

MAR 16 1981

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

East Bay Municipal Utility District) Project No. 2916

ORDER ISSUING LICENSE (MAJOR)

(Issued March 10, 1981)

On March 20, 1980, East Bay Municipal Utility District (Applicant) filed an application for a major license under Part I of the Federal Power Act (Act) to expand its existing hydroelectric power facility at the Pardee Dam, 1/ and to construct, operate, and maintain a new hydroelectric power facility at its existing Camanche Dam, all to be known as the Lower Mokelumne River Project, FERC No. 2916. 2/ The project would be located on the Mokelumne River, in the counties of Amador, Calaveras, and San Joaquin, California. In addition to occupying lands of the United States, the project would affect the interests of interstate commerce.

Notice of the application has been published and comments have been received from interested Federal, State, and local agencies. Pacific Gas and Electric Company (PG&E), the proposed power purchaser 3/, sought, and was granted, intervention in this proceeding. PG&E stated that its transmission facilities would be used to transmit project power.

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- 1/ The Pardee Project was originally licensed by the Federal Power Commission as Project No. 567. In 1934, however, Public Law No. 177 (48 Stat. 642) terminated the license for the Pardee Project and authorized the Applicant to continue operation of the existing facilities. Both Pardee and Camanche dams and reservoirs are owned and operated by the Applicant.
- 2/ Authority to act on this matter is delegated to the Director, Office of Electric Power Regulation, under §375.308 of the Commission's regulations, 45 Fed. Reg. 21216 (1980) amending, 44 Fed. Reg. 46449 (1979) and 18 C.F.R. 3.5(g) (1979).
- 3/ The project energy would be sold to PG&E. A copy of the Power Purchase Contract, between the Applicant and PG&E, has been filed.

PROJECT DESCRIPTION

The proposed project, when fully operational, would have a total rated capacity of 39.33 MW. The project would consist of: two existing dams and reservoirs; two powerhouses; and the associated appurtenances. The project is more fully described in ordering paragraph (B) below.

SAFETY AND ADEQUACY OF STRUCTURES

The Pardee Dam spillway capacity is considered adequate. To determine whether additional spillway capacity is needed at Camanche Dam, Special Article 33 is included in this license requiring the Applicant to file a detailed Probable Maximum Flood study based upon criteria and procedures set forth in the U.S. Weather Bureau Hydrometeorological Report No. 36.

The Pardee Dam is considered safe. To assure that uplift pressures remain within allowable limits, however, Special Article 34 is included in this license requiring the Applicant to provide to the San Francisco Regional office an annual report summarizing the piezometer measurements of foundation uplift pressures.

The Camanche Dam is considered safe for normal loading conditions. The Applicant's engineering consultant is currently conducting detailed studies of the potential for seismically induced liquefaction in the old alluvium foundation beneath Dike No. 2 and in the dredge tailings under the main dam. The studies when completed may show that remedial measures are necessary to insure the structural integrity of the dam under earthquake loading conditions. If remedial measures are necessary, the Director, Office of Electric Power Regulation, by delegation of authority under 18 C.F.R. §375.308(cc), has the authority to require the Licensee to make repairs to project works and to take any related actions for the purpose of maintaining the safety and adequacy of such works.

In accordance with standard Commission practice, this license includes conditions that require the filing of an emergency action plan for the project and the installation of any necessary safety devices to protect the public in its use of project lands and waters.

It is concluded that the project, under the conditions of this license, will be safe and adequate.

COMPREHENSIVE DEVELOPMENT

Both Pardee and Camanche Dams and the associated Reservoirs are owned and operated by the Applicant. Mokelumne River water is diverted from Pardee Reservoir, the principal storage facility, to serve the Applicant's water supply system. The remaining river flow is routed through the existing hydroelectric facility at the Pardee Dam. The Mokelumne River then flows into Camanche Reservoir. Releases from this re-regulating reservoir are mandated for supply to an adjacent fish hatchery (Mokelumne River Fish Installation), for flood control, and for downstream fish releases. The proposed hydroelectric facilities would use these releases, which will continue without change, in compliance with existing water rights and the Applicant's agreements with downstream users such as the U.S. Army Corps of Engineers (Corps), California Department of Fish and Game (DFG), and Calaveras County.

