

**PACIFIC GAS AND ELECTRIC COMPANY
 DRUM-SPAULLING PROJECT
 FERC PROJECT NO. 2310**

CURRENT FERC LICENSE¹

Introduction

The Federal Power Commission (FPC), the predecessor to the Federal Energy Regulatory Commission (FERC), issued the initial Drum-Spaulling Project (Project) license to Pacific Gas and Electric Company (Licensee) on June 24, 1963, effective for the period from May 1, 1963 through April 30, 2013. The initial license included 44 articles that specified conditions of the license (i.e., articles numbered 1-48 with articles 12, 13, 17, and 20 being excluded from the license). Articles 1-24 were from “Terms and Conditions of License for Unconstructed Project Affecting Lands of the United States”, dated December 15, 1953, and were typical of “standard” articles included in project licenses at the time. Since 1963, FERC has added 30 new articles to the license. License articles numbered between 25 and 405 are considered “Project-specific” articles. Table 1 below provides a list of the current license articles, including the general topic of each article. Specific language of the FERC license, including the project description, license articles, and references of the FERC orders modifying Project facilities and articles, is provided after Table 1.

**TABLE 1
 List of license articles in Pacific Gas and Electric Company’s current Federal Energy Regulatory Commission license for the Drum-Spaulling Project (FERC Project No. 2310).**

| <i>Article</i> | <i>Description</i> | <i>Article</i> | <i>Description</i> |
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| 1 | Entire Project subject to terms of license. | 40 | Maintenance of water levels in Project reservoirs. |
| 2 & 3 | FERC approval of changes. | 41 | Prevention of substances injurious to fish and wildlife from entering streams or waters. |
| 4 | Construction and O&M subject to FERC inspection. | 42 | Protection of deer in Project area.. |
| 5 | Revisions to maps and plans showing project area and boundary subject to FERC approval. | 43 | Stockpile of top soil from borrow sites and replacement upon completion of borrow operations. |
| 6 | Installation and maintenance of stage and flow gages and meters to determine energy generated by project. | 44 | Consultation requirements regarding historical and archeological data at Drum No. 2 Powerhouse construction site. |
| 7 | Roads, trails, and other land uses on US-owned lands to be approved by appropriate federal agency or department. | 45 | Permanent Project roads on lands in Tahoe National Forest to be constructed subject to standards of Commission. |
| 8 | Place and maintain suitable structures for public safety related to transmission lines, telephone lines, and other signal wires. | 46 | Payment or disposal of cleared timber on lands of the US during construction and maintenance of Project works. |
| 9 | Avoid inductive interference between Project transmission lines and radio, telephone or other | 47 | Prevention and suppression of fires on project lands. |

¹ This document represents the Licensee’s understanding of the current FERC license, as it relates to facilities and license conditions, for the Drum-Spaulling Project, as amended during the license term. The intent of this document is to meet the requirements of 18 CFR §5.6(d)(2)(v)(A) for a complete description of the current license requirements. This document does not attempt to track Exhibit drawings, as amended during the license term, or provide details of Exhibit M due to its treatment as Critical Energy Infrastructure Information (CEII).

Pacific Gas and Electric Company
Drum-Spaulding Hydroelectric Project
FERC Project No. 2310

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| | communication facility. | | |
| 10 | Clearing of lands prior to filling reservoirs and maintaining margins of reservoirs. | 48 | Submittal of plans for Commission approval for repairs of specific dams. |
| 11 | Clearing of transmission line right-of-ways on US-owned lands. | 49 | Specified rate of return for determining surplus earnings of the Project. |
| 12 | Not included in the License | 50 | Requirement to conduct T&E plant species survey prior to construction or inundation of Fordyce development. |
| 13 | Not included in the License | 51 | Requirement to revise Exhibits K and L for the Fordyce development |
| 14 | Reasonable rules for release of water from reservoirs to protect life, property, beneficial uses, etc. | 52 | Safety requirement regarding Wise and Halsey forebays. |
| 15 | Provisions regarding water for fire suppression, sanitary and domestic needs to agencies with jurisdiction on US-owned lands. | 53 | Plan for improvements to Lake Valley Dams and revision of Exhibit L drawings. |
| 16 | Licensee liability regarding buildings, bridges, roads, trails, etc. on US-owned lands. | 54 | Verification of spillway adequacy of Lake Valley and Lake Arthur Dams |
| 17 | Not included in the License | 55 | Implement and modify, when appropriate, an Emergency action plan for early warning to sudden releases of water. |
| 18 | Licensee rights limited to use, occupancy, and enjoyment of lands of US related to construction, operation, and maintenance of Project, | 56 | Requirements for clearance of vegetation and trees along conduits and reservoirs. |
| 19 | Reservation of rights for US agency or state or county to take over Project roads after construction. | 57 | Requirements for a feasibility analysis regarding development of drops between Bear River Canal and Halsey Forebay, South Canal and Folsom Reservoir, and Lake Valley Canal and Drum Canal. |
| 20 | Not included in the License | 58 | Consultation requirements with environmental protection agencies during construction and operation of project works. |
| 21 | Specified rate of return for determining surplus earnings of the Project. | 59 | Licensee authority to grant permission for certain types of land use without prior Commission approval. |
| 22 | Lease of Project works for power subject to Commission approval. | 60 | Requirement to file revised Exhibit F drawings and Exhibit G maps. |
| 23 | Licensee to retain possession of Project property covered by the license. | 61 | Requirements to provide contract drawings and specifications for Regional Engineer review prior to construction. |
| 24 | Terms and conditions of license shall not impair terms and conditions of Federal Power Act. | 62 | Requirements for Licensee approval of contractor design and construction of cofferdams and deep excavations prior to start of construction. |
| 25 | Licensee construction of Drum No. 2 Powerhouse. | 63 | Minimum streamflow requirement at Mormon Ravine above Newcastle Powerhouse. |
| 26 | Licensee to file revised Exhibits F & K, defining Project boundary. | 64 | Requirements for conducting studies for fishery and wildlife resources at Newcastle Development intake to determine minimum flows needed. |
| 27 & 28 | Construction of fishways & fish handling facilities. | 65 | Requirements for consultation with SHPO prior to future construction. |
| 29 | Installation of additional capacity. | 66 | Requirements for commencement of construction of Newcastle Development. |
| 30 | Coordination of operation with such other power systems. | 67 | Requirements for development of restoration plan for Wise 2 development. |
| 31 | Reservation by Commission to determine what additional transmission facilities should be included as part of Project works. | 68 | Requirements for plan to protect riparian vegetation of Rock Creek. |
| 32 | Licensee reimbursement to and recompensing the US (annual charges). | 69 | Requirements to construct Wise 2 Powerhouse in a manner compatible with historical character of existing Wise powerhouse. |
| 33 | Public access to Project waters and adjacent Project lands. | 70 | Requirements regarding time frame for construction of Wise 2 Powerhouse development. |
| 34 | Licensee to file recreational use plan. | 71 | Requirements to provide contract drawings and specifications for pertinent features of project additions to FERC prior to start of construction. |

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| 35 | Right of Licensee to occupy public lands in Project lakes under Act of July 26, 1866. | 72 | Requirements for submitting revised Exhibit F drawings and supporting design report showing final design of major project works. |
| 36 | Cost of Project and net investment to be determined by Commission. | 73 | Requirements for filing revised Exhibits F and G for approval. |
| 37 | Cost of Project and any betterments to be determined by Commission. | 401 | Requirements to file a plan to monitor water temperature in Bear River at the Highway 20 gage and at release from South Yuba Canal. |
| 38 | Releases from reservoirs no greater than natural conditions. | 402, 403, 404, 405 | Requirements regarding abandonment of Upper Boardman Canal. |
| 39 | Minimum streamflow requirements. | | |

**ORDER ISSUING LICENSE (MAJOR)
 (Issued June 24, 1963)**

The Commission orders:

(A) This license is hereby issued to Pacific Gas and Electric Company (Licensee) under Section 4 (e) of the Act for a period of 50 years, effective as of May 1, 1963, for the construction, operation and maintenance of Project No. 2310, located on the South Yuba and Bear Rivers and tributaries, affecting lands of the United States within the Tahoe National Forest, subject to the terms and conditions of the Act, which is incorporated herein by reference as a part of this license, and subject to such rules and regulations as the Commission has issued or prescribed under the provisions of the Act;

(B) The Drum-Spaulding Project, consists of:

(i) All lands to the extent of the Licensee's interests in those lands, constituting the project area and enclosed by the project boundary, shown and described by certain exhibits which form part of the application for license which are designated and described as: *[(B) and (B)(i) revised by August 14, 1980 Order Approving Surrender of License For Project No. 502 and Amending License For Project No. 2310]*.

