

COMM-OPINION-ORDER, 31 FERC ¶61,151, **South Fork Resources, Inc., Project No. 4885-003, Puget Sound Power & Light Co. and, Project No. 5681-000, City of Tacoma, Department of Public Utilities, Project No. 5683-000**, (May 06, 1985)

South Fork Resources, Inc., Project No. 4885-003, Puget Sound Power & Light Co. and, Project No. 5681-000, City of Tacoma, Department of Public Utilities, Project No. 5683-000

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**South Fork Resources, Inc., Project No. 4885-003
Puget Sound Power & Light Co. and, Project No. 5681-000
City of Tacoma, Department of Public Utilities, Project No. 5683-000**

Order Issuing Major License, Denying Competing Preliminary Permit Applications, Granting Motions to Intervene, Denying Motions for Coordination of Proceedings and for Hearing, and Granting Waiver

(Issued May 6, 1985)

Before Commissioners: Raymond J. O'Connor, Chairman; Georgiana Sheldon, A. G. Sousa, Oliver G. Richard III and Charles G. Stalon.

On July 13, 1982, South Fork Resources, Inc. (South Fork) filed an application for a license under Part I of the Federal Power Act (Act) to construct, operate, and maintain the proposed Twin Falls Project No. 4885. The project would be located on the South Fork Snoqualmie River in the Snohomish River Basin in King County, Washington, would occupy lands of the United States, and would affect the interests of interstate and foreign commerce. Previously, on November 24, 1981, Puget Sound Power & Light Company, and the City of Tacoma, Department of Public Utilities, had each filed separate applications for preliminary permit for the same site to study the feasibility of Project Nos. 5681 and 5683, respectively.

Public notice of the filing of the license application for Project No. 4885 was given on August 30, 1982, with November 5, 1982, as the last date for filing comments, protests or motions to intervene. Numerous letters of comment were filed by Federal and state agencies. Several motions to intervene were filed. The significant concerns raised by the interveners and the commenters are discussed below.

Motions to Intervene

The Weyerhaeuser Company, on November 1, 1982, filed a timely motion to intervene. The United States Department of the Interior (Interior), on May 10, 1984, filed a late motion to intervene which was subsequently granted on July 30, 1984. Late

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motions to intervene in this proceeding were also filed on February 24, 1983, jointly by the National Marine Fisheries Service (NMFS) and the Tulalip Tribes of Washington (Tribes); on August 17, 1983, by the Snoqualmie Tribe; and on June 17, 1983, jointly by the Washington State Department of Fisheries (WDF) and the Washington State Department of Game (WDG). In addition, on February 24, 1983, the NMFS and the Tribes filed a Joint Petition for Coordination of Proceedings, for Development of Data, and for Hearing and Motion for Suspension and Stay of Proceedings. And, on June 17, 1983, the WDF and WDG filed a joint Motion to Intervene and for Coordination of Proceedings, for Development of Data, and for Hearing.

The Department of the Interior, the National Marine Fisheries Service, the Tulalip Tribes of Washington, the

Washington State Department of Fisheries, and the Washington State Department of Game all initially expressed concerns about the cumulative impact of hydroelectric power in the Snohomish River Basin. The Snoqualmie Tribe expressed general basin-wide concerns over potential impacts upon existing cultural and religious activities and upon unknown archeological sites. The Weyerhaeuser Company indicated it owns a portion of the project area and uses large quantities of power generated in the area.

We will grant each late motion to intervene but deny the motions for coordination of proceedings. Each of the movants for intervention has either statutory responsibilities to enforce or treaty rights to protect. In the case of each motion to intervene, the movant has shown good cause for late intervention by demonstrating that it has an interest in these proceedings that is not adequately represented by other parties and that there were valid reasons why intervention had not been sought earlier. Furthermore, there will be no prejudice to other parties, nor will resolution of the proceeding be delayed or otherwise disrupted.

With respect to the motions for coordination of proceedings and for hearing, we explain below that this project will not contribute to an adverse cumulative environmental impact upon the Snohomish Basin. Accordingly, these motions will be denied with respect to this proceeding.

Waiver of Commission's Regulations

On April 2, 1984, and October 22, 1984, South Fork filed supplemental information to its license application. In those filings, South Fork advised the Commission in detail as to how it proposed to resolve various issues concerning the project that had been raised by numerous interested Federal and state agencies and Indian tribes. One of those proposals was to move the proposed powerhouse site 800 feet upstream to reduce the bypass reach and avoid the most sensitive part of the stream.

Under Section 4.35(a) of the Commission's regulations, [18 C.F.R. §4.35](#) (1984), if an applicant amends its filed license application to "materially amend the proposed plans of development," the Commission will change the date of acceptance of the application to the date of the amendment. Section 4.35(b) defines a "material" amendment as one proposing any "fundamental and significant change," including a change in the location of the powerhouse.

