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Docket Nos. 50-275
and 50-323

Mr. Frederick T. Searls
Vice President and General Counsel
Pacific Gas and Electric Company
77 Beale Street
San Francisco, California 94106

Dear Mr. Searls:

This letter will confirm the June 19, 20 and 22 site visit and meeting related to our environmental review of the Diablo Canyon Nuclear Power Station.

I am enclosing a proposed agenda and detailed list of topics to guide the discussions during this meeting.

Dr. Louis B. Werner of the Directorate of Licensing is the Project Manager responsible for preparation of the environmental statement, and will represent the regulatory staff at this meeting. Accompanying him will be several members of the Oak Ridge National Laboratory (ORNL) who are providing technical support in our environmental review. The ORNL team leader will be Mr. Jack McWherter. Please feel free to contact Dr. Werner at 301/973-7588 if additional information pertaining to the site visit is required.

Sincerely,

Original signed by
Daniel R. Muller

Daniel R. Muller, Assistant Director
for Environmental Projects
Directorate of Licensing

Enclosures:
Agenda and Suggested Topics
Pertaining to Diablo Canyon
Nuclear Station

See the attached for concurrences

RM

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ENVIRONMENT

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 Directorate of Licensing

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 Pertaining to Diablo Canyon
 Nuclear Station

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SURNAME ▶	LWerner:peb	GKDicker	DRMuller:ADEP			
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EP-S 240, 1110

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EP-S: I

GLASPANO: ADP

6/17/72

EP-S: I

STICKER: EP-S

6/17/72

PROPOSED AGENDA FOR SITE VISIT TO
DIABLO CANYON NUCLEAR STATION.

BY
DIRECTORATE OF LICENSING

JUNE 19, 20 AND 22, 1972

June 19, 20: Visit to site with emphasis on: impact of construction intake and discharge systems, transmission system, site characteristics and ecology.

June 22: Discussion with Pacific Gas and Electric Company at San Francisco, California.

- I. Site
- II. Cooling System
- III. Ecological Effects
- IV. Radiological Considerations
- V. Chemical Discharges
- VI. Cost-Benefit
- VII. Alternatives to Nuclear Power Generation
- VIII. Monitoring Programs

Those expected to attend:

AEC

Louis Werner, Project Manager

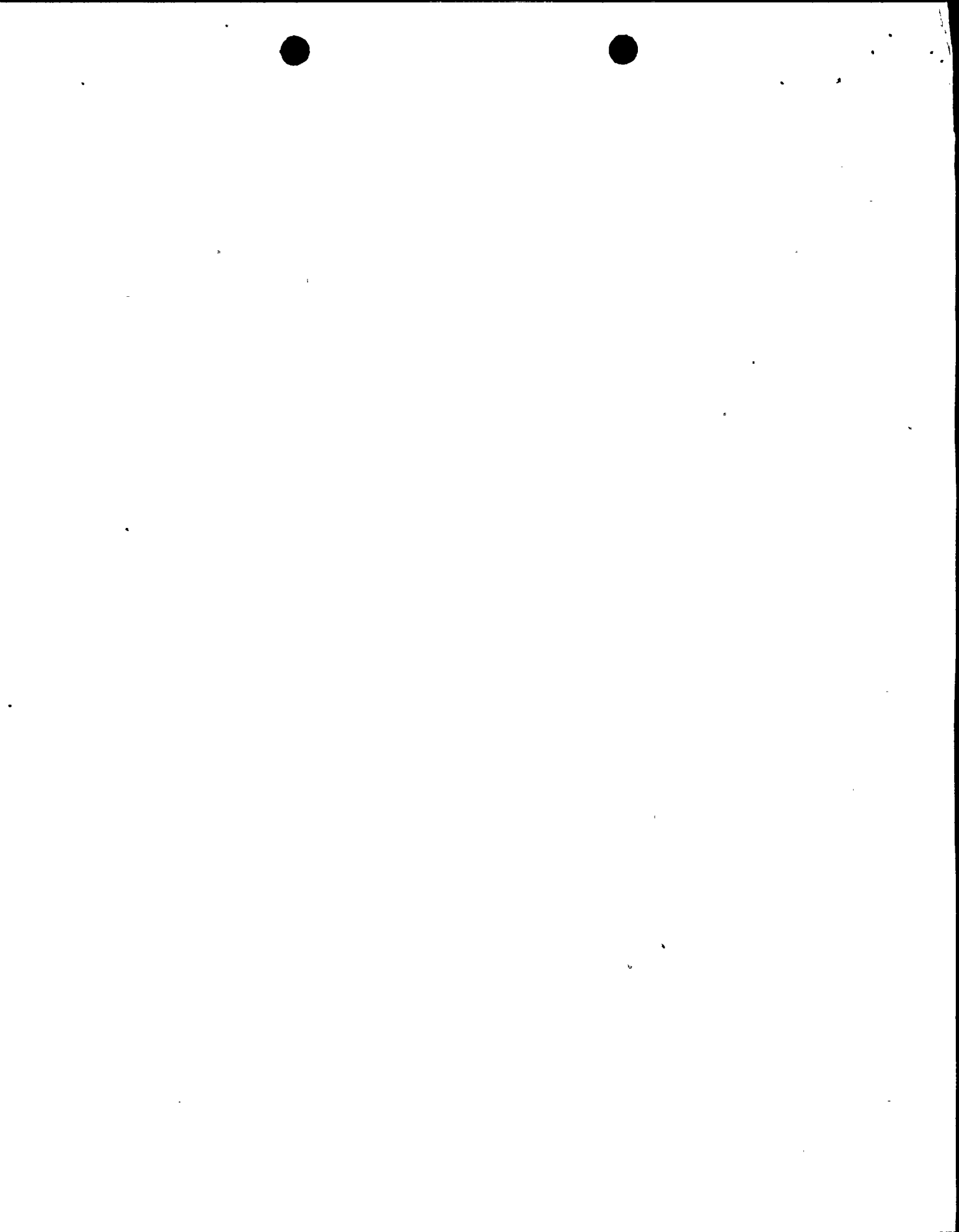
ORNL

Jack McWherter, Team Leader
Harry Arnold, Cost/Benefit
J. Tom Kitchings, Ecology
George Kerr, Health Physics
L. Farrar, Site Description
Thomas Berg, Liquid Effluents
George Parker, Gaseous Effluents



PROPOSED TOPICS FOR DISCUSSION

DIABLO CANYON SITE VISIT



I. SITE

A. Fresh Water Hydrology

1. Ground and surface water movement in the general area of the plant site.

B. Marine Hydrology

1. Detailed description of all currents in the area that could affect the plant, as a function of month.
2. Shoreline and bottom contours near the plant site.
3. Vertical temperature profiles in the water near the plant site.
4. Chemical composition of sea water at the plant site.
5. Salinity profiles in the vicinity of the plant.
6. Evaluation of results of any measurements made for estimating:
 - a. the equilibrium surface temperature, and
 - b. mean longitudinal diffusion coefficient.

C. Meteorology

1. Meteorological information - monthly averages, and extremes observed over a period of time for:



- a. rainfall
- b. gross solar radiation
- c. dewpoint
- d. mean wind velocity and direction (wind rose or the data for a wind rose)
- e. frequency and duration of very calm conditions.

D. Topography

1. Obstructions, natural or man made, near the plant which affect the plant in any way. This includes obstructions to wind flow as well as water flow.

E. Geographical

1. Identification and location of all property owned by the applicant within one mile of the plant.
2. Identification and location of all public building and recreational facilities within five miles of the plant.



II. COOLING SYSTEM

A. Intake

1. The number and capacity of pumps.
2. Detailed drawings of intake structure, e.g., cross-sectional area open to flow, materials of construction, screen details - traveling or stationary, physical arrangement, etc.
3. Cross-sections and lengths, and any other pertinent details of canals or channels associated with cooling water intake structures.
4. Detailed description of the opening to the water source, e.g., a skimmer wall.
5. Maximum water velocity graph from intake opening through system to final discharge.
6. Method for disposal of trash from screens.

B. Condenser System

1. Details of pipe lines to the condensers, i.e., diameters, length, materials, etc. (also from condenser).
2. Description of the condensers; number and sizes of tubes, materials, fabrication technique, and corrective action planned for leaks.



3. Condenser cooling water flow rates and inlet and outlet temperatures. If these are variables, include details of different operating conditions. Time-temperature details of water flow through cooling system from intake opening to outfall.