(ii) The project works, consisting of:

(a) Spaulding No. 3 Development, comprising: *(Revised by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application, unless otherwise noted)*.

(1) The Upper Rock Lake, on Texas Creek, a reservoir with a surface area of 21 acres and a usable storage capacity of 207 acre-feet, impounded by a main dam, an earthfill structure, 17 feet high, with a rock wall on the downstream face, and an auxiliary dam, an earthfill structure, 8.5 feet high with a rock wall on the downstream face.

- (2) The Lower Rock Lake, on Texas Creek, a reservoir with a surface area of 9 acres and a usable storage capacity of 48 acre-feet, impounded by a dam, an earthfill structure, 10.5 feet high, with upstream and downstream rock walls.
- (3) The Culberston Lake, on a tributary to Texas Creek, a reservoir with a surface area of 70 acres and a usable storage capacity of 953 acre-feet, impounded by a dam, an earthfill structure, 20 feet high, with a rock wall on the downstream face.
- (4) The Upper Lindsey Lake, on Lindsey Creek, a reservoir with a surface area of 6 acres and a usable storage capacity of 18 acre-feet, impounded by a dam, 8 feet high, with upstream and downstream rockwalls.
- (5) The Middle Lindsey Lake, on Lindsey Creek, a reservoir with a surface area of 24 acres and a usable storage capacity of 110 acre-feet, impounded by a dam, an earthfill structure, 8.5 feet high, with a rock wall on the downstream face.
- (6) The Lower Lindsey Lake, on Lindsey Creek, a reservoir with a surface area of 29 acres and a usable storage capacity of 293 acre-feet impounded by a dam, with an earthfill structure, 16 feet high, buttressed with rock and shotcrete.
- (7) The Upper Feeley Lake, on a tributary to Fall Creek, a reservoir with a surface are of 56 acres and a usable storage capacity of 739 acre-feet, impounded by a dam, an earthfill structure, 23 feet, high buttressed with rock.
- (8) The Lower Feeley Lake also known as Carr Lake, on a tributary to Fall Creek, a reservoir with a surface area of 17 acres and a usable storage capacity of 150 acre-feet, impounded by a dam, an earthfill structure, 19 feet high.
- (9) The Blue Lake, on Rucker Creek, a reservoir with a surface area of 63 acres and a usable storage capacity of 1,163 acre-feet, impounded by a dam, an earthfill structure, 21 feet high.
- (10) The Rucker Lake, on Rucker Creek, a reservoir with a surface area of 69 acres and a usable storage capacity of 648 acre-feet, impounded by a dam, an earthfill structure, 22 feet high, buttressed with rockfill, and an 11-foot-high auxiliary dam.
- (11) The Fuller Lake, on a tributary to Jordan Creek, a reservoir with a surface area of 69 acres and a gross storage capacity of 1,127 acre-feet, impounded by a dam, an earthfill structure, 39 feet high, with added shotcrete on the upstream face and buttressed with rockfill.
- (12) The Spaulding No. 3 Headerbox, at the downstream end of the Bowman-Spaulding Canal a part of Project No. 2266, a reservoir with a surface area of 0.1 acre and a gross storage capacity of less than 1 acre-foot, impounded by a berm, and earthfill structure, 8.5 feet high.
- (13) The Spaulding No. 3 Penstock, joining the Spaulding No. 3 Headerbox, 5.5 feet in diameter and 1,614 feet long.
- (14) The Spaulding No. 3 Powerhouse, on the bank of Lake Spaulding, an indoor-type powerhouse containing an 8,000 hp horizontal Francis turbine

connected to a generator rated at 8,450 kVA at 0.90 pf (equivalent to 7,605kW) (*Revised by March 23, 1995 Order Approving Revised Exhibit M and Amending License*).

- (b) Spaulding No. 1 and No. 2 Development, comprising: (*Revised by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application, unless otherwise noted*).
- (1) The Kidd Lake, on a tributary to South Yuba River, a reservoir with a surface area of 86 acres and a usable storage capacity of 1,505 acre-feet, impounded by a main dam, and earth and rockfill structure, 35 feet high, with an auxiliary dam, an earthfill structure, 15 feet high, with a downstream rock wall and buttressed with rockfill.
 - (2) The Upper Peak Lake, also known as Cascade Lakes, on a tributary to South Yuba River, a reservoir with a surface area of 85 acres and a usable storage capacity of 1,736 acre-feet, impounded by a dam, an earthfill structure, 39 feet high, with a downstream rock wall and buttressed with rockfill.
 - (3) The Lower Peak Lake, also known as Cascade Lakes, on a tributary to South Yuba River, a reservoir with a surface area of 33 acres and a usable storage capacity of 484 acre-feet, impounded by a main dam, an earthfill structure, 31 feet high, and a auxiliary dam, an earthfill structure, 9 feet high, with a downstream rock wall.
 - (4) The White Rock Lake, on White Rock Creek, a reservoir with a surface area of 90 acres and a usable storage capacity of 570 acre-feet, impounded by a dam an earthfill structure, 13.5 feet high, with a downstream rock wall.
 - (5) The Meadow Lake, on a tributary to Fordyce Creek, a reservoir with a surface area of 250 acres and a usable storage capacity of 4,841 acre-feet, impounded by a dam, a rockfill structure, 38 feet high, with a downstream rock wall and upstream earthfill, buttressed and shotcreted on upstream face.
 - (6) The Lake Sterling, on a tributary to Fordyce Creek, a reservoir with surface area of 112 acres and a usable storage capacity of 1,764 acre-feet, impounded by a dam, a rockfill timber crib structure, 32 feet high, with an upstream shotcreted face and a downstream rock wall, and buttressed with rockfill.
 - (7) The Lake Fordyce, on Fordyce Creek, a reservoir with a surface area of 730 acres and a gross storage capacity of 46,662 acre-feet, impounded by a dam, a rockfill structure, 140 feet high, with a reinforced concrete upstream slab face.
 - (8) The Jordan Creek Diversion, on Jordan Creek, a pond with a surface area of 0.01 acres and a gross storage capacity of less than 0.1 acre-feet, impounded by a dam, a masonry structure, 3 feet high.

- (9) The Jordan Creek Canal, joining the Jordan Creek Diversion, consisting of a 0.07-mile-long flume, and a 0.53-mile-long natural waterway discharging into the Lake Spaulding.
 - (10) The Lake Spaulding, on South Yuba River, a reservoir with a surface area of 698 acres and a gross storage capacity of 74,773 acre-feet, impounded by a main dam, a concrete arch structure, 276.5 feet high, a spillway dam, a concrete gravity structure, 42 feet high, and an emergency spillway dam, a concrete gravity structure, 91 feet high, with a reinforced concrete upstream slab face and buttressed with rockfill.
 - (11) The Spaulding Power Intakes, Tunnels, and Penstocks, consisting of two submerged intakes, serving two 200-foot-long tunnels, 8.67 feet in diameter, converting into a single 800-foot-long tunnel, 8.67 feet in diameter, extending to the Spaulding No. 1 Powerhouse, which bifurcates into a 190-foot-long tunnel 4.5 feet in diameter extending from the main tunnel at a point 200 feet upstream of the Spaulding No. 1 Powerhouse to a 196-foot-long penstock, 4 feet in diameter, connecting to the Spaulding No. 2 Powerhouse.
 - (12) The Spaulding No. 1 Powerhouse, on the South Yuba River an underground-type powerhouse containing a 13,750 hp vertical Francis turbine connected to a generator rated at 8,800 kva at 0.80 pf (equivalent to 7,040 kW). *(Revised by June 23, 1992 Order Approving Revised Exhibit M, Revising Annual Charges and Amending License)*.
 - (13) The Spaulding No. 2 Powerhouse, on the South Yuba River, an indoor-type powerhouse containing a 5,300 hp vertical Francis turbine connected to a generator rated at 4,125 kva at 0.90 pf (equivalent to 3,710 kW). *(Revised by June 23, 1992 Order Approving Revised Exhibit M, Revising Annual Charges and Amending License)*.
- (c) Drum No. 1 and No. 2 Development, comprising: *(Revised by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application, unless otherwise noted)*.
- (1) The Lake Valley, on North Fork of North Fork American River, a reservoir with a surface area of 298 acres and a gross storage capacity of 7,964 acre-feet, impounded by a main dam, an earthfill structure, 63 feet high, with wood core wall, and an auxiliary dam, an earthfill structure, 25 feet high, with an upstream shotcrete face.
 - (2) The Kelly Lake, on tributary to North Fork of North Fork American River, a reservoir with a surface area of 26 acres and usable storage capacity of 336 acre-feet, impounded by a dam, an earthfill structure 23.5 feet high, with wood corewall and upstream shotcrete face.
 - (3) The Lake Valley Diversion, on North Fork of North Fork American River, a reservoir with a surface area of 0.1 acres and a gross storage capacity of 0.3 acre-feet, impounded by a dam, a masonry gravity structure, 9 feet high.