The project would efficiently utilize the flow of the Mokelumne River, and would not conflict with any planned development. The proposed project, with its average annual generation of 54.6 million kWh, will utilize a renewable resource that will save the equivalent of approximately 89,700 barrels of oil or 25,000 tons of coal per year.

It is concluded that, as conditioned in this license, Project No. 2916 is best adapted to a comprehensive plan for development of the Mokelumne River basin for beneficial public uses.

TRANSMISSION FACILITIES

Transmission facilities included under this license would include generator leads, step-up transformers, and appurtenant facilities. No transmission lines would be included in this license. PG&E is in the process of submitting an application for license for the following "primary" transmission lines which would interconnect with its existing distribution system:

- (1) an existing 500-foot long, 60-kV transmission line, presently transmitting power from Pardee powerhouse to Pardee Switching Station;
- (2) a new 6.5-mile long, 115-kV transmission line to connect the proposed Camanche powerhouse to;
- (3) an existing abandoned 7.5-mile long, 115-kV line which would be energized and connect, in turn, to the existing Lockford Junction (PG&E distribution point).

RECREATION

Extensive recreational facilities are provided at both Pardee and Camanche sites. The Applicant has indicated that it is currently completing plans with its concessionaire for the expansion of the facilities at the Pardee site. However, since the Pardee concessionaire is experiencing delays in obtaining financing, the Applicant is unable to provide final plans or a construction schedule for the expansion of the recreational facilities at the Pardee site. Because of the indefinite nature and timing of the facilities to be constructed and because changing conditions may result in a change in plans for additional facilities, Special Article 38 is included in this license. Article 38 requires the Applicant, prior to construction of any additional recreational facilities, to file with the Commission for approval, an amendment to the Report on Recreational Resources, to include a construction schedule and a description of the facilities as proposed to be developed. Pursuant to Article 17 of standard Form L-2 (revised October 1975) the Commission reserves the right to require additional recreational development in the future.

COMMENTS OF THE U.S. DEPARTMENT OF THE ARMY

The U.S. Army Corps of Engineers (Corps) concluded that the proposed development would not be in conflict with flood control, navigation, or other programs within its jurisdiction. The Corps stated, however, that it needs assurance that the Applicant will continue to honor its commitments concerning water release requirements. The Applicant has indicated that it will do so. The Corps also requested that the Applicant furnish to the Corps' Sacramento District all final plans and engineering designs of the proposed project for approval. Although the Applicant may choose, on its own initiative, to seek Corps' approval, under Section 10(a) and 10(e) of the Federal Power Act, the Commission, not the Corps, has the final authority over the designs of licensed project works. Therefore, Corps approval will not be required by this license.

FISH, WILDLIFE, AND BOTANICAL RESOURCES

The U.S. Department of the Interior, Corps, and DFG expressed concern about the possible adverse impacts of construction activities on fish and wildlife in the project area. Applicant proposed that blasting activities at the Pardee and Camanche sites would be conducted between August 1 and December 1 in order to reduce the noise-related disruption to bald eagles and other birds residing in the project area. In addition, Applicant

proposed to restrict construction activities in and near the river during the salmon spawning, egg incubation, and fry development period, from November through May in order to reduce the potential adverse effects of water turbidity and gravel siltation on salmon production in the Mokelumne River.

Interior and the DFG expressed concern that modification of the Camanche Dam may reduce the effectiveness of the present fishway entrance for attracting adult salmon and steelhead. The result would be to reduce the number of salmon and steelhead ascending the fish ladder and entering the Mokelumne River Fish Installation. Interior and DFG recommended, and Applicant has proposed, extension of the fish ladder and installation of a training fence to facilitate guidance of adult fish toward the ladder entrance.

Interior recommended, and Applicant has proposed, as a mitigative measure, to modify the existing outlets of Camanche Dam to allow some degree of water temperature control and, thereby, to improve fish rearing conditions at the Mokelumne River Fish Installation. Temperature control would be accomplished by withdrawal and mixing of water from selected strata of the reservoir.

WATER QUALITY

The California Regional Water Quality Control Board has waived certification requirements for the proposed project, in accordance with Section 401 of the Federal Water Pollution Control Act.

ENVIRONMENTAL IMPACT

Beneficial impacts resulting from the issuance of this license would include more efficient use of water resources, development of additional recreational facilities and improvement of water quality conditions for fish rearing.