On January 11, 1985, South Fork filed a request for a waiver of Section 4.35 so that it may implement its proposal to move the powerhouse without having the date of acceptance of its application changed. We will grant the waiver. The proposal to move the powerhouse came as a result of consultation and negotiation with various agencies and Indian tribes for the sole purpose of improving the environmental and aesthetic aspects of the project. That being the case, we do not believe it would be equitable to penalize South Fork for its efforts to make these improvements and for cooperating with the agencies and tribes.

Competing Applications

The plans proposed in the preliminary permit applications and the plans proposed in the license application have been analyzed by the staff. The projects propose substantially the same development. Consistent with Section 4.33(f) of the Commission's regulations, [18 C.F.R. §4.33](#) (f) (1984), which states that the Commission will favor applications for licenses over applications for preliminary permits, this license is being issued to South Fork Resources, Inc., and the two pending preliminary permit applications will be denied.

Project Description and Operation

The proposed project would consist of a 6-foot-high diversion weir, a 200-foot-long intake channel, an intake structure, a 4,560-foot-long tunnel/penstock, a powerhouse containing two generating units each rated at 10.0 MW, a tailrace, a switchyard, a 2,300-foot-long transmission line, an access road to the diversion structure, an access road to the powerhouse, and appurtenant facilities, as more fully described in Ordering Paragraph (B) hereof.

The run-of-river project would have a hydraulic capacity of 610 cfs, and would

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generate an estimated 69.2 million kWh of energy annually. As discussed in more detail below, provision for minimum instream flow releases will be made.

Environmental Considerations

Impacts of Clustered Hydropower Development in the Basin

In the recently issued Weeks Falls Project No. 7563 license,¹ we discussed extensively the absence there of any potential for causing cumulative environmental impacts in the Snohomish River Basin. The Twin Falls project is located just a few miles from the Weeks Falls project and, like Weeks Falls, is upstream of Snoqualmie Falls, an impassable barrier preventing the migration of anadromous fish species. As in *Weeks Falls*, the applicant here has consulted extensively with the interested Federal and state agencies and the Tulalip Tribes in defining and addressing all the significant environmental issues associated with the development of the proposed project and defined and proposed appropriate measures to offset the potential adverse impact of erosion and stream sedimentation upon aquatic resources. Here, as in *Weeks Falls*, the record evidence demonstrates that the project will not contribute to any adverse cumulative environmental impacts, and all the parties and agencies who originally raised concerns about potential adverse cumulative impacts now agree that this project should be processed on an individual basis.²

The Snoqualmie Tribe, an intervener, has expressed general basin-wide concerns over potential impacts upon existing cultural and religious activities and upon unknown archeological sites, but has not documented the exact nature and substance of their concerns. The staff has found no reasonable risk of impacts upon the activities and resource values raised by the Snoqualmies, based upon the information available to the staff and taking into account the environmental safeguards stipulated in the license articles.

Agreement Between South Fork and the Tulalip Tribes

On October 22, 1984, South Fork filed with the Commission an agreement (characterized by the parties as a Memorandum of Understanding) reached by South Fork and the Tulalip Tribes with respect to Project No. 4885. The agreement provides that its terms must be included as conditions in the license. Those terms require South Fork to maintain certain minimum instream flows, to allow tribal staff to inspect the project site at any time before, during, and after construction, to pay the Tribes unspecified legal and professional fees to defray the cost of monitoring the project, and to develop and submit to the Tribes for review, under procedures similar to those specified in Article 33, a detailed construction and operation plan which is to include an erosion and sedimentation control plan embodying the recommendations of the Dunne study.³ The agreement further provides that if any dispute arises concerning the adequacy of the erosion and sedimentation control plan or other construction documents, such dispute must be resolved by unanimous agreement of the Tribes and affected agencies before construction can begin. Finally, construction cannot begin until South Fork receives the approval of the Tribes.

In the license for the Weeks Falls Project No. 7563 issued on April 25, 1985, we did not incorporate the provisions of the agreement as conditions of the license because, as we explained there, it was neither appropriate nor necessary specifically to approve the agreement and to include verbatim all its terms as specific conditions in the license. Here, as in *Weeks Falls*, the articles we have included in the license adequately address all of the subjects raised in the agreement. *See* Articles 33 through 38. Furthermore, the Commission's final authority with respect to the licensing conditions is not compromised.

Erosion, Slope Stability, and Sediment Control

Increased erosion and subsequent increases in sediment load in the river will occur due to excavation of soils and unconsolidated alluvial and glacial deposits during project construction and during spoil disposal. The

greatest increases in erosion will be expected during construction on steep slope segments of the access road alignments, at the diversion dam and intake sites, and at the powerhouse and on the slope immediately above the powerhouse. The greatest losses of sediment to the river will be at the diversion and intake sites and at the tailrace.

The impoundment will function as a trap to coarse sand and gravel sediment bedload in the river that would otherwise normally pass through the project reach. Oversteepened cut slopes will be subject to slumping or landsliding.