- (4) The Lake Valley Canal, from the Lake Valley Diversion into the Drum Canal, a canal 2.41 miles long consisting of a 0.96-mile-long ditch, a 0.56-mile-long flume, and a 0.89-mile-long pipe.
 - (5) The Drum Canal, from the Spaulding No. 1 Powerhouse into the Drum Forebay, a canal 9.11 miles long consisting of a 7.14-mile-long ditch, a 0.97-mile-long flume, a 0.65-mile-long tunnel, and 0.35 mile of parallel siphon pipes.
 - (6) The Drum Forebay, on a hilltop above Bear River, a reservoir with a surface area of 23 acres and a gross storage capacity of 621 acre-feet, impounded by a dam, an earthfill structure completely encircling the reservoir, 65.3 feet high.
 - (7) The Drum Power Intakes and Penstocks, consisting of one submerged intake structure serving two penstocks each 6,272 feet long and up to 6 feet in diameter and one tower intake structure serving a penstock 5,798 feet long and up to 7 feet in diameter.
 - (8) The Drum No. 1 Powerhouse, on Bear River, an indoor-type powerhouse containing three 18,000 hp double-overhung impulse turbines connected to generators rated at 15,000 kVA at 0.80 pf (equivalent to 12,000 kW) and one 24,790 hp single-overhung impulse turbine connected to a generator rated at 16,500 kVA at 0.80 pf (equivalent to 13,200 kW). *(Revised by March 23, 1995 Order Approving Revised Exhibit M and Amending License)*.
 - (9) The Drum No. 2 Powerhouse, located adjacent to Drum No. 1 Powerhouse, containing one 59,000 hp, 6-jet, vertical impulse turbine connected to a generator rated at 59,000 kva at 0.90 pf (equivalent to 53,100 kW). *(Revised by June 23, 1992 Order Approving Revised Exhibit M, Revising Annual Charges and Amending License)*.
- (d) Dutch Flat No. 1 Development, comprising: *(Revised by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application, unless otherwise noted)*.
- (1) The Drum Afterbay, on Bear River, a reservoir with a surface area of 10 acres and a gross storage capacity of 341 acre-feet, impounded by a dam, a concrete arch structure, 102 feet high.
 - (2) The Drum Toe Dam, on Bear River, a reservoir with a surface area of 0.14 acres and a gross storage capacity of 3 acre-feet, impounded by a dam, a concrete arch-gravity structure, 25.5 feet high.
 - (3) The Dutch Flat No. 1 Power Intake, Tunnel, Surge Shaft and Penstock, consisting of a tower type intake structure, on Drum Afterbay, serving a 4.13-mile-long tunnel, lined and unlined, with a circular and horseshoe shape generally 9 to 12 feet in diameter, connecting to a concrete-lined surge shaft, with an 8-foot diameter steel riser, 53 feet high, and with a 3,615-foot-long penstock up to 8 feet in diameter.
 - (4) The Dutch Flat No. 1 Powerhouse, on Bear River, an indoor type powerhouse containing a 29,000 hp vertical Francis turbine connected to a generator rated at 27,500 kva at 0.80 pf (equivalent to 22,000 kW).

(Revised by June 23, 1992 Order Approving Revised Exhibit M, Revising Annual Charges and Amending License).

- (e) Halsey Development, comprising: *(Revised by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application, unless otherwise noted).*
- (1) The Bear River Diversion, on Bear River, a reservoir with a surface area of 0.14 acre and a gross storage capacity of 1 acre-foot, impounded by a dam, a cyclopean concrete gravity structure, 30 feet high.
 - (2) The Bear River Canal, from Bear River Diversion to Halsey Forebay, a 22.71-mile-long canal consisting of 20.74 miles of canal, 0.65 miles of flume, and 1.32 miles of tunnel.
 - (3) The Halsey Forebay, on a hilltop, a reservoir with a surface area of 18 acres and a gross storage capacity of 244 acre-feet, impounded by Dam No. 1, and earth embankment, 29 feet high, and Dam No. 2, an earth embankment, 42 feet high.
 - (4) The Halsey Power Intake, Tunnels, and Penstock, from the Halsey Forebay to Halsey Powerhouse, consisting of an intake structure, serving 2,615 feet of lined tunnel, connecting to 1,566 feet of wood stave pipe in two sections, all 8 feet in diameter, connecting to a 1,207-foot-long steel penstock 6 feet in diameter.
 - (5) The Halsey Powerhouse, on South Fork Dry Creek, an indoor type powerhouse containing an 18,000 hp double-overhung Francis turbine connected to a generator rated at 17,000 kva at 0.80 pf (equivalent to 13,600 kW). *(Revised by June 23, 1992 Order Approving Revised Exhibit M, Revising Annual Charges and Amending License).*
- (f) Wise Development, comprising: *(Revised by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application, unless otherwise noted).*
- (1) The Halsey Afterbay, on Dry Creek, a reservoir with a surface area of 10 acres and a gross storage capacity of 106 acre-feet, impounded by a dam, a rockfill structure, 40.25 feet high.
 - (2) The Upper Wise Canal, from Halsey Afterbay Reservoir to Rock Creek Reservoir, consisting of a 0.76-mile-long tunnel, 0.17 mile of natural waterway and a 2.14-mile-long tunnel.
 - (3) The Rock Creek Reservoir, on Rock Creek, a tributary to Dry Creek, a reservoir with a surface area of 55 acres and a gross storage capacity of 550 acre-feet, impounded by a main dam, a concrete multiple arch structure, 36 feet high, a south dam, an earth embankment, 14 feet high, abutting the left end of the multiple arch dam, and a north wing dam, an earth embankment, 6 feet high, abutting the right end of the multiple arch dam.

- (4) The Lower Wise Canal, from the Rock Creek Reservoir to the Wise Forebay Reservoir, a canal 2.81 miles long including 0.06 mile of flume.
 - (5) The Wise Forebay, on top of a hill, a reservoir with a surface area of 8.3 acres and a gross storage capacity of 32 acre-feet, impounded by a dam, an earth embankment, 20 feet high, encircling the forebay.
 - (6) The Wise Power Intake, Tunnels, and Penstock, from the Wise Forebay to Wise Powerhouse, consisting of a spillway-intake structure, serving a 1,389-foot-long steel pipe section about 8 feet in diameter, connecting to a 436-foot-long concrete lined tunnel, 8 feet in diameter, connecting to a 6,775-foot-long. (*Note: The word "penstock" was omitted at the end of the previous sentence in the February 16, 1984 Order.*)
 - (7) The Wise Powerhouse, on Auburn Ravine, an indoor-type powerhouse containing an 19,920 hp horizontal Francis turbine connected to a generator rated at 17,000 kva at 0.80 pf (equivalent to 13,600 kW). (*Revised by June 23, 1992 Order Approving Revised Exhibit M, Revising Annual Charges and Amending License.*)
 - (8) The South Canal, from Wise Powerhouse to Folsom Lake (Reservoir), a 6.69-mile-long canal consisting of a 1.23-mile-long unlined ditch, a 2.89-mile-long lined ditch, a 0.4-mile-long concrete flume, a 0.5-mile-long unlined tunnel, a 0.54-mile-long lined tunnel, and 1.13 miles of natural waterway.
- (g) The Newcastle Development consists of: (*Revised by June 23, 1992 Order Approving Revised Exhibit M, Revising Annual Charges and Amending License, unless otherwise noted.*)
- (1) a 70-foot-wide by 40-foot-long sandtrap.
 - (2) A 130-foot-long side channel spillway with a crest elevation of 855.3 feet (USGS).
 - (3) A concrete intake structure with trashracks and a 7-foot-square fixed-wheel gate.
 - (4) A 4,700-foot-long, 7-foot-diameter reinforced concrete penstock.
 - (5) A 1,000-foot-long, 7-foot-diameter steel penstock.
 - (6) The Newcastle Powerhouse, a 52-foot-diameter reinforced concrete powerhouse, containing a 15,700 hp vertical Francis turbine connected to a generator rated at 14,111 kva at 0.90 pf (equivalent to 12,700 kW).
 - (7) A tailrace.
 - (8) Appurtenant facilities. (*Revised by March 23, 1995 Order Approving Revised Exhibit M and Amending License.*)
- (h) Deer Creek Development, comprising: (*Revised by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application, unless otherwise noted.*)

