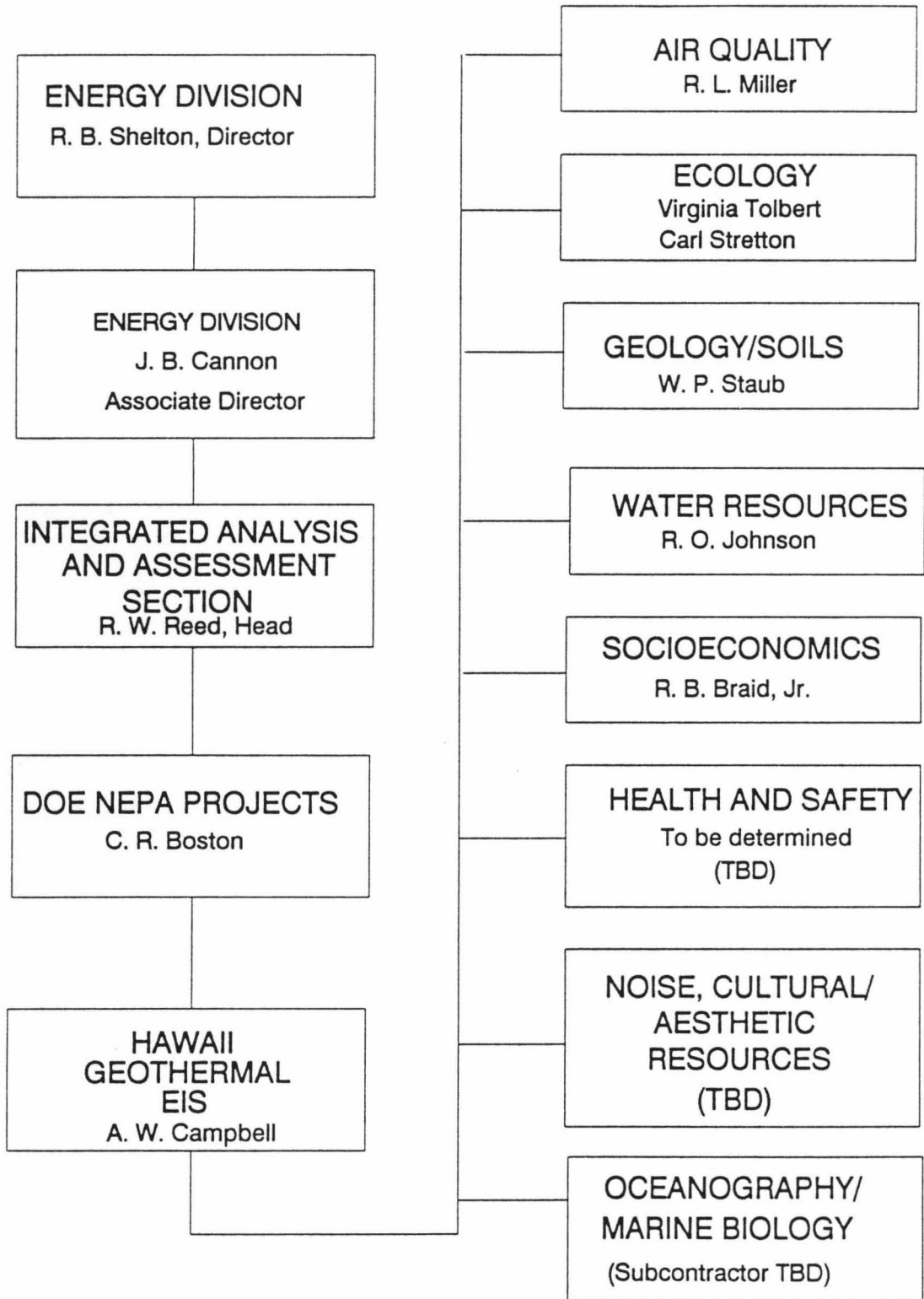
Hawaii Geothermal Project Management Organization for EIS Preparation



DOE RESPONSIBILITIES AS LEAD AGENCY FOR HGP EIS

- As lead agency:
 - Comply with NEPA and other laws and regulations
 - Define issues and alternatives to be assessed
 - Determine scope, content, and schedule of EIS (Implementation Plan)
 - Prepare EIS with cooperating agency assistance
 - Review and modify EIS based on comments received
 - Prepare Record of Decision
- Initiate interagency agreements
- Insure timely coordination of efforts and information exchange

OAK RIDGE NATIONAL LABORATORY
PROJECT MANAGEMENT PLAN
FOR DOE HAWAII GEOTHERMAL PROJECT NEPA SUPPORT



DOE NEPA PLAN FOR HGP EIS

Schedule Name : Hawaii Geothermal Project Tentative Schedule
 Responsible :
 As-of Date : 11-Sep-91 8:00am Schedule File : E:\HAWAII