The WDF, WDG, Fish and Wildlife Service (FWS) of the Department of the Interior, and the Tribes recommend that South Fork consult with appropriate resource agencies and the Tribes and prepare a plan to minimize erosion and sedimentation during project construction and operation. The WDF emphasizes that the key to prevention of increased sediment from the project is sound erosion control, including: (1) good

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engineering; (2) careful design and stabilization of excavated slopes; (3) revegetation of disturbed sites; (4) careful construction and maintenance of access roads, particularly road drainage; (5) good design and frequent maintenance of sedimentation ponds, installed and maintained with a significant margin of safety; (6) appropriate flushing of the reservoir; and (7) implementation of a sediment control plan required by county ordinance.

South Fork proposes strict erosion and sediment control measures that would reduce the degree of erosion and loss of sediment to the river to minimal levels. Among these measures would be: siltation ponds to trap sediment at the project site during construction and at spoil disposal sites; proper grading of cut slopes, revegetation, and use of buttressing, retaining walls, drainage and other measures as would be necessary to stabilize slopes; and strict adherence to King County grading permit conditions that would encompass: steepness of cut slopes, location of tops and toes of cut slopes, erosion control, preparation of ground, fill material, drainage and sediment runoff control, design of benches and terraces, access road maintenance, and restoration of all areas disturbed by construction activities and spoil disposal. South Fork proposes to prepare a temporary erosion and sediment control plan following the King County guidelines and other guidelines established by concerned agencies and the Tribes. South Fork also agrees to a license condition that would require consultation with resource agencies and the Tribes in preparation of a detailed erosion, sediment, and slope stability control plan prior to any ground disturbing activity at the project.

Implementation of erosion, slope stability, and sediment control measures proposed by South Fork and the agencies, and adherence to the relevant agency guidelines during design, construction and operation of the project will ensure that erosion and sedimentation impacts at the project are reduced to insignificant levels. Article 33 requires the Licensee to solicit appropriate participation by the agencies and the Tribes in the preparation and implementation of a detailed erosion, slope stability, and sediment control plan for the project. The Article also requires appropriate agency consultation in designing and scheduling means to pass bedload sediment through the diversion dam.

Instream Flows and Habitat Enhancement

South Fork proposes to maintain the following minimum flows in the 1-mile-long bypassed reach of river: (a) 75 cubic feet per second (cfs) from August 1 through April 30; and (b) 150 cfs from May 1 through July 31. In conjunction with the proposed minimum flow schedule, South Fork proposes to enhance trout habitat in 1,500 feet of channelized river upstream of the project.

The WDG, the FWS, and the Tribes have agreed that the proposed minimum flows and the habitat enhancement plan will provide adequate protection for the fishery resources.

South Fork also proposes a 5-year study of the trout populations in the bypassed reach and in the reach proposed for habitat enhancement. South Fork, the WDG, and FWS, and the Tribes have agreed that,

following commencement of project operations, if the combined trout populations of the bypassed and enhancement reaches exceeds pre-project levels, a year round minimum flow of 75 cfs would provide adequate protection of the fishery resources in the bypassed reach.

The proposed minimum flow schedule is sufficient to protect aquatic resources in the bypassed reach. Although some fishery habitat will be lost in the bypassed reach as a result of reduced flows, the proposed off-site habitat enhancement will provide adequate compensation. The fishery study should provide the necessary information to determine whether or not the trout population in the South Fork Snoqualmie River is increased as a result of the boulder groupings in the upstream channelized reach of river.

If the habitat modifications enhance the trout population in the South Fork Snoqualmie River beyond pre-project levels, a final, year-round flow of 75 cfs may be justified. Article 35 requires the Licensee to discharge from the project diversion weir the following interim continuous minimum flows or the natural inflow, whichever is less: (a) 75 cfs from August 1 through April 30; and (b) 150 cfs from May 1 through July 31. Article 37 requires that the proposed habitat modifications and fishery study be implemented after consulting with the WDG, the FWS, and the Tribes. Article 37 also requires the Licensee to file with the Commission, the results of the fish study and recommendations for a long-term minimum flow schedule.

Fishery Resources

The FWS and the WDG recommend the following measures to protect the fishery resources of the South Fork Snoqualmie River: (a) installation of fish screens and a fish bypass system for the project intake to prevent the entrainment and subsequent mortality of fish; (b) installation of racks across the tailrace to prevent adult fish from entering the draft

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tube; and (c) determination of a ramping rate for project operations that would prevent stranding of fish.

In the Report of Fish, Wildlife, and Botanical Resources, South Fork proposes to install intake screens, a fish bypass system and racks across the tailrace, and to establish, following project start-up, a ramping rate after consultation with the agencies. Each of these mitigation measures, including an appropriate ramping rate, should be established in cooperation with the appropriate agencies. Article 36 requires the licensee to consult with the WDG, the FWS, and the Tribes and conduct studies to determine an appropriate ramping rate for the protection of fish resources. The results of the studies and recommendations for a ramping rate are to be filed for Commission approval within 6 months of commencement of project operations. Functional design drawings for the fish screens, bypass system, and the tailrace are not included in the report. Therefore, Article 38 requires the Licensee to file functional design drawings and as-built drawings with the Commission.