- (1) The Main South Yuba and Chalk Bluff Canals, from Spaulding No. 2 Powerhouse to Deer Creek Forebay, an 18.95-mile-long canal consisting of an 11.54-mile-long ditch, a 5.89-mile-long flume, a 0.71-mile-long tunnel, and a 0.81-mile-long pipe. *(Amended by March 3, 1994 Order Amending License and Approving Revised Exhibit L).*
- (2) The Deer Creek Forebay, on a hillside above Deer Creek, a reservoir with a surface area of 3 acres and a gross storage capacity of 16 acre-feet, impounded by a dam, an earthfill structure, 14 feet high.
- (3) The Deer Creek Intake and Penstock, consisting of a headwall type intake serving a 5,589-foot-long penstock up to 4 feet in diameter.
- (4) The Deer Creek Powerhouse, on Deer Creek, an indoor-type powerhouse containing a 7,500 hp double-overhung Francis turbine connected to a generator rated at 6,875 kva at 0.80 pf (equivalent to 5,500 kW). *(Revised by June 23, 1992 Order Approving Revised Exhibit M, Revising Annual Charges and Amending License).*
- (i) Alta Development, comprising: *(Revised by April 11, 1994 Order Amending License; previously numbered 1-8 until abandonment of Boardman Canal).*
 - (1) The Drum Forebay Diversion, from Drum Forebay Dam to Canyon Creek upstream from Towle Diversion, a natural waterway about 0.3 mile long.
 - (2) The Towle Diversion, on Canyon Creek a tributary to North Fork American River, a reservoir with a surface area of 0.01 acres and a gross storage capacity 0.05 acre-feet, impounded by a dam, a concrete gravity structure, 5.5 feet high.
 - (3) The Towle Intake and Canal, consisting of an intake structure serving a 3.88-mile-long canal, from Towle Diversion to Alta Forebay, consisting of a 3.28-mile-long ditch, a 0.24-mile-long flume, and a 0.36-mile-long pipe.
 - (4) The Alta Forebay, on a hillside above Little Bear River, a reservoir with a surface area of 5 acres and a gross storage capacity of 38 acre-feet, impounded by a dam, an earthfill structure, 17 feet high.
 - (5) The Alta Power Intake and Penstock, a spillway-power intake structure serving a 5,393-foot-long penstock, 3 feet in diameter.
 - (6) The Alta Powerhouse, on Little Bear River, an indoor type powerhouse containing two 1,500 hp single-overhung impulse turbines each connecting to a generating unit rated at 1,000 kW.
- (j) Transmission Lines, comprising: *(Several transmission lines included in the original Project were deleted from the Project by December 22, 1998 Order Granting License Amendments “effective on the date that the Licensee receives all necessary permits from the U.S. Forest Service and/or the U.S. Bureau of Land Management”. The Licensee subsequently received necessary permits from BLM on December 8, 2004 and from the Tahoe National Forest on April 19, 2005. Consequently,*

effective April 19, 2005, the seven transmission lines listed below are in the Project license.)

- (1) Spaulding No. 3-Spaulding No. 1
A 60 kV line approximately 1.1 mile long connects Spaulding No. 3 Powerhouse to Spaulding No. 1 Powerhouse.
 - (2) Spaulding No. 2-Spaulding No. 1
A 2.3 kV single circuit line 0.04 mile long connects Spaulding No. 2 Powerhouse to Spaulding No. 1 Powerhouse.
 - (3) Deer Creek-Drum
A 60 kV single circuit line extends 6.25 miles from Deer Creek Powerhouse to Drum Powerhouse.
 - (4) Dutch Flat No. 1-Dutch Flat No. 2
A 115 kV single circuit line extends 0.24 miles from Dutch Flat No. 1 Powerhouse to Nevada Irrigation District's Dutch Flat No. 2 Powerhouse, a part of Project No. 2266, and then to the Drum-Halsey Transmission Line.
 - (5) Dutch Flat No. 2 Tie
A 115 kV single circuit line extends 0.41 miles from Nevada Irrigation District's Dutch Flat No. 2 Powerhouse, a part of Project No. 2266, to Drum-Halsey Junction Transmission Line.
 - (6) Wise Powerhouse Taps
Two 65-kV single circuit lines extending 0.1 miles from Wise Powerhouse to a connection with Licensee's interconnected system.
 - (7) Newcastle Powerhouse Tap
A 150 foot long 115 kV transmission line connects the Newcastle Switchyard to the Licensee's interconnected Newark-Halsey Junction Transmission Line.
- (k) Wise 2 Development, comprising: *(Revised by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application, unless otherwise noted).*
- (1) A 1,400-foot-long steel penstock which varies in diameter from 60 inches to 42 inches.
 - (2) The Wise No. 2 Powerhouse, a 25-foot by 41.5-foot reinforced concrete powerhouse, containing a 3,980 hp horizontal Francis turbine connected to a generator rated at 3,194 kVA at 0.90 pf (equivalent to 2,875 kW).
(Revised by March 23, 1995 Order Approving Revised Exhibit M and Amending License).
 - (3) A 66-foot-long, 54-inch-diameter buried steel tailrace pipe returning water to the South Canal.
 - (4) Appurtenant facilities.

(iii) The location, nature, and character of the project works are generally shown and described by the exhibits cited above and are more specifically shown and described by certain other exhibits designated and described as: *[(B)(iii) amended by August 14, 1980 Order Approving Surrender of License For Project No. 502 and Amending License for Project 2310]*.

Exhibit L: General Design Drawings (*Exhibit L drawings are not included in this document*).

Exhibit M: General Description and General Specifications of Mechanical, Electrical and Transmission Equipment Drawings. (*Exhibit M was amended by August 14, 1980 Order Approving Surrender of License for Project No. 502 and Amending License for Project 2310. Exhibit M is not included in this document as it is treated as Critical Energy Infrastructure Information (CEII)*).

(C) This license is also subject to the terms and conditions set forth in Form L-2, December 15, 1953, entitled "Terms and Conditions of License for Unconstructed Project Affecting Lands of the United States" (17 FPC 62), which terms and conditions, designated as Articles 1 through 24, are attached hereto and made a part hereof, except for Articles 12, 13, 17 and 20 thereof, and subject to the following special conditions set forth herein as additional articles:

Article 1. The entire project, as described in the order of the Commission, shall be subject to all 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 amended, supplemental, 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. Said 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 life, health, or property, no substantial alteration or addition not in conformity with the approved plans shall be made to any dam or other project works under the license without the prior approval of the Commission; and any emergency alteration or addition so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in the project works or divergence from such approved exhibits may be made if such changes will not result in decrease in efficiency, in material increase in cost, 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. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may from time to time prescribe for the protection of life, health, or property.

Article 4. The construction, operation, and maintenance of the project and any work incident to additions or alterations, whether or not conducted upon lands of the United States, 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 furnish to said representative such 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, and 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 him 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.