Continued operation and maintenance of the existing facilities, with the proposed increased power production capacity at Pardee Dam, and the installation of the proposed power facility at the Camanche Dam are not expected to result in any new long-term adverse environmental impacts. The Applicant advises that, where possible, short-term impacts associated with the construction activities would be minimized and mitigated. These impacts would include increased air pollution from dust and vehicle emissions, increased water pollution from soil erosion and increased noise levels. These impacts would be limited to the construction period. On the basis of the record,

including agency comments and the staff's independent analysis, it is found that issuance of this license for the proposed project, as conditioned, is not a major Federal action significantly affecting the quality of the human environment.

It is ordered that:

(A) This license is issued under Part I of the Federal Power Act (Act) to the East Bay Municipal Utility District of Oakland, California for a fifty-year period effective the first day of the month following issuance of this license, for the construction, operation, and maintenance of the Lower Mokelumne River Project, FERC No. 2916, located on the Mokelumne River, in the counties of Amador, Calaveras, and San Joaquin, California, and utilizing the existing Pardee and Camanche Dams, and affecting lands of the United States. This license is subject to the terms and conditions of the Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the Act.

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(B) Project No. 2916 consists of:

(1) all lands, to the extent of the Licensee's interests in those lands, constituting the project area and enclosed by the project boundary, the project areas and boundary being shown and described by certain exhibits which form part of the application for license and which are designated and described as:

<u>Exhibit</u>	<u>FERC No. 2916-</u>	<u>Titled</u>
G-1	21	General Map
G-2	22	Project Boundary (sheet 1 of 4)
G-3	23	Project Boundary (sheet 2 of 4)
G-4	24	Project Boundary (sheet 3 of 4)
G-5	25	Project Boundary (sheet 4 of 4)
G-6	26	Transmission Lines

(2) Project works consisting of: (1) the Pardee Dam, an existing concrete gravity-arch structure 1,337 feet long and 345 feet high; (2) the Pardee Dam Main Spillway, an existing 360-foot long concrete overflow ogee structure divided into 20 bays at 40 feet each for a total width of

800 feet and 360 feet high; (3) the Jackson Creek Dike, an existing earthfilled structure 1,360 long and 37 feet high; (4) the Pardee Reservoir with gross storage capacity of 210,000 acre-feet at pool elevation of 568 feet; (5) an existing powerhouse located at the base of the Pardee Dam and presently containing two Francis-type turbine-generating units of 9,375 kW capacity each, and a proposed additional Francis-type turbine-generating unit of 9,900 kW capacity; (6) the Camanche Dam, an existing rock-fill structure with impervious core 2,640 feet long and 171 feet high located approximately 11 miles downstream from Pardee Dam; (7) the Camanche Dam Spillway, an existing 1,600-foot long concrete overflow ogee structure 400 feet wide and 37 feet high; (8) the Camanche Reservoir with gross storage capacity of 431,000 acre-feet at pool elevation of 236 feet; (9) a powerhouse, to be constructed at the base of the Camanche Dam, containing three Kaplan-type turbine-generating units of 3,560 kW capacity each; (10) the existing Pardee unit Nos. 1 and 2 generator leads, two 6.6/57.5-kV step-up transformers; (11) the proposed unit No. 3 generator leads, 6.9/59.76-kV step-up transformer; (12) the proposed Camanche unit Nos. 1, 2, and 3 generator leads, 4.16/115-kV step-up transformer; and (13) appurtenant facilities.

The location, nature, and character of these project works are more specifically shown and described by the exhibits cited above and by certain other exhibits which also form part of the application for license and which are designated and described as:

<u>Exhibit</u>	<u>FERC No. 2916-</u>	<u>Titled</u>
F-1	6	Pardee Dam-Plans and Elevations
F-2	7	Pardee Dam-Sections, Powerhouse, and Sluiceways
F-4	8	Pardee Dam-Spillway, Plans and Profiles
F-5	9	Pardee Dam-Domestic Water Intake Tower
F-6	10	Camanche Dam-Plan, South Tower Portion