Wildlife Habitat

To compensate for the project-related loss of wildlife habitat on State of Washington (State) lands, South Fork proposes to assist the State in acquiring a 50-acre parcel of replacement land, located adjacent to the intake structure, from the Bureau of Land Management (BLM) of Interior. If the land purchase is not feasible, South Fork proposes to acquire land with comparable wildlife value to the State lands that would be affected by the project. The WDG concurs with the proposal.

As discussed in the Report on Fish, Wildlife, and Botanical Resources, South Fork proposes to revegetate disturbed areas in accordance with WDG guidelines. The proposed measures would help minimize impacts to wildlife, and are therefore approved herein and made part of the license. South Fork's proposal would adequately compensate the State for loss of wildlife productivity on State lands. Article 39 requires the Licensee to implement the proposed measures.

Visual Resources

The project facilities, including transmission line, road access, diversion structure, powerhouse, switchyard, and tailrace will have moderate visual impacts due in part to the sensitivity levels that viewers have for the visual resources in the area. Those facilities that might be seen from the highway, where sensitivity is high, will not deviate from the visual character of the highway, and will be glimpsed at more or less the speed of 55 miles per hour. The number of people who make personal contact with the area is low, and although the proposed changes would be evident, the impact resulting from low to moderate sensitivity will also be low to moderate. Reduction of flows to a minimum of 75 cfs will not be noticed from the highway and will only be noticed during a few months in the year by the few people who may hike into the area.

South Fork's mitigation of all visual impacts is adequate, in consideration of the existing sensitivity levels. Those impacts resulting from construction will be mitigated to the extent possible, including erosion control, restrictions on excessive use of equipment, scheduling of blasting and noisy equipment for mid-day, and regrading and revegetation after completion of construction.

The impacts of project operation will be mitigated by facility alignment and location, burying the entire penstock and pipeline, using natural colors and building materials, establishing a minimum flow of 75 cfs year round, selective vegetative removal and revegetation, and topographic, vegetative, and physical barrier screening where necessary.

The Washington State Department of Ecology (WDE) expressed concern over whether the minimum flows of 75 cfs proposed by South Fork would be adequate to maintain the interests of the Washington State Parks and Recreation Commission (WP&RC) to establish the Olallie State Park. The reason for the park would be the high visual quality of the river and falls in that area and the convenient location to the highway. If the park were established, sensitivity levels would be high and the visual impacts of the project would be significant. WDE states that after consultation with the WP&RC, the proposed minimum flow year round is adequate to meet the desired aesthetic and recreational values.

The WDG, the WDE, the WP&RC, and the King County Department of Planning and Community Development concur in the measures to mitigate the impacts on visual resources as proposed in South Fork's Report on Aesthetic Resources. The Report is approved herein and made a part of the license.

Cultural Resources

No known archeological or historic sites will be affected by the project. Article 40 requires the protection of archeological or historic sites in the event that such sites are

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discovered during construction, and in the event of any future construction at the project.

Recreational Resources

South Fork consulted with the appropriate resource agencies in formulating its plan for recreational development at and near the project. The agencies are generally supportive of the proposed plan, as it will enhance public use opportunities, utilizing the existing scenic natural resource values in the area. Therefore, the Report on Recreational Resources is approved herein and made a part of the license. Article 41 requires the Licensee to file a revised recreation drawing showing the modified configuration of project facilities associated with the upstream powerhouse location.

Although WP&RC was active in consultations involving the recreation plan,⁴ it has requested⁵ that all hydropower license actions affecting state park lands--such as Commission action on the Twin Falls Project--be held in abeyance until such time as the Northwest Power Planning Council (Council) has completed its study to identify and rank potential hydroelectric sites in the Pacific Northwest.⁶

Having reviewed WP&RC's request and the schedule for the Council's site-ranking study, we have

concluded that granting WP&RC's request would be inappropriate. First, although the study will examine recreational issues in addition to fish and wildlife issues, the results of the study will not be known until the summer of 1986. Second, and more importantly, WP&RC has not identified any recreational concerns we have not examined or which justify our holding up issuance of the license for over one year until the Council's site-ranking study is completed.

Other Environmental Concerns

Water quality certification, pursuant to Section 401 of the Clean Water Act, 33 U.S.C. §1341, was granted for the proposed project by WDE on April 1, 1983.

No Federally listed threatened or endangered species or critical habitat, or sites listed or eligible for listing on the *National Register of Historic Places* will be affected by the project.