Article 5. 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 maps, plans, specifications, and statements 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 maps, plans, specifications, and statements approved by the Commission, together with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variations in or divergence from the approved maps, plans, specifications, and statements. Such revised maps, plans, specifications, and statements shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

Article 6. For the purpose of determining the stage and flow of the stream or streams from which water is to be diverted for the operation of the project works, the amount of water held in and withdrawn from storage, and the effective head on the turbines, the Licensee shall install and thereafter maintain such gages and stream-gaging stations as the Commission may deem necessary and best adapted to the requirements; and shall provide for the required readings of such gages and for the adequate rating of such stations. The Licensee shall also install and maintain standard meters adequate for the determination of the amount of electric energy generated by said 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 and may be altered from time to time if necessary to secure adequate determinations, but such alteration shall not be made except with the approval of the Commission or upon the specific direction of the Commission. The installation of gages, the ratings 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 said 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 record 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 7. In the construction and maintenance of the project, the location and standards of roads and trails, and other land uses including the location and condition of quarries, borrow pits, spoil disposal areas, and sanitary facilities shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

Article 8. In the construction and 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 and obstructing traffic and endangering life on highways, streets, or railroads.

Article 9. 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. None of the provisions of this article is intended to relieve the Licensee from any responsibility or requirement which may be imposed by other lawful authority for avoiding or eliminating inductive interference.

Article 10. The Licensee shall prior to impounding water clear all lands in the bottoms and margins of reservoirs up to high-water level, shall clear and keep clear to an adequate width lands of the United States along open conduits, and shall dispose of all temporary structures, unused timber, brush, refuse, or inflammable material resulting from the clearing of the lands or from the construction and maintenance of the project works. In addition, all trees along the margins of reservoirs which may die from operation of the reservoir shall be removed. The clearing of the lands and the disposal of the material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission.

Article 11. The Licensee 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 line; shall cut and remove all dead or leaning trees which might fall in contact with the transmission line; 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 12. Not included in the License per 29 FPC 1265 Order Issuing License, June 24, 1963.

Article 13. Not included in the License per 29 FPC 1265 Order Issuing License, June 24, 1963.

Article 14. 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 15. 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 to the use by said parties of water for sanitary and domestic purposes from any stream or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license.

Article 16. 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 17. Not included in the License per 29 FPC 1265 Order Issuing License, June 24, 1963.

Article 18. The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across the project lands, conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other means of transportation and communication not inconsistent with the enjoyment of said lands by the Licensee for the purposes stated in the license. This article 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 19. There is reserved to the appropriate department or agency of the United States, or of the State or county involved, the right to take over, maintain, and supervise the use of any project road as a public road after construction of the project works is completed.

Article 20. Not included in the License per 29 FPC 1265 Order Issuing License, June 24, 1963.

Article 21. After the first twenty (20) years of operation of the project under the license, six (6) percent per annum shall be the specified rate of return on the net investment in the project for determining surplus earnings of the project for the establishment and maintenance of amortization reserves, pursuant to section 10 (d) of the Act; one-half of the project surplus earnings, if any, accumulated after the first twenty years of operation under the license, in excess of six (6) percent per annum on the net investment, shall be set aside in a project amortization reserve account as of the end of each fiscal year, provided that, if and to the extent that there is a deficiency of project earnings below six (6) percent per annum for any fiscal year or years after the first twenty years of operation under the license, the amount of such deficiency shall be deducted from the amount of any surplus earnings accumulated thereafter until absorbed, and one-half of the remaining surplus earnings, if any, thus cumulatively computed, shall be set aside in the project amortization reserve account; and the amounts thus established in the project amortization reserve account shall be maintained therein until further order of the Commission. This Article is effective through August 15, 1976.

Included in June 24, 1963 Order Issuing License, and amended by Instrument No. 8 dated October 19, 1976 (Amendment of License Article No. 21 and Addition of Article No. 49 to the License for Project No. 2310). Instrument No. 8 added the last sentence regarding the effective date of this article.

Article 22. No lease of the project or part thereof whereby the lessee is granted the exclusive occupancy, possession, or use of project works for purposes of generating, transmitting, or distributing power shall be made without the prior written approval of the Commission; and the Commission may, if in its judgment the situation warrants, require that all the conditions of the license, of the Act, and of the rules and regulations of the Commission shall be applicable to such property so leased to the same extent as if the lessee were the Licensee: Provided, that the provisions of this article shall not apply to parts of the project or project works which may be used by another jointly with the Licensee under a contract or agreement whereby the Licensee retains the occupancy, possession, and control of the property so used and receives adequate consideration for such joint use, or to leases of land while not required for purposes of generating, transmitting, or distributing power, or to buildings or other property not built or used for said purposes, or to minor parts of the project or project works, the leasing of which will not interfere with the usefulness or efficient operation of the project by the Licensee for such purposes.

Article 23. The Licensee, 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 necessary or useful to the project and to

the development, transmission, and distribution of power therefrom will be voluntarily sold, transferred, abandoned, or otherwise disposed of without the approval of the Commission: Provided, that a mortgage or trust deed or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article. 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 Act, or is transferred to a new licensee under the provisions of Section 15 of the Act, the Licensee, its successors and assigns will be responsible for and will make good any defect of title to or of right of user in any of such project property which is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and will pay and discharge, or will 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 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, or 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 user in any of such project property than was necessary to acquire for its own purposes as Licensee.

Article 24. 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.

Article 25. The Licensee shall commence construction of Drum No. 2 Powerhouse within two years of the effective date of this license, 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 this license, but not later than the time additional water supply is available from Project No. 2266 of Nevada Irrigation District.

Article 26. The Licensee shall, within two years from the effective date of this license, file with the Commission revised Exhibits F and K to define the final project boundary including transmission line rights-of-way in accordance with the rules and regulations of the Commission.

Article 27. The Licensee shall construct, maintain and operate or shall arrange for the construction, maintenance and operation of such fishways, including fish traps, or other fish handling facilities or fish protective devices and supporting facilities for artificial propagation and comply with such reasonable modifications of the project structures and operation in the interest of fish life as may be prescribed hereafter by the Federal Power Commission upon its own motion or upon the recommendations of the Secretary of the Interior, or the California Department of Fish and Game, after notice and opportunity for hearing and upon a finding based on substantial evidence that such modifications are necessary and desirable, and consistent with the provisions of the Act.

Article 28. Whenever the United States shall desire, in connection with the project, to construct fish handling facilities or to improve the existing fish handling facilities at its expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of

Licensee's lands and interest in lands, reservoirs, waterways and project works as may be reasonably required to complete such fish handling facilities or such improvements thereof. In addition, after notice and opportunity for hearing the Licensee shall modify the project operation as may be prescribed by the Commission, consistent with the primary purpose of the project, in order to permit the maintenance and operation of the fish handling facilities constructed or improved by the United States under the provision of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish handling facilities or to relieve the Licensee of any obligation under this license.

Article 29. The Licensee shall install additional capacity and 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, after notice and opportunity for hearing.

Article 30. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other 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 31. The Commission reserves the right to determine at a later date what additional transmission facilities, if any, should be included in this license as part of the project works.

Article 32. The Licensee shall pay to the United States the following annual charges:

(i) For the purpose of reimbursing the United States for the cost and 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 241,600 horsepower. *(Amended on June 23, 1992 by Order Approving Revised Exhibit M, Revising Annual Charges and Amending License).*

(ii) For the purpose of recompensing the United States for the use, occupancy, and enjoyment of 763.15 acres of its lands, exclusive of transmission line rights-of-way, an amount as may be determined from time to time pursuant to the Commission's regulations. *(Amended by December 20, 1990 Order Approving Revised Exhibit K Drawings and Revising Annual Charges).*

(iii) For the purpose of recompensing the United States for the use, occupancy, and enjoyment of 107.28 acres of its lands for transmission lines rights-of-way an amount as may be determined from time to time pursuant to the Commission's regulations. *(Amended by August 14, 1980 Order Approving Surrender of License for Project No. 502 and Amending License for Project No. 2310).*

Article 33. 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 recreational purposes, including fishing and hunting, and shall allow to a reasonable extent for such purposes the construction of access roads, wharves, landings, and

other facilities on its lands the occupancy of which may in appropriate circumstances be subject to payment of rent to the Licensee in a reasonable amount: 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 and provided further, that the Licensee's consent to the construction of access roads, wharves, landings, and other facilities shall not, without its express agreement, place upon the Licensee any obligation to construct or maintain such facilities. These facilities are in addition to the facilities that the Licensee may construct and maintain as required by the license.