<u>Exhibit</u>	<u>FERC No. 2916-</u>	<u>Titled</u>
F-7	11	Camanche Dam-North Portion
F-8	12	Camanche Dam-Elevations
F-9	13	Camanche Dam-Sections, Sheet 1 of 2
F-10	14	Camanche Dam-Sections, Sheet 2 of 2
F-11	15	Camanche Dam-Spillway, Plan and Profile
F-12	16	Camanche Dam-Fish Facilities
F-13	17	Pardee Third Unit-Powerhouse Arrangement
F-14	18	Pardee Third Unit-Site Plan
F-15	19	Camanche Powerplant-Powerhouse Arrangement
F-16	20	Camanche Powerplant-Site Plan

Exhibit E, report on Fish, Wildlife, and Botanical Resources, consisting of 9 pages of text (Exhibit E, pages 64 through 72); report on Recreational Resources, consisting of 14 pages of text (Exhibit E, pages 74 through 87) filed on March 20, 1980.

(3) All of the structures, fixtures, equipment, or facilities used or useful in the operation or maintenance of the project and located within the project boundary, all portable property that may be employed in connection with the project, whether located within or outside the project boundary, as approved by the Commission, and all riparian or other rights necessary or appropriate in the operation or maintenance of the project.

(C) Exhibits F and G designated in ordering pagragraph (B) above are approved and made a part of this license only to the extent that they show the general location and description of the project area and works.

(D) The Reports on Fish, Wildlife, and Botanical Resources, and on Recreational Resources, designated in ordering paragraph (B) above are approved and made part of the license.

(E) This license is also subject to the terms and conditions designated Articles 1 through 32 in Form L-2 (revised October 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Lands of the United States," attached to and made a part of this license. This license is also subject to the following special conditions set forth as additional articles:

Article 33. The Licensee shall submit within one year from the issuance date of the license a Probable Maximum Flood (PMF) study for the Camanche Dam to determine if additional spillway capacity is required. The study shall incorporate the estimates of Probable Maximum Precipitation (PMP) as appropriate from the U.S. Weather Bureau Hydrometeorological Report No. 36. The PMF study as submitted shall include sufficient data to permit an independent evaluation of all assumptions and parameters including but not limited to: PMP values and precipitation losses and excesses for each sub-area of the watershed in the controlling PMF and its accompanying sequential storm; the time distribution of the PMP and sequential storm; calibration of the runoff and streamcourse models with historical floods; the reservoir level at the beginning of the PMF inflow and the reservoir rule curve assumed in routing the PMF.

Article 34. The Licensee shall file with the FERC San Francisco Regional Office yearly a report summarizing the piezometer measurements of foundation uplift pressure at Pardee Dam.

Article 35. The Licensee shall file with the Commission's Regional Engineer and the Director, Office of Electric Power Regulation, one copy each of the contract drawings and specifications for certain important project works including water retention structures, powerhouses, and water conveyance structures, 60 days prior to start of construction. The Director, Office of Electric Power Regulation may require additional contract drawings and specifications and changes in any of the plans and specifications to insure a safe and adequate project.

Article 36. Within one year after commencement of operation of the project the Licensee shall file, for approval, Exhibits A, F, and G, conforming to the Commission's regulations at that time, to describe and show the project works and facilities as constructed.

Article 37. The Licensee shall, prior to the commencement of any construction at the project, consult with the California State Historic Preservation Officer (SHPO) about the need for any cultural resource survey and salvage work. The Licensee shall make available funds in a reasonable amount for any such work as required. If any previously unrecorded archeological or historical sites are discovered during the course of construction or development of any project works or other facilities at the project, construction activity in the vicinity shall be halted, a qualified archeologist shall be consulted to determine the significance of the sites, and the Licensee shall consult with the SHPO to develop a mitigation plan for the protection of significant archeological or historical resources. If the Licensee and the SHPO cannot agree on the amount of money to be expended on archeological or historical work related to the project, the Commission reserves the right to require the Licensee to conduct, at its own expense, any such work found necessary.

Article 38. Licensee shall, at least 60 days prior to commencement of construction of the additional recreational facilities proposed to be developed at the Pardee Development as discussed in the approved Report on Recreational Resources, file with the Commission for approval a description of the facilities, a construction schedule, and, if necessary, revised Exhibit G drawings to show the type and location of the facilities to be developed within the project boundary.

Article 39. The Licensee shall, to the satisfaction of the Commission's authorized representative, install and operate any signs, lights, sirens, barriers or other safety devices that may reasonably be needed to warn the public of fluctuations in flow from the project and to protect the public in its recreational use of project lands and waters.