Finding of No Significant Impact

Minor, short-term impacts related to project construction activities will include increased erosion, stream sedimentation and turbidity, noise, vehicular exhaust emissions, disturbances to local wildlife populations and aquatic resources, and disruption of local recreational activities. License Article 33 requires the Licensee to prepare a plan in consultation with the appropriate agencies and the Tribes to control erosion, dust, and slope stability, and to minimize sedimentation or other potential water pollutants, and to provide for the passage of sediment load through the diversion dam. Approximately 10 acres of coniferous forest vegetation providing significant wildlife habitat will be displaced by the proposed project facilities. License Article 39 ensures the acquisition of a 50-acre parcel of land, or an equivalent parcel, by the Licensee for mitigating project impacts on wildlife habitat.

Operation of the project will impact resident fish in the South Fork Snoqualmie River. License Article 35 requires the Licensee to discharge an interim continuous minimum flow to protect aquatic resources in the bypassed reach of river. Article 36 requires the licensee to consult with the WDG, the FWS and the Tribes and conduct studies to determine an appropriate ramping rate for the protection of fish resources. License Article 37 requires that the Licensee implement its proposed aquatic mitigation plan, including habitat enhancement measures and a planned fishery study, the results of which are to be filed, together with the comments of the appropriate resource agencies and the Tribes. License Article 38 requires the filing of functional design drawings for the planned fish screens, fish bypass system, and tailrace racks, together with the comments of the appropriate resource agencies and the Tribes. As-built drawings of these fish facilities will be filed after the completion of construction. Should any cultural resources be discovered during construction, Article 40 requires the Licensee to consult with the Washington State Historic Preservation Officer and to undertake any required survey and salvage work.

In accordance with the National Environmental Policy Act of 1969,⁷ an Environmental Assessment⁸ was prepared for the Twin Falls Project (FERC Project No. 4885). On the basis of the record, and Staff's independent environmental analysis, issuance of a license for the project, as conditioned herein, will not constitute a major Federal action significantly affecting the quality of the human environment.

Engineering Considerations

Safety and Adequacy

The Supporting Design Report submitted with the application for license is preliminary. The design of the proposed project works is preliminary and conceptual in nature. License Article 42 requires the Licensee to submit final

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exhibit drawings and a final Supporting Design Report for approval prior to the start of construction. The

proposed project structures would be safe and adequate if constructed in accordance with sound engineering practices and the articles of the license.

Economic Feasibility

The project will generate an estimated 69,248,000 kWh of energy annually.⁹ The project is economically feasible based on the price set forth in the power sales contract with Puget Sound Power & Light Company (Puget) filed November 1, 1984.

Comprehensive Development

Need for the Project

On April 25, 1985, we licensed the Weeks Falls Project No. 7563. Weeks Falls is located within a few miles of Twin Falls on the South Fork Snoqualmie River. In that licensing order we discussed in detail the issue of the need for power. There we found that there was a need for power because Puget Sound Power & Light Company had agreed to buy the power from Weeks Falls, because Puget Sound would use the power to satisfy its local distribution load in the surrounding area thereby reducing its power flows out to this area which is on the fringe of its distribution system, and because the Weeks Falls power would be immediately available to off-load existing fossil-fuel steamelectric plants in the Pacific Northwest, thereby conserving nonrenewable resources and reducing the emission of noxious byproducts of combustion to the atmosphere.

In the Twin Falls application before us here, the situation is analogous. Puget Sound has agreed to buy the Twin Falls power. The project is located very close to Weeks Falls, and the power would be immediately available for the same purposes. Accordingly, we find that there is a need for the power to be generated at Twin Falls.

Other Aspects of Comprehensive Development

Taking all aspects of the project into consideration, the project will make good use of the flow and fall of the South Fork of the Snoqualmie River, is not in conflict with any existing or planned development, and will be best adapted to the comprehensive development of the basin upon compliance with the terms and conditions of the license.

The Commission orders:

(A)(1) This license is issued to South Fork Resources, Inc. (Licensee) of Snoqualmie Pass, Washington, under Part I of the Federal Power Act (Act), for a term of 50 years, effective the first day of the month in which this order is issued, for the construction, operation and maintenance of the Twin Falls Hydroelectric Project No. 4885 to be located in King County, Washington, on the South Fork Snoqualmie River, occupying lands of the United States and subject to the terms and conditions of the Act which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the Act.

(2) In light of the Commission's determination, discussed in the text of this order, that the project will not cause any adverse cumulative environmental impacts, the Twin Falls Project No. 4885 shall not be included in, or subject to, the Cluster Impact Assessment Procedure (CIAP) to be conducted by the Commission staff with respect to the Snohomish River Basin.