Article 34. The Licensee shall, within one year from the date of issuance of this license file with the Commission a recreational use plan for the project which shall include not only recreational improvements which may be provided by others, but the recreational improvements the Licensee plans to provide.

Article 35. During the period of this license, the right of the Licensee to occupy public lands in the various project lakes in which the Licensee claims rights of occupancy under the Act of July 26, 1866, will be derived from this license notwithstanding any rights the Licensee may have prior to the issuance hereof or after the termination of this license for any cause.

Article 36. The actual legitimate original cost, estimated where not known, and the accrued depreciation of the parts of the project completed prior to the effective date of the license shall be determined by the Commission as of such effective date, in accordance with the act, and the rules and regulations of the Commission, and such cost less such accrued depreciation, so determined, shall be the net investment in the project as of such effective date.

Article 37. The actual legitimate original cost of the parts of the project to be completed after the effective date of the license, and of any addition to or betterment of the project, shall be determined by the Commission in accordance with the Act and the rules and regulations of the Commission there under.

Article 38. The Licensee shall operate the project reservoirs during flood periods so that the releases from the reservoirs are no greater than those which would occur under natural stream conditions.

Article 39. The Licensee shall maintain streamflows below project structures as follows: *(Streamflow requirements were originally required in the June 24, 1963 Order Issuing License; however, the article has been completely revised as indicated below.)*

Parts (i) through (iii)

| Release Location | Period | Target flow (cfs) | Allowable Minimum (cfs) |
|-------------------------|----------|----------------------|----------------------------|
| (i) Upper Rock Lake | 7/1-9/30 | 0.25 | 0.10 |
| (i) Lower Rock Lake | 7/1-9/30 | 0.25 | 0.10 |
| (i) Middle Lindsey Lake | 7/1-9/30 | 0.25 | 0.10 |
| (iii) Lower Lindsey | All Year | 0.50 | 0.20 |

| | | | |
|--------------------------------|----------|------|------|
| (iii) Feeley Lake (Upper) | All Year | 0.50 | 0.20 |
| (iii) Carr Lake (Lower Feeley) | All Year | 0.50 | 0.20 |
| (iii) Blue Lake | All Year | 0.50 | 0.20 |
| (iii) Rucker Lake | All Year | 0.50 | 0.20 |
| (ii) Culbertson Lake | All Year | 0.75 | 0.30 |

During dry years, these flows shall be adjusted according the following formula:
 From July 1 through October 31,

$$(0.80 * (\text{storage}_{\text{July 1}}) * 0.504) / (123)$$

where 0.80 is used to account for evaporation in the lake; 0.504 is the conversion from acre-feet to cubic feet per second (cfs); and 123 is the number of days from July 1-October 31. *(The table of streamflows for parts (i) through (iii) and the text above following the table was revised on April 16, 1998 by Order on Rehearing. References to parts (i), (ii), and (iii) are left in for reference to the 1963 order).*

PG&E will take all reasonable measures to correct any problems that exist with respect to the minimum flow releases set out in parts i, ii, and iii above. The Commission reserves the right to reexamine the flow requirements if necessary. *(Paragraph added by June 30, 1998 Order on Rehearing).*

Parts (iv) through (x)

| Stream | Min. Flow cfs | Period | Qualifications |
|--|----------------|---|--|
| (iv) Fordyce Creek below Fordyce Lake | 5.0 | Yearlong provided that sufficient Lake storage shall be reserved at the time of outlet adjustment for unattended winter operation to insure an initial flow of 5 cfs and not less than 3 cfs at Lake level of maximum winter drawdown | Lake storage in excess of these release to be prorated over the period 7/1 to the date of winter operational adjustment without causing Spaulding Reservoir to spill; Fordyce Lake not to be drawn down below 3,000 acre feet of storage |
| (v) South Yuba River below Lake Spaulding | 1.0 | Yearlong | To be released at or adjacent to Spaulding Powerhouse No. 2 |
| (vi) South Yuba River Langs Crossing | 5.0 | Yearlong | To be released from Lake Spaulding |
| (v) Bear River 0.1 mile below the site of the California Department of Fish and Game's Bear River Fish Planting Base | 5.0 | Yearlong | To be released from South Yuba Canal |
| (viii) Bear River below | Normal year 10 | 3/1-9/30 | Dry year conditions are |

| | | | |
|---|-----------------------------|--------------|---|
| Drum Afterbay | Dry year 5 | | deemed to exist in the month following whenever the accumulated seasonal precipitation at Lake Spaulding commencing with Oct. 1, is equal to or less than: 29 inches as of Jan. 31, 35 inches as of Feb. 28-29, 40 inches as of March 31, 45 inches [as of April 30; provided that if total precipitation by April 30 is 45 inches or less, Dry year conditions are deemed to exist for the remainder of the year.] <i>(Note: The latter part of the above text in italicst was omitted in the August 14, 1980 order).</i> |
| | Normal year 5 Dry Year 5 | 10/1-2/28-29 | |
| (ix) Canyon Creek Below Towle Diversions | 1.0 | Yearlong | Or natural streamflow, whichever is less |
| (x) Bear River Below Upper Boardman Canal Diversion Dam | 1.0 | Yearlong | Or natural streamflow, whichever is less |

(Table above amended by August 14, 1980 Order Approving Surrender of License for Project No. 502 and Amending License for Project No. 2310).

Provided, that in lieu of maintaining flow records the Licensee shall devise and implement a plan for checking minimum stream flows by means of stream stage marks on natural stream features, and calibration of project structure gates and valves, which shall be acceptable to the United States Forest Service, California Department of Fish and Game, and the US Fish and Wildlife Service. Provided further, that the Licensee may make such reasonable deviations in the schedule of item (vii) as may be necessitated by maintenance or repair operations on the South Yuba Canal. Provided further, that the Licensee shall regulate downstream releases in as near uniform flow as possible, and provided further, that the Licensee shall conduct the normal operations of the Bear River waste gate so as to provide gradual changes in rates of releases from the Drum Canal into the Bear River insofar as possible excepting emergencies and allowances for the safety of the Drum Canal. *(Paragraph Amended by February 16, 1984 Order further Amending License and Denying Preliminary Permit Application).*

PG&E will take all reasonable measures to correct any problems that exist with respect to the minimum flow releases set out in parts i, ii, and iii above. The Commission reserves the right to

reexamine the flow requirements if necessary. *(Paragraph added by June 30, 1998 Order on Rehearing.*

Article 40. The Licensee shall maintain water levels in project reservoir lakes as follows:

| Reservoir Level | Water Level Schedule |
|--|--|
| (i)Meadow Lake | Maximum level consistent with project operation June 1 to August 1. |
| (ii)Rucker Lake Sterling Lake Lower Rock Lake Lower Feeley Lake | Maximum level consistent with project operations June 1 to September 1. |
| (iii)Fuller Lake | Maximum level consistent with project operations year round; any necessary drawdowns not to decrease the level below the bottom elevation of Nevada Irrigation District's outlet ditch. |
| (iv)Upper Lindsey Lake | Level as permitted with no drawdown for irrigation or power purposes. |
| (v)Upper Cascade (Peak) Lake Lower Cascade (Peak) Lake | Maximum level consistent with project operations and with use of the storage to maximize recreational use of the lakes and to augment the flow of the South Yuba River during the fall months. |
| (vi)Lake Arthur Rock Creek Reservoir Halsey Forebay Halsey Afterbay | Maximum level consistent with project operation June 1 to September 1. |
| (vii)White Rock Lake | Consistent with project operations; storage level used to augment flows into North Creek during summer and fall months. |

Provided, that the Licensee may make such reasonable deviations in the foregoing schedules as may be necessitated by maintenance or repair operations; provided further, that the Licensee shall release storage during drawdowns in as near uniform flow as possible; and provided further, that the Licensee shall retain sufficient storage above lake outlets at the end of each annual drawdown so that uninterrupted operation of outlet controls can be assured insofar as possible and stream flow requirements can be met during unattended winter periods.

Amended by February 16, 1984 Order further Amending License and Denying Preliminary Permit Application.

Article 41. The Licensee shall take whatever precautions are necessary to prevent the entry into any streams or waters in or below the project area of any clay, silt, sand, gravel, fines, detritus, oil, or other substances which are injurious to fish and wildlife or their habitat.

