ENVIRON

Distribution
Docket File (Environ.)
EP Reading File
EP File
Projects Branch Chief, L. K. Kniel
Licensing Ass't, EP, R. Wade
AEC PDR
Local PDR
OGC, M. Malsch
ADEP, DMuller
Project Manager, EP- L. Werner

Docket Nos. 50-275
and 50-323

DEC 12 1972

Mr. Tony Stadeker
Office of Management and Budget
Executive Office Building
Washington, D. C. 20503

Dear Mr. Stadeker:

Enclosed for your information are two copies of the summary sheet for the Draft Environmental Statement prepared by the Commission's Regulatory Staff relating to the facility identified in the enclosure to this letter.

The Draft Environmental Statement was prepared in accordance with the statement of general policy and procedure on implementation of the National Environmental Policy Act of 1969 as set out in Appendix D of the Commission's regulations, 10 CFR Part 50. A notice of availability of the Draft Environmental Statement and the Applicant's Environmental Report, and request for comments from interested persons is being sent to the Office of the Federal Register for filing and publication. A request for comments also is being sent to appropriate Federal, State and local agencies.

Sincerely,

Original signed by
Gordon K. Dicker

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

Enclosure:
Summary Sheet for Draft
Environmental Statement (2)

CRESS OFFICE ▶	EP-2	EP-2	EP-2 GKD	ADEP:L		
SURNAME ▶	LA RWade:hem	Project Manager LWerner	Br. Chief GDicker	GKD DMuller		
DATE ▶ 11/27/72	11/28/72	11/ /72	11/29/72	12/ 7/72		

Form AEC-318 (Rev. 9-53) AECM 0240 ☆U.S. GOVERNMENT PRINTING OFFICE: 1971—446—154

SUMMARY AND CONCLUSIONS

This Draft Environmental Statement was prepared by the U.S. Atomic Energy Commission, Directorate of Licensing.

1. The action is administrative.

2. The proposed action is the continuation of construction permits and issuance of operating license to the Pacific Gas and Electric Company for the Diablo Canyon Units 1 and 2, located on the California coast 12 miles southwest of San Luis Obispo, California (Docket Nos. 50-275 and 50-323).

Both units will employ pressurized water reactors designed to produce up to 7136 thermal megawatts (3568 MWt each). This heat will be used to produce steam to drive steam turbines, providing up to a guaranteed output of about 2300 MW of electrical power capacity.

The units will be cooled by once-through flow of water from the Pacific Ocean.

3. Summary of environmental impact and adverse effects.

   a. Construction activity associated with the plant and its transmission facilities will have the following environmental effects:

      (1) Construction-related activities on the site have disturbed 142 acres of land, resulting in some alteration of wildlife habitat. Of this area, 51 acres are to be used for plant facilities, parking lots, roads, and switchyards; the remaining 91 acres will be restored by seeding and other plantings. Use of the rest of the 750-acre exclusion area will be restricted.

      (2) Construction of transmission lines has affected 6000 acres of right-of-way. Service roads and tower bases occupy 1500 acres. There has been some loss of vegetation near the roads and towers, but most of this loss will be temporary. Erosion of steep areas along the roads can be serious if not controlled.

      (3) Construction of the intake breakwaters and the coffer dams at the intake and discharge has occupied about 14-1/2 acres of ocean bottom that previously provided

habitat for benthic organisms; in addition, a small area was affected by the Avila Beach barge landing. The barge landing and the coffer dams are to be removed, permitting reestablishment of the natural populations. The breakwaters will provide new habitat for intertidal and subtidal organisms.

(4) There will be some shifts in natural animal populations as a result of increased human activity.

b. Operation of the plant is expected to result in the following impacts:

(1) At design power, condenser cooling water will be heated to a maximum of 83.5°F (28.6°C) and will be discharged at a rate of up to 3864 cfs (at a temperature rise of 20°F above ambient). The heated water will mix with the cooler water of the Pacific Ocean, where the heat will eventually be dissipated to the atmosphere. As much as 92 acres will be enclosed by the 4°F isotherm 20% of the time.

(2) The radioactivity to be released to the environment during normal operation will result in an estimated radiation dose of approximately 4 man-rems per year to the population. The impact from this dose is not considered to be significant when compared to the natural background radiation doses.