(B) The Twin Falls Hydroelectric Project No. 4885 consists of:

(1) All lands, to the extent of the Licensee's interest in those lands, constituting the project area and enclosed by the project boundary. The project area and boundary are shown and described by a certain exhibit that forms part of the application for license and that is designated and described as:

Exhibit FERC Drawing No. Showing
G-1 4885-11 Project Boundary Map

(2) Project works consisting of: (a) a 6-foot-high, 150-foot-long reinforced-concrete diversion weir with crest elevation 1,082 feet m.s.l.; (b) a 200-foot-long, 20-foot-deep, concrete-lined, trapezoidal-section intake channel; (c) a 30-foot-high, 90-foot-long, 20-foot-wide, reinforced-concrete, gated intake structure with trash racks and fish screens; (d) a 4,559-foot-long conduit comprising: (i) a 284-foot-long, 8-foot-diameter vertical shaft; (ii) a 2,500-foot-long, 10-foot-horseshoe tunnel; (iii) a 1,700-foot-long, 8-foot-diameter, lined tunnel; and (iv) a 75-foot-long, 8-foot-diameter, buried steel penstock; (e) a 45-foot-wide, 80-foot-long, reinforced-concrete powerhouse containing two generating units each rated at 10.0 MW operated under a 435-foot head and at a flow of 305 cfs; (f) a concrete-lined tailrace having normal water surface elevation 630 feet m.s.l.; (g) the 125-foot-long 13.8-kV generator leads, and the 13.8/115-kV, 12/16/20/22.4 MVA transformer; (h) a 2,300-foot-long, double circuit, H-frame 115-kV overhead transmission line; (i) an access road to the intake structure and an access road to the powerhouse; and (j) appurtenant facilities.

The location, nature and character of these project works are generally shown and described in the exhibit cited above and more

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specifically shown and described by certain other exhibits that also form a part of the application for license and that are designated and described as:

Exhibit A--Entitled Project Description, section 3 (page A-4) and section 5 (page A-5), filed January 11, 1985.

Exhibit	FERC Drawing No.	Showing
F-1	4885-12	General Plan
F-1A	4885-13	General Plan
F-2	4885-14	Diversion Intake
F-3	4885-15	Tunnel Profile & Sections
F-4	4885-16	Powerhouse Plan
F-5	4885-17	Powerhouse Sections & Elevations
F-6	4885-18	Substation
F-7	4885-19	Single Line Diagram

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

(C) Exhibits, A, F, and G, designated in Ordering Paragraph (B) above, are approved and made a part of the license only to the extent that they show the general location and nature of the project works.

(D) Within 90 days of the date of issuance of this order, the Licensee shall file originals of each approved Exhibit drawing reproduced on silver or gelatin 35 mm microfilm mounted on Type D (3 1/4" x 7 3/8") aperture cards. In addition the Licensee shall file two Diazo-type duplicate aperture cards. The original set and one duplicate set of aperture cards should be filed with the Secretary of the Commission. The remaining

duplicate set of aperture cards should be provided to the Commission's San Francisco Regional Office. The FERC drawing numbers should be shown in the margin below the title block of microfilmed drawings, and also in the upper right corner of each appropriate aperture card.

(E) The Reports of Recreational Resources (pages E-52 to E-66), and Aesthetic Resources (pages E-76 to E-82) of the Environmental Report, Exhibit E, filed on July 13, 1982, are approved and made a part of the license, except as modified by any license articles contained herein.

(F) Proposed measures to revegetate disturbed areas, contained in the Report on Fish, Wildlife, and Botanical Resources (page E-34), filed on July 13, 1982, are approved and made a part of the license, except as modified by any license articles contained herein.

(G) This license is also subject to the terms and conditions set forth in Form L-2 (revised October, 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Lands of the United States", attached to (reported at 54 FPC 1808) and made a part of this license. The license is also subject to the following additional articles:

Article 33. Licensee shall, after consultation with the Washington State Department of Ecology, the Washington State Department of Fisheries, the Washington State Department of Game, the Washington State Department of Transportation, the Washington State Parks and Recreation Commission, the King County, Washington, Department of Planning and Community Development, the U.S. Fish and Wildlife Service, and the Tulalip Tribes of Washington, prepare a plan to control erosion, dust, and slope stability, and to minimize the quantity of sediment or other potential water pollutants resulting from construction and operation of the project. The plan shall address, among other things, vegetation, design and location of sedimentation ponds, grading of slopes, control of surface drainage, temporary stockpiling of topsoil, storage and disposal of excess excavation and slide materials, and any construction or upgrading of access roads, including construction access. The plan shall also include a subplan for the passage of sediment through the dam. The subplan shall address, among other things: functional design drawings of measures that would allow passage of sediment, an implementation schedule that provides for normal sediment passage periods defined to minimize adverse impacts on fish spawning and rearing, and provisions for cooperation with, and notification of, the entities listed above prior to sediment passage operations. The control plan shall also include: provisions for identifying and mapping of erosive soils and potentially unstable slopes; functional design drawings and map locations or control measures; an implementation schedule for the provisions not related to the subplan; monitoring and maintenance programs for project construction and operation; provisions for periodic review of the plan and for making any necessary revisions to the plan;

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provisions for submitting to the Director, Office of Hydropower Licensing, the Commission's Regional Engineer, and to the entities listed above, periodic reports on the progress of all investigations, implementation, monitoring, and maintenance accomplished under the plan during the period, and of work contemplated under the plan for the ensuing period; and documentation of consultation with the above entities during preparation of the plan.