Article 42. The Licensee shall construct deer-proof fences, deer cross-walks covered with soil, deer-escape ramps, and such other structures or modifications to project features reasonably found necessary to protect deer in the project area based on precise definition of any problem

areas, as may be prescribed by the Commission upon the recommendations of the United States Forest Service, California Department of Fish and Game, or the Bureau of Sport Fisheries and Wildlife.

Article 43. The Licensee shall strip and stockpile top soil from all borrow areas prior to borrow operations, and shall regrade these areas as practicable and replace top soil upon completion of borrow operations. Additionally, all borrow areas on Federal lands not subject to project inundation shall be revegetated, as prescribed by the administering government agency.

Article 44. The Licensee shall consult with the Central California Archaeological Foundation, P.O. Box 5595, Sacramento, California, to negotiate a contract for the possible survey and salvage of historical and archeological data (including relics and specimens) in the new construction area of the Drum No. 2 Powerhouse and shall finance such survey and salvage program in an amount not to exceed \$2,000 upon further order of the Commission.

Article 45. All permanent project roads on lands within the Tahoe National Forest, which may be constructed by the Licensee, shall be constructed to standards as may be prescribed by the Commission.

Article 46. 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 requirement of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber will be at current stumpage rates, and payment for young growth timber below merchantable size will be at current damage appraisal value. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee, with the provision that timber so sold or disposed of will be cut and removed from the area prior to or without undue interference with clearing operations of the Licensee and in coordination with his project construction schedules. Such sale or disposal to others will not relieve the Licensee of the responsibility for the clearing and disposing of all slash and debris from project lands.

Article 47. 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, make advance preparations for suppression, and suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and 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 work appurtenant of accessory thereto under the license.

Article 48. The Licensee shall, within six months from the effective date of this license, submit for Commission approval plans for repairs on the following dams and appurtenant works in the interest of structural safety and the Licensee shall accomplish such repairs upon further order of the Commission: Upper Lindsey, Middle Lindsey, Lower Lindsey, Lower Feeley, Rucker, Puller, Sterling, Fordyce, Spaulding Nos. 2, 3, 4 and 5, and Drum Forebay.

Article 49. Pursuant to Section 10(d) of the Act, after the first 20 years of operation of the project under license, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One half of the project surplus earnings, if any, accumulated after the first 20 years of operation under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account as of the end of each fiscal year: Provided, that, if and to the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year or years after the first 20 years of operation under the license, the amount of such deficiency shall be deducted from the amount of any surplus earnings accumulated thereafter until absorbed, and one-half of the remaining surplus earnings, if any, thus cumulatively computed, shall be set aside in the project amortization reserve account; and the amounts thus established in the project amortization reserve account shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the weighted cost components of long-term debt, preferred stock, and the cost of common equity, as defined herein. The weighted cost component for each element of the reasonable rate of return is the product of its capital ratios and cost rate. The current capital ratios for each of the above elements of the rate of return shall be calculated annually based on an average of 13 monthly balances of amounts properly includable in the Licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rates for such ratios shall be the weighted average cost of long-term debt and preferred stock for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10 year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

Added to License on October, 19, 1976 by Instrument No. 8 (Amendment of License Article No. 21 and Addition of Article No. 49 to the License for Project No. 2310).

Article 50. Licensee shall, prior to undertaking any construction or inundation activities at the Fordyce development that could harm or jeopardize the continued existence of any threatened or endangered plant species, complete a threatened or endangered plant species survey during the spring-emergent plant season and file a report of the survey with the Director of the Office of Electric Power Regulation. The Director may stay reservoir clearing or inundation above elevation 6,402.1 feet (USGS datum) if the method, timing, or scope of the survey is inadequate to determine the presence or absence of threatened or endangered plant species. If the survey finds evidence of threatened or endangered plant species that would be affected by the proposed increase in reservoir elevation, no clearing or inundation between elevations 6,402.1 feet and 6,405.1 (USGS datum) may proceed until the procedures required by Section 7 of the Endangered Species Act (as amended) have been completed, and the procedures for clearing and inundation have been approved by the Director. If the Director has not stayed reservoir clearing or inundation within 30 days from the date that the survey report is filed; and if the plant species survey has found no evidence of threatened or endangered species, the proposed activities may proceed.

Added to License by April 9, 1980 (as Article 49) Order Amending License and amended (i.e., renumbered as Article 50) by August 14, 1980 Order Approving Surrender of License For Project No. 502 and Amending License For Project No. 2310.

Article 51. Licensee shall, within six months of the date of issuance of this order, file for Commission approval revised Exhibits K and L for the Fordyce development.

Added to License by April 9, 1980 (as Article 50) Order Amending License and amended (i.e., renumbered as Article 51) by August 14, 1980 Order Approving Surrender of License For Project No. 502 and Amending License For Project No. 2310.

Article 52. Licensee shall, within six months from the issuance date of this amendment, either verify the safety of, or submit a plan and schedule for modifying Wise Forebay, and Halsey Forebay, so as to provide a factor of safety against sliding of at least 1.10 for the loading condition of steady seepage and a pseudo static earthquake acceleration of .15 g.

Added to license by August 14, 1980 Order Approving Surrender of License for Project No. 502 and Amending License for Project No. 2310; and amended by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application.

Article 53. Licensee shall, within one year from the issuance date of this order, complete the plan for improvements to the Lake Valley Dams as described and proposed in its letter with enclosure to the San Francisco Regional Engineer dated April 2, 1980. Upon completion of the modifications to the dams, Licensee shall submit revised Exhibit L drawings showing the Lake Valley development “as-built”.

Added to license by August 14, 1980 Order Approving Surrender of License for Project No. 502 and Amending License for Project No. 2310.

Article 54. Licensee shall, within six months from the issuance date of this order, either verify the spillway adequacy of the Lake Valley and Lake Arthur Dams or submit for approval a plan and schedule for remedial action to provide additional spillway capacity.

Added to license by August 14, 1980 Order Approving Surrender of License for Project No. 502 and Amending License for Project No. 2310.

Article 55. Licensee shall file with the Commission within 6 months 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, the 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.

Added to license by August 14, 1980 Order Approving Surrender of License for Project No. 502 and Amending License for Project No. 2310.

Article 56. 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.

Added to license by August 14, 1980 Order Approving Surrender of License for Project No. 502 and Amending License for Project No. 2310; and amended on February 16, 1984 by Order Further Amending License and Denying Preliminary Permit Application.

Article 57. Licensee shall, within one year of the issuance date of this order, submit a feasibility analysis of developing the 30-foot drop between the end of Bear River Canal and Halsey Forebay, the 100-foot drop between the end of the South Canal and Folsom Reservoir, and the 600-foot drop between the Lake Valley Canal and Drum Canal. If the Licensee's analysis finds any of the potential developments feasible, the Licensee shall simultaneously file an application for amendment of license to install the additional capacity or a schedule for filing that application.

Added to license by August 14, 1980 Order Approving Surrender of License for Project No. 502 and Amending License for Project No. 2310.

Article 58. Licensee shall consult with the appropriate environmental protection agencies and take such measures as may be needed during any construction and operation of project works, including recreational facilities, to protect and develop the environmental values of the project area. Such measures should include but not be limited to: selection of area and methods of clearing excavation, borrow, spoil, disposal, and of leveling, revegetation, and selective or screen plantings, and the development of outdoor recreation facilities; location and construction of roads, and of sewage and solid waste disposal facilities. The Commission reserves the right to make final determination on environmental matters relating to construction or maintenance at, or the operation of, the project, if the appropriate environmental agencies and Licensee cannot reach agreement.

Added to license by August 14, 1980 Order Approving Surrender of License for Project No. 502 and Amending License for Project No. 2310.

Article 59. (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, canceling 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.

Added to license by August 14, 1980 Order Approving Surrender of License for Project No. 502 and Amending License for Project No. 2310.

Article 60. The Licensee shall within 90 days after completion of construction, file in accordance with the Commission's Rules and Regulations, revised Exhibit F drawings and Exhibit G maps, for approval, showing the project as-built.

Added to license by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application.

Article 61. The Licensee shall provide the Commission's Regional Engineer and the Director, Office of Electric Power Regulation, one copy each of the contract drawings and specifications for pertinent features of the project such as water retention structures, powerhouse and water conveyance structures, at least 60 days prior to start of construction. The Director, Office of Electric Power Regulation may require changes in the plans and specifications to ensure a safe and adequate project.