C. Discharge Structure

1. Design details of the discharge structure, sizes, shapes and dimensions of openings, and materials of construction. Exact location of discharge relative to plant and receiving water body.
2. Depth of discharge. If this varies, description of the conditions under which it varies.
3. Discharge velocity and orientation, and variations if any.

D. Condenser Cooling Water

Details of water treatment planned, i.e., heat and chemicals. Concentration and addition schedule for all chemicals (generic names) added to the water.

E. Cooling Water Discharge

Results and description of analytic and/or physical model studies made on the heated water discharge from the condensers into the receiving water body.



III. ECOLOGICAL EFFECTS

A. Terrestrial

1. Identification of the terrestrial flora and fauna present in the area, including abundance, habitat preference, and how they will be affected by plant construction and operation. Particular attention should be paid to the species in the Los Padres National Forest and to any endangered species in the area. (i.e., Morro Bay Kangaroo Rat and California condor).
2. Characterization of the land types to be crossed by transmission lines. Projected uses of land in the rights-of-way. Methods used to control erosion in the disturbed areas. Herbicides, if any, which will be used to control vegetation.

B. Aquatic

1. Identification of the principal species of fish eggs, larvae, and juveniles and other organisms susceptible to entrainment in condenser cooling.
2. Exposure of entrained organisms to elevated temperature.
3. Fate of any fish which pass through the traveling screens.



4. Consideration of replacement of fish, both adult and larvae, killed via plant operation.
5. Additional information on the extent of abalone reduction as indicated on pages 41 and 42 of the Environmental Report.



IV. RADIOLOGICAL CONSIDERATIONS

1. Permanent population distribution within a 50-mile radius of the station according to the 1970 census. Data are needed for (a) sectors of 22.5° with directions of NW, NNW, N, NNE, NE, ENE, E, ESE, SE, and SSE and (b) distance increments of 0-1, 1-10, 10-20, 20-30, 30-40, and 40-50 miles.
2. Estimated transient population distribution in the same form as requested in Question 1.
3. Location of any permanent residences within about 6.5 miles of the station, especially the closest residences (in any direction and in the dominant wind directions) to the station.
4. Location (on a map) of population centers, recreational areas, grazing and farming areas about the site, especially the closest dairy herds and truck farms (in any direction and in the dominant wind directions) to the station. Distinction between major grazing areas for dairy herds separate from the major grazing areas for beef herds.
5. Location (on a map) of major fishing areas along the coast within a 50-mile radius of the station. Estimates of the harvest of fish and other seafoods from these areas.



6. Estimates of the average yearly concentrations of liquid effluents released by the station in fishing areas off the coast near the station and in recreational areas on the coast near the station.