(3) A very low risk of accidental radiation exposure to nearby residents will be created.

(4) Some chemicals will be added to the water used for cooling; however, the concentration of these chemicals in Diablo Cove is not expected to have adverse effects on aquatic life.

(5) There will be very little, if any, decline in the concentration of dissolved oxygen in the discharged cooling water.

(6) The thermal discharge from the plant will cause an ecological shift in benthic organisms and fish that will result in an increase in the number of warm-water-tolerant forms. The higher temperatures in Diablo Cove may cause those parts of the bull kelp

that are near the surface to degenerate earlier in the year than they normally do; at most, 2 or 3 acres will be affected. The higher temperatures will also increase the feeding activity of the giant sea urchin, which competes with the abalone for the existing food supply (mainly kelp); this may lead to a decline in the abalone population unless measures are taken to control the urchin.

(7) No adverse effect on phytoplankton populations is expected, because of the rapid regeneration times and large stocks available for recruitment from outside Diablo Cove. A mortality of as much as 8.5% of the zooplankton passing through the cooling system may occur, but the generation times for California zooplankton are generally 24 hours to 8 weeks, and recruitment from the open ocean will be copious; therefore, the impact on the local ecosystem is believed to be insignificant.

(8) Some jellyfish will be killed in the intake structures as a result of impingement. The ecological consequences of this loss are expected to be small.

(9) No fish losses are expected to occur in Diablo Cove as a result of the thermal discharge. Some small fish (less than 3 inches) will be killed as a result of impingement or entrainment in the cooling system.

(10) There appears to be some potential for increased mortality of avian species from contact with transmission line facilities.

4. Principal alternatives considered:

a. Sources of energy other than nuclear.

b. The construction of an equivalent plant at some other site.

c. The use of cooling towers instead of the proposed once-through cooling.

d. The discharge of heated water at some distance from the shore instead of at the shoreline.

5. The following Federal, State, and local agencies are being asked to comment on this Draft Detailed Environmental Statement:

   Advisory Council on Historic Preservation
   Department of Agriculture
   Department of the Army, Corps of Engineers
   Department of Commerce
   Department of Health, Education, and Welfare
   Department of Housing and Urban Development
   Department of the Interior
   Department of Transportation
   Environmental Protection Agency
   Federal Power Commission
   California Resources Agency (Departments of: Conservation, Water Resources, Parks and Recreation, Fish and Game, Harbors and Watercraft)
   California Public Utilities Commission
   California Department of Public Health
   California Office of the Governor
   County Board of Supervisors, San Luis Obispo County, California

6. This statement was made available to the public, to the Council on Environmental Quality, and to the other specified agencies in December 1972.

7. On the basis of the analysis and evaluation set forth in this Statement, after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives, it is concluded that from the standpoint of environmental effects the action called for is the issuance of construction permits for the facilities subject to the following conditions for the protection of the environment:

   a. The continuation of the ecological and radiological baseline monitoring program as specified in Section 6.

   b. The development of a program to determine the concentration of small fish and to document the concentration of eggs and larva of marine organisms in the intake cove. This information should be used to determine susceptibility to entrainment and impingement for the organisms present; and to determine the mortality resulting from such impacts (entrainment, or impingement).

c. The applicant shall develop and be prepared to implement a program which will confirm that the total available chlorine in the plant discharge does not exceed 0.1 ppm even during heat treatment for organism removal.

d. The applicant shall improve his proposed radioactive waste treatment systems to include: (1) provisions for reducing the total liquid radioactive waste from both units to 10 curies per year. This can be achieved by reducing the quantity of blowdown released or modifying the system to treat a sufficient fraction of the blowdown to meet this requirement or some combination of both; (2) provisions for treating iodine releases from the boric acid and waste evaporator condensers (in the proposed system these units are vented directly to the atmosphere, without treatment, and they are the principal sources of airborne radioiodine released to the environment); and (3) provisions for treating iodine releases from the blowdown flash tank vent by addition of a condenser to the blowdown system.

e. The applicant shall develop and implement a program, which is acceptable to the staff, for redress of the areas affected by transmission line construction.

f. If harmful effects, including any evidence of irreversible damage, are detected by the monitoring programs, the applicant shall conduct an adequate analysis of the problems and implement corrective action acceptable to the staff.