Within one year from the date of issuance of this license and at least 90 days prior to any ground disturbing activity or soil disposal at the project, the Licensee shall submit copies of the plan to the entities listed above for review, comment and objection. If any such entity does not provide the Licensee with written comments or objections within 30 days from its receipt of the plan, the Licensee shall make a written request to such entity to confirm, within 10 days of its receipt of such request, that it has no objection to the plan. At the expiration of such 10 day period, the Licensee shall file the plan with the Commission along with any written comments and objections from the entities listed above and any comments it has on such comments and objections. The Licensee shall thereafter comply fully with the plan as filed with the Commission; provided, however, that the Commission reserves the right to direct changes in the plan.

Article 34. Licensee shall allow representatives of the Tulalip Tribes of Washington to inspect the project

site at any reasonable time before and during construction and operation of the Twin Falls Project. Licensee shall also maintain and make available to the Tulalip Tribes of Washington a record of project operations, including daily amount of diversion, daily record of flows over the diversion, and rate of change of both diverted flows and bypassed flows. In addition, the Licensee shall document all unusual occurrences such as load rejections, bring such events to the immediate attention of the Tulalip Tribes of Washington, and make such documentation available to such entity.

Article 35. Licensee shall discharge from the Twin Falls Project diversion weir the following interim continuous minimum flows, or the inflow to the project, whichever is less, for the protection of aquatic resources in the South Fork Snoqualmie River: (a) 75 cubic feet per second (cfs) from August 1 through April 30; and (b) 150 cfs from May 1 through July 31. The interim minimum flows may be temporarily modified if required by operating emergencies beyond the control of the Licensee and for short periods upon mutual agreement among the Licensee, the Washington Department of Game, and the Tulalip Tribes of Washington.

Article 36. Licensee shall, after consultation with the Washington State Department of Game, the Tulalip Tribes of Washington, and the U.S. Fish and Wildlife Service, conduct studies to determine a ramping rate needed at the Twin Falls Project to ensure protection of downstream fish resources. Further, Licensee shall, within 6 months of commencement of project operations, complete the study and file with the Commission a report on the results of the study, and for approval, recommendations for a ramping rate. Comments on the results of the study from the entities listed above shall be included in the filing.

Article 37. Licensee shall, after consultation with the Tulalip Tribes of Washington, the Washington Department of Game, and the U.S. Fish and Wildlife Service, implement the habitat enhancement and fishery study described in the report entitled "Aquatic Mitigation Plan, May 15, 1984, by Phillip J. Hilgert." Within 6 months of the date of issuance of this license, Licensee shall file a schedule for implementing the plan and for filing the results of the study, and recommendations, for Commission approval, for a long-term minimum flow. Comments from the above agencies shall be included in the filing.

Article 38. Licensee shall, after consultation with the Washington Department of Game, the Tulalip Tribes of Washington, and the U.S. Fish and Wildlife Service, and within 6 months from the date of issuance of this license, file for Commission approval functional design drawings and a construction schedule for fish screens and a fish bypass system for the intake, and racks for the tailrace of the Twin Falls Project. Agency comments on the proposed designs and construction schedule shall be included in the filing. The Commission reserves the right to require changes in the design or schedule. Licensee shall construct the facilities as scheduled. Within 6 months after completion of construction of these facilities or any improvements thereto, Licensee shall file as-built drawings with the Commission.

Article 39. Licensee shall, within 1 year from the date of issuance of this license, either: (1) provide evidence that the 50-acre parcel of Bureau of Land Management land located adjacent to the intake structure has been transferred to the State of Washington; or (2) after consultation with the Washington Department of Game (WDG), identify and

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acquire alternative land in sufficient quantity and quality to mitigate the loss of wildlife habitat on State lands. Comments from the WDG on the adequacy of the alternative lands shall be included in the filing.

Article 40. Licensee shall, prior to any future construction at the project, consult with the Washington State Historic Preservation Officer (SHPO) about the need for cultural resources survey and salvage work. Documentation of the nature and extent of consultation, including a cultural resources management plan and a schedule to conduct any necessary investigation prior to such construction, and a copy of a letter from the SHPO accepting the plan, shall be filed with the Commission within 6 months of any construction activity in the location of such investigations. 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 Licensee shall consult with the SHPO to develop a mitigative 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.

Article 41. Licensee shall file for Commission approval, within 90 days from the date of issuance of this license, a revised recreation drawing, Exhibit E-7.10 (FERC No. 4885-003), labeled "Twin Falls Recreation Plan," to show the modified configuration of project facilities associated with the upstream powerhouse location. The filing shall include an original drawing reproduced on silver or gelatin 35 mm microfilm mounted on a type D (3 1/4" x 7 3/8") aperture card. In addition, the Licensee shall file two Diazo type duplicate aperture cards. The original card and one duplicate aperture card should be filed with the Secretary of the Commission. The remaining duplicate card shall be provided to the Commission's San Francisco Regional Office. The FERC drawing number shall be shown in the margin below the title block of the microfilmed drawing, and also in the upper right corner of each aperture card.