Added to license by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application.

Article 62. The Licensee shall review and approve the design and construction procedures for contractor-designed cofferdams and deep excavations prior to the start of construction. The Licensee shall file with the Commission's Regional Engineer and Director, Office of Electric

Power Regulation, one copy of the approved construction drawings and specifications, and a copy of the letter of approval.

Added to license by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application.

Article 63. The licensee shall maintain a minimum flow of 5 cubic feet per second at the gaging station located at Mormon Ravine above Newcastle Powerhouse (Pacific Gas and Electric Company gage YB-292). No minimum flow is required at this site during the annual South Canal Outage.

This minimum flow may be temporarily modified if required by operating emergencies beyond the control of the licensee and for short periods upon mutual agreement with the California Department of Fish and Game.

Article 63 issued February 16, 1984 is superseded by June 28, 1990 Order Approving Study and Amending Minimum Flow.

Article 64. Licensee shall consult and cooperate with the California Department of Fish and Game and the U.S. Fish and Wildlife Service in conducting studies to determine the minimum flow release needed at the Newcastle Development intake structure to ensure continued protection and enhancement of fishery and wildlife resources. Further, Licensee shall, within 1 year from the date of issuance of this order, file a report of its findings along with comments from the above-mentioned agencies, and for Commission approval, recommendations for minimum flow release from the development.

Added to license by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application.

Article 65. The Licensee shall, prior to commencement of any future 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.

Added to license by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application.

Article 66. The Licensee shall commence construction of the Newcastle Development within two years from the effective date of this order and shall thereafter in good faith and with due diligence prosecute such construction and shall complete construction of such project works within three years from the starting date of construction.

Added to license by February 16, 1984 Order Further Amending License and Denying Preliminary Permit Application.

Article 67. Licensee, after consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Game, shall develop a restoration plan for the Wise 2 development, which includes stabilization measures and a list of recommended plant species. The list of plant species shall include an indication of each species' wildlife food and habitat value. A copy of the plan and species list shall be filed with the Commission at the time of construction. The Commission reserves the right to require changes to the plan.

Added to license by August 12, 1985 Order Amending License.

Article 68. Licensee shall, after consultation with the California Department of Fish and Game (DFG), prepare and file with the Commission within 1 year of the date of this order, a plan to protect the riparian vegetation of Rock Creek. The plan shall also include a schedule for its implementation, comments from the DFG on the plan, and, if the Licensee does not concur with any DFG recommendations, a discussion of the reasons why the Licensee does not concur. The Commission reserves the right to require changes to the plan.

Added to license by August 12, 1985 Order Amending License.

Article 69. Licensee shall, prior to any construction, implement its plan to construct the Wise 2 powerhouse in a manner compatible with the historical character of the existing Wise powerhouse, as filed by letter with the Commission dated May 6, 1983. The plan shall adhere to the Secretary of the Interior's Standards for Historic Preservation Projects, and shall include procedures for operating and maintaining these facilities in a manner so as to minimize or avoid any impacts on the significant historical attributes of the existing Wise powerhouse.

Within two years of the date of this order, and prior to the implementation of the plan, Licensee shall file with the Commission a letter from the California State Historic Preservation Officer (SHPO) commenting on the final design specifications for constructing the Wise 2 Powerhouse, and on operating and maintaining the facilities, in accordance with the Secretary of the Interior's Standards. The plan must be implemented in a manner satisfactory to the SHPO. Unless the Director, Office of Hydropower Licensing, within 60 days from the filing date instructs otherwise, Licensee may commence ground disturbing activities and construction associated with the powerhouse and the implementation of the plan. Licensee shall make funds available 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 Licensee

shall consult with the SHPO to develop a mitigation plan for the protection of significant archeological or historical resources. If 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 Licensee to conduct, at its own expense, any such work found necessary.

Added to license by August 12, 1985 Order Amending License.

Article 70. The Licensee shall commence construction of the Wise 2 Powerhouse development within two years from the effective date of this amendment and shall thereafter in good faith and with due diligence prosecute such construction and shall complete construction of such project works within three years from the starting date of construction.

Added to license by August 12, 1985 Order Amending License.

Article 71. The Licensee shall provide the Commission's Regional Engineer in San Francisco, California, and the Director, Office of Hydropower Licensing, one copy each of the contract drawings and specifications for pertinent features of the project additions, such as water retention structures, powerhouse and water conveyance structures, 60 days prior to the start of construction. The Director, Office of Hydropower Licensing, may require changes in the plans and specifications to assure a safe and adequate project.

Added to license by August 12, 1985 Order Amending License.

Article 72. The Licensee shall submit in accordance with the Commission's Rules and Regulations revised Exhibit F drawings and a supporting design report showing the final design of major project works, and shall not begin construction of any major project structures until the Director, Office of Hydropower Licensing, has approved the Exhibit F drawings.

Added to license by August 12, 1985 Order Amending License.

Article 73. The Licensee shall within 90 days after completion of construction, file in accordance with the Commission's Rules and Regulations, revised Exhibits F and G, for approval, showing the project as-built.

Added to license by August 12, 1985 Order Amending License.

Article 401. Within 90 days of the date of issuance of this order the licensee shall file for approval a plan to monitor water temperature of the Bear River of the Drum-Spaulding Project.

The purpose of this monitoring is to ascertain the water temperature regime in the Bear River during the warmest period of the year and at the minimum required or seasonal low flow, as measured at the Highway 20 gage. This regime will be compared to the thermal criteria for rainbow trout and the release from the South Yuba Canal, to determine whether additional flow would be beneficial to the trout population.

The monitoring plan shall include a schedule for:

- (1) implementation of the plan;
- (2) consultation with the appropriate federal and state agencies concerning the results of the monitoring; and
- (3) filing the results, agency comments, and licensee's response to agency comments with the Commission.

The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service and the California Department of Fish and Game.

The licensee shall include with the plan documentation of agency consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon approval, the licensee shall implement the plan, including any changes required by the Commission.

Added to license by April 11, 1994 Order Amending License.

Article 402. The licensee shall modify the Upper Boardman Canal Diversion Dam by removing all exposed metal catwalks, railing and gate operating mechanism for the gate that conveys water through the Upper Boardman Canal. The Upper Boardman Canal 36-inch-diameter gate should be lowered and welded shut, and the gate outlet should be plugged with concrete. The 3-foot by 4-foot gate that controls flow into the Bear River, however, should remain operational; the gate should be lowered and locked. The purpose of the modification shall be for the structure to retain water with constant uncontrolled spill.

The modifications to the Upper Boardman Canal Diversion Dam and gates shall be coordinated with the Commission's San Francisco Regional Office (SFRO). The licensee shall, at least 60 days prior to start of abandonment works, submit one copy to the SFRO and two copies to the Director, Division of Dam Safety and Inspections, of the final contract drawings and specifications for approval.

Added to license by April 11, 1994 Order Amending License.

Article 403. Within 90 days of issuance of this order, the licensee shall consult with the California Department of Fish and Game (CDFG) and prepare a plan, for Commission approval, that provides for joint inspection with CDFG of the concrete-lined ditch sections of Upper Boardman Canal. The plan must include recommendations for partial or full removal or breakup of designated sections of the lined ditch to encourage faster degradation and growth of vegetation. The plan shall be implemented as approved. The Commission may require changes

to the plan to ensure adequate protection of the environmental, scenic, and cultural values of the project area.

Added to license by April 11, 1994 Order Amending License.

Article 404. During the initial year of canal abandonment, the licensee shall survey remaining canal sections for evidence of wildlife entrapment. The licensee shall conduct the survey on a monthly basis, and file with the Commission quarterly reports on its surveys. If the results of the surveys show that the canal is hazardous to the well being of area wildlife, the licensee shall modify those sections of the canal to eliminate the hazardous conditions.

Added to license by April 11, 1994 Order Amending License.

Article 405. Within 120 days of issuance of this order, the licensee shall file, for commission approval, a revision of its erosion control plan filed on November 7, 1990. The revised plan shall include any modifications deemed necessary due to changes to canal abandonment procedures resulting from compliance with article 403. The Commission may require changes to the plan to ensure adequate protection of the environmental, scenic, and cultural values of the project area.

Added to license by April 11, 1994 Order Amending License.