Article 40. Licensee shall file with the Commission within one year from the date of issuance of this order, implement, and modify when appropriate, an emergency action plan designed to provide an early warning to upstream and downstream inhabitants and property owners if there should be an impending or actual sudden release of water caused by an accident to, or failure of, project works. That plan shall include: instructions to be provided on a continuing basis to operators and attendants for actions they are to take in the event of an emergency; detailed and documented plans for notifying law enforcement agents, appropriate Federal, State, and local agencies, operators of water-related facilities, and those residents and owners of properties that could be endangered; actions that would be taken to reduce the inflow to the reservoir, if possible, by

limiting the outflow from upstream dams or control structures; and actions to reduce downstream flows by controlling the outflow from dams located on tributaries to the stream on which the project is located. Licensee shall also submit a summary of the study used as a basis for determining the areas that may be affected by an emergency, including criteria and assumptions used. Licensee shall monitor any changes in upstream or downstream conditions which may influence possible flows or affect areas susceptible to damage, and shall promptly make and file with the Commission appropriate changes in the emergency action plan. The Commission reserves the right to require modifications to the plan.

Article 41. The Licensee shall pay the United States the following annual charges, effective the first day of the month in which this license is issued:

(a) For the purpose of reimbursing the United States for the cost of administration of part I of the Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 52,440 horsepower.

(b) For the purpose of reimbursing the United States for the use, occupancy, and enjoyment of its lands, a reasonable annual charge as determined by the Commission in accordance with its regulations in effect from time to time. The acreage of United States lands for that purpose will be determined after submission of "as-built" exhibits for approval.

Article 42. The Licensee shall commence construction of the project within two years from the effective date of the license and shall thereafter in good faith and with due diligence prosecute such construction and shall complete construction of such project works within four years from the effective date of the license.

- Article 43. (a) In accordance with the provisions of this article, the Licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission approval. The Licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the Licensee shall also have continuing responsibility to supervise and control the uses and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the Licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the Licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the Licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the Licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The Licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the uses and occupancies for which it grants permission are maintained in good repair and comply with applicable State and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the Licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the Licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the Licensee's costs of administering the permit program. The Commission reserves the right to require the Licensee to file a description of its standards, guidelines, and procedures for

implementing this paragraph (b) and to require modifications of those standards, guidelines, or procedures.

(c) The Licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary State and Federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the Licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The Licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary State and Federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary Federal and State water quality certificates or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary Federal and State approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the Licensee must file a letter to the Director, Office of Electric Power Regulation, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any Federal or

State agency official consulted, and any Federal or State approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the Licensee to file an application for prior approval, the Licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraphs (c) or (d) of this article:

(1) Before conveying the interest, the Licensee shall consult with Federal and State fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the Licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the Licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

(F) This order is final unless a petition appealing it to the Commission is filed within 30 days from the date of its issuance, as provided in Section 1.7(d) of the Commission's regulations, 18 C.F.R. 1.7(d) (1979), as amended, 44 Fed. Reg. 46449 (1979). The filing of a petition appealing this order to the Commission or an application for rehearing as provided in Section 313(a) of the Act does not operate as a stay of the effective date of this license or of any other date specified in this order, except as specifically ordered by the Commission. The Licensee's failure to file a petition appealing this order to the Commission shall constitute acceptance of this license. In acknowledgment of acceptance of this license and its terms and conditions, it shall be signed by the Licensee and returned to the Commission within 60 days from the date this order is issued.

(S E A L)



William W. Lindsay
Director, Office of Electric
Power Regulation

Project No. 2916
East Bay Municipal Utility District

IN TESTIMONY of its acknowledgment of acceptance of all of the terms and conditions of this Order, East Bay Municipal Utility District this ____ day of _____, 19____, has caused its corporate name to be signed hereto by

_____, its _____ President, and its corporate seal to be affixed hereto and attested by _____, its _____ Secretary, pursuant to a resolution of its Board of Directors duly adopted on the ____ day of _____, 19____, a certified copy of the record of which is attached hereto.