Task Name

Advance NOI in Federal Reg.	
Draft NOI to DOE	C
DOE Approval of Draft NOI	C
NOI In Federal Reg.	C p
Scoping Mtgs./Site Visit	C s
Analyze Scoping Comments	
Prepare Draft EIS IP	
ORNL Review of IP	
Draft IP to DOE	
DOE Approval of Draft IP	
Prepare PDEIS	C
ORNL Review of PDEIS	C
PDEIS to DOE	C
DOE Review of PDEIS	C
Prepare DEIS	C
ORNL Review of DEIS	C
Approval Copy of DEIS to DOE	C
DOE Review of DEIS	C
Revise DEIS	C
DEIS to DOE	C p
NOA for DEIS in Federal Reg.	C ps
Public Hearing on DEIS	s
Analyze/Respond to Comments	s
Prepare PFEIS	C s
ORNL Review of PFEIS	C
PFEIS to DOE	C
DOE Review of PFEIS	C
Prepare FEIS	C
ORNL Review of FEIS	C
Approval Copy of FEIS to DOE	C
DOE Review of FEIS	C
Revise FEIS	C
FEIS to DOE	C p
NOA for FEIS in Federal Reg.	C ps
Record of Decision	C s



■■■■ Detail Task ■■■■■ Summary Task ▲ Milestone
 -- (Started) == (Started) >>> Conflict
 - (Slack) === (Slack) .. Resource delay

Scale: 1 week per character

PROPOSED SCHEDULE FOR HGP EIS

- Advance Notice of Intent 9/91
- Notice of Intent 11/91
- Public Scoping Meetings 12/91
- Draft Implementation Plan 2/92*
- Draft EIS 6 to 12 months later*
- Public comment period 45 days later*
- Final EIS 6 to 12 months later*
- Record of Decision Immediate*

* Depends on necessary surveys, studies, scoping comments, etc.

PROGRESS TO-DATE ON HGP EIS

- DOE library of HGP references established at ORNL
- Internal NEPA review initiated with Action Description Memorandum
- Advance Notice of Intent widely published in Hawaii on 9/3/91
- Press release issued in Hawaii on 9/3/91
- Potential Federal Cooperating Agency meeting on 9/13/91
- Information meetings with Hawaii Agencies October 1991.

POTENTIAL ENVIRONMENTAL ISSUES

- LAND USE
- AIR QUALITY
- WATER RESOURCE IMPACTS
- ECOLOGICAL IMPACTS
- GEOLOGICAL IMPACTS
- NOISE
- OCCUPATIONAL AND PUBLIC HEALTH AND SAFETY
- SOCIOECONOMIC IMPACTS
- AESTHETIC IMPACTS

ALTERNATIVES

- Alternatives to the Action
 - Biomass
 - Wind
 - Solar
 - Demand-side Management
 - Integrated Resource Planning Review
 - Others

- Analysis Renewable Energy Technology
 - description of technology
 - inventory of resource
 - assess feasibility, cost, potential
 - review environmental impacts

- Demand Side Management (DSM)
 - assess changes in energy use and costs due to efficiency measures via simulation/other means; calculate cost-effectiveness of efficiency measures in new/retrofit situations.

REASONABLY FORESEEABLE ALTERNATIVES (CONTINUED)

- Integrated Resource Planning (IRP)
 - review/assess data used in IRP analyses performed by Hawaiian electric companies; assess adequacy of treatment, review key methodological issues involved in integrated planning process
 - develop computer simulations that would explore the economic and financial impacts of alternatives

COOPERATING AGENCIES FOR HGP EIS

PURPOSE

- Help achieve NEPA goals
- Identify and assess potential impacts of HGP proposal
- Promote agency cooperation early in the NEPA process
- Facilitate cooperative consultation among agencies during preparation of the EIS

WHO CAN BE A COOPERATING AGENCY

- Other Federal agencies having jurisdiction by law or special expertise
- State and local agencies with similar qualifications
- Indian tribes (when Indian lands may be affected)

STEPS

- Lead agency requests participation of potential cooperating agency
- A Cooperating Agency Agreement may be used to define respective roles and responsibilities of the lead and cooperating agencies

TASKS

- Provide support to NEPA process as requested by lead agency and to the extent resources permit
 - Identify issues for analysis in EIS
 - Provide data and information
 - Review documents

REQUIREMENTS

- For cooperating agencies, allocate staff resources
- For lead agency, coordination and planning

WHEN

- Invitation by lead agency at the earliest possible time in the NEPA process

ADVANTAGES

- Resolves concerns of cooperating agencies during EIS preparation
- Reduces potential for delays and misunderstandings

POTENTIAL RESPONSIBILITIES OF COOPERATING AGENCIES

- Assign coordinator to interface with DOE
- Define regulatory authority in relationship to the proposed action
- Identify issues, concerns, and suggested mitigation in relationship to the proposed action
- Provide technical expertise in development of impact analyses conducted for EIS
- Review data collection procedures and offer comment
- Conduct reviews of EIS (Draft, Final, and Parts)
- Assist DOE in promoting public awareness and involvement in NEPA process