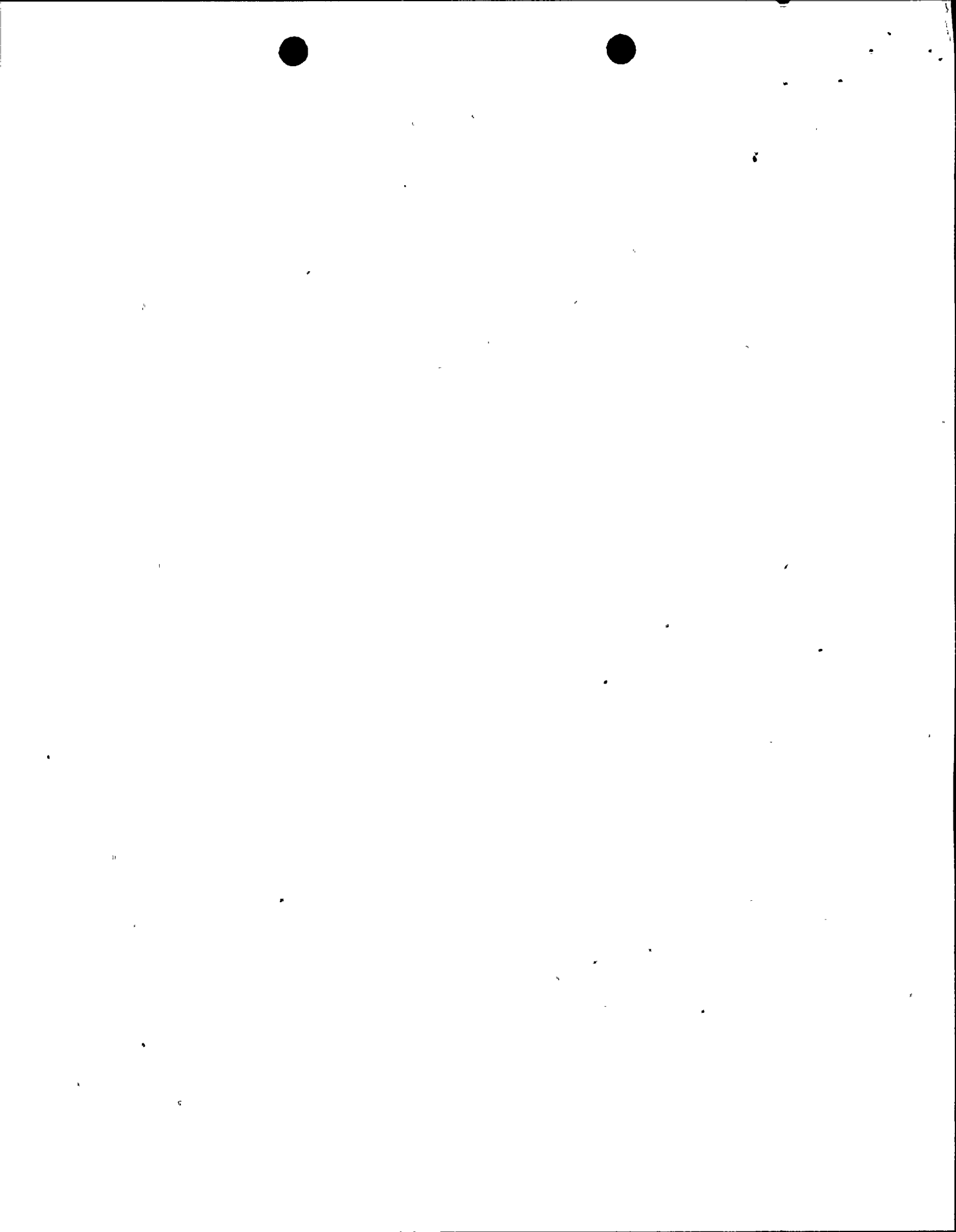


V. CHEMICAL DISCHARGES

- A. Source, composition, quantities, pathways through plant and concentrations at point of release to environments.
 - 1. Cooling water treatment chemicals.
 - 2. Corrosion products.
 - 3. Sanitary system additives.
 - 4. Cleaning and laundry compounds.
 - 5. Steam system additives.
 - 6. Oil, grease, organics.
 - 7. Insoluble materials; suspended material.
 - 8. Solid wastes.

- B. Interaction with environment.
 - 1. Reaction with sea water.
 - 2. Other effects.

- C. Chemicals and estimated quantities associated with the alternate cooling systems described in the Environmental Report Supplement.



VI. COST-BENEFIT

A. Transmission Lines

1. Important alternatives rejected in selection of present rights-of-way.
2. Acreage and cost per mile of single and double lines; acreage diverted from other uses.

B. Station

1. Factors leading to rejection of alternate sites.
2. Land costs.
3. Construction schedule highlights.

C. Costs and Need for Power

1. Last ten years PG&E system capacity, peak load demand, and predicted peak load demand.
2. Future eight-year predicted peak load demand and total system capacity.
3. Estimated system reserve margin 1974-78 without Diablo Canyon Units 1 and 2.



4. Total capacity of and reserve capacity of Western Systems Coordinating Council membership in 1974-75.
5. Cost of replacement power over plant life.
6. Cost of nuclear fuel and alternate fossil costs over 30 years.
7. Estimated interest rate (after tax cost of capital) for comparing alternatives.

D. Benefits

1. Expected tax contribution of Diablo Canyon Units 1 and 2 to San Luis Obispo County.
2. Estimated increase in population which would be necessary to match this increase in tax base.
3. Sociological, economic, and industrial changes which may be expected as result of Diablo Canyon Units 1 and 2.



VII. ALTERNATIVES TO NUCLEAR POWER GENERATION

A. Geothermal

1. Sources of power, reserves, commercial availability of steam
2. Generation costs
3. Development schedules, normal and accelerated



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VIII. MONITORING PROGRAMS

A. Radiological Monitoring Plan

B. Ecological Monitoring Plan