By _____
President

Attest:

Secretary

(Executed in quadruplicate)

FEDERAL POWER COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR
UNCONSTRUCTED MAJOR PROJECT
AFFECTING LANDS OF THE UNITED STATES

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project works shall be constructed in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Project 2916

Form L-2
(Revised October, 1975)

FEDERAL POWER COMMISSION

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UNCONSTRUCTED MAJOR PROJECT
AFFECTING LANDS OF THE UNITED STATES

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project works shall be constructed in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in the exhibits approved by the Commission, together with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

Article 4. The construction, operation, and maintenance of the project and any work incidental to additions or alterations shall be subject to the inspection and supervision of the Regional Engineer, Federal Power Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of the project and for any subsequent alterations to the project. Construction of the project works or any feature or alteration thereof shall not be initiated until the program of inspection for the project works or any such feature thereof has been approved by said representative. The Licensee shall also furnish to said representative such further information as he may require concerning the construction, operation, and maintenance of the project, and of any alteration thereof, and shall notify him of the date upon which work will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction, maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights of occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a non-power licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

Article 7. The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

Article 8. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 9. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Article 10. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 11. Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

Article 12. The operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Commission may prescribe for the purposes hereinbefore mentioned.

Article 13. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity

for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 14. In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

Article 15. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 16. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 17. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

Article 18. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

Article 19. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Article 20. The Licensee shall consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, the Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. Upon approval of the clearing plan all clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 21. Timber on lands of the United States cut, used, or destroyed in the construction and maintenance of the project works, or in the clearing of said lands, shall be paid for, and the resulting slash and debris disposed of, in accordance with the requirements of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber shall be at current stumpage rates, and payment for young growth timber below merchantable size shall be at current damage appraisal values. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee: Provided, That timber so sold or disposed of shall be cut and removed from the area prior to, or without undue interference with, clearing operations of the Licensee and in coordination with the Licensee's project construction schedules. Such sale or disposal to others shall not relieve the Licensee of responsibility for the clearing and disposal of all slash and debris from project lands.

Article 22. The Licensee shall do everything reasonably within its power, and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon the request of officers of the agency concerned, to prevent, to make advance preparations for suppression of, and to suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and shall pay the costs incurred by the United States in suppressing fires caused from the construction, operation, or maintenance of the project works or of the works appurtenant or accessory thereto under the license.

Article 23. The Licensee shall interpose no objection to, and shall in no way prevent, the use by the agency of the United States having jurisdiction over the lands of the United States affected, or by persons or corporations occupying lands of the United States under permit, of water for fire suppression from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license, or the use by said parties of water for sanitary and domestic purposes from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license.

Article 24. The Licensee shall be liable for injury to, or destruction of, any buildings, bridges, roads, trails, lands, or other property of the United States, occasioned by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Arrangements to meet such liability, either by compensation for such injury or destruction, or by reconstruction or repair of damaged property, or otherwise, shall be made with the appropriate department or agency of the United States.

Article 25. The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across those project lands which are lands of the United States such conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other routes or means of transportation and communication as are not inconsistent with the enjoyment

of said lands by the Licensee for the purposes of the license. This license shall not be construed as conferring upon the Licensee any right of use, occupancy, or enjoyment of the lands of the United States other than for the construction, operation, and maintenance of the project as stated in the license.

Article 26. In the construction and maintenance of the project, the location and standards of roads and trails on lands of the United States and other uses of lands of the United States, including the location and condition of quarries, borrow pits, and spoil disposal areas, shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

Article 27. The Licensee shall make provision, or shall bear the reasonable cost, as determined by the agency of the United States affected, of making provision for avoiding inductive interference between any project transmission line or other project facility constructed, operated, or maintained under the license, and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.

Article 28. The Licensee shall make use of the Commission's guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way across lands of the United States as are designated by the officer of the United States in charge of the lands; shall keep the areas so designated clear of new growth, all refuse, and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the transmission lines; shall cut and remove all dead or leaning trees which might fall in contact with the transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place.

Article 29. The Licensee shall cooperate with the United States in the disposal by the United States, under the Act of July 31, 1947, 61 Stat. 681, as amended (30 U.S.C. sec. 601, et seq.), of mineral and vegetative materials from lands of the United States occupied by the project or any part thereof: Provided, That such disposal has been authorized by the Commission and that it does not unreasonably interfere with the occupancy of such lands by the Licensee for the purposes of the license: Provided further, That in the event of disagreement, any question of unreasonable interference shall be determined by the Commission after notice and opportunity for hearing.

Article 30. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 31. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Article 32. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.