Article 42. The Licensee shall file with the Commission revised Exhibit F drawings showing the final design of project structures for approval of the Director, Office of Hydropower Licensing. The revised Exhibit F drawings shall be accompanied by a supporting design report and the Licensee shall not commence construction of any project structure until the corresponding revised Exhibit F drawing has been approved.

Article 43. The Licensee shall provide the Commission's Regional Engineer (one copy) and the Director, Division of Inspections (two copies) with the final 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, Division of Inspections, may require changes in the plans and specifications to assure a safe and adequate project.

Article 44. The Licensee shall review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction and shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the Licensee shall provide the Commission's Regional Engineer and the Director, Division of Inspections, one copy each of the approved cofferdam construction drawings and specifications and a copy of the letter(s) of approval.

Article 45. The Licensee shall commence construction of project works within two years from the issuance date of the license and shall complete construction of the project within four years from the issuance date of the license.

Article 46. Licensee shall within 90 days of completion of construction file with the Commission for approval by the Director, Office of Hydropower Licensing, revised Exhibits A, F, and G to describe and show the project as-built.

Article 47. The Licensee shall pay the United States the following annual charge effective the first day of the month in which this order is issued:

(i) For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable annual charge as determined by the Commission in accordance with the provisions of its regulations in effect from time to time. The authorized installed capacity for that purpose is 26,700 horsepower.

(ii) For the purpose of recompensing the United States for the use, occupancy, and enjoyment of 3.24 acres of its land, an amount determined pursuant

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to the Commission's regulations in effect from time to time.

Article 48. 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 at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts 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 annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost for each component of the reasonable rate of return is the product of its capital ratio and cost rate. The annual capital ratio for each component of the rate of return shall be calculated 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 long-term debt and preferred stock shall be their respective weighted average costs 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).

Article 49. (a) In accordance with the provisions of this article, the Licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission approval. The Licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the Licensee shall also have continuing responsibility to supervise and control the uses and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with, the covenants of the instrument of conveyance for any interests that it has conveyed under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the Licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the Licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the Licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) noncommercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 water-craft at a time and where said facility is intended to serve single-family-type dwellings; 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

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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 modification 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 Hydropower Licensing, 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 paragraph (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

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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.

(H) South Fork's request for a waiver of Section 4.35 of our Regulations, [18 C.F.R. §4.35](#) (1984), is granted.

(I) The motions to intervene jointly filed in this proceeding on February 24, 1983, by the National Marine Fisheries Service and the Tulalip Tribes of Washington; on August 17, 1983, by the Snoqualmie Tribe; and on June 17, 1983, jointly by the Washington State Department of Fisheries and the Washington State Department of Game, are granted, subject to the Commission's rules and regulations under the Federal Power Act. Participation of the interveners shall be limited to matters set forth in their motions to intervene. The admission of the interveners shall not be construed as recognition by the Commission that they might be aggrieved by any order entered in this proceeding. Furthermore, intervention is subject to the provisions of Section 385.214(d)(2) and (3) of the Commission's regulations, [18 C.F.R. §385.214](#) (d)(2) and (3) (1984).

(J) The Joint Petition for Coordination of Proceedings, for Development of Data, and for Hearing and Motion for Suspension and Stay of Proceedings filed in this proceeding on February 24, 1983, by the National Marine Fisheries Service and the Tulalip Tribes of Washington and the joint Motion to Intervene and For Coordination of Proceedings, For Development of Data, and for Hearing filed in this proceeding on June 17, 1983, by the Washington State Department of Fisheries and the Washington State Department of Game are denied.

(K) Puget Sound Power & Light Co.'s application for preliminary permit for the Twin Falls Project No. 5681 filed on November 24, 1981, is denied.

(L) The City of Tacoma, Department of Public Utilities' application for preliminary permit for the Twin Falls Project No. 5683 filed on November 24, 1981, is denied.

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

-- Footnotes --

¹ *South Fork II, Inc.*, [31 FERC ¶61,097](#) (April 25, 1985).

² The Commission, in *Weeks Falls*, indicated that it would consider proceeding with license approval on a

case-by-case basis rather than waiting to act pursuant to the results of the Cluster Impact Assessment Procedure (CIAP) whenever these criteria are met.

³ T. Dunne, Effects of the Twin Falls and Weeks Falls Projects on Sedimentation along the Snoqualmie River System, filed October 22, 1984.

⁴ WP&RC has erred in asserting in its April 18, 1985, filing that its comments and recommendations during the agency review period were not filed with the Commission. South Fork did file these comments and recommendations. See South Fork's Revised Application for License, filed July 13, 1982, Exhibits E-7.13 through E-7.21.

⁵ See letter dated January 19, 1984, from WP&RC to King County Building and Land Development Division, filed with the Commission on April 2, 1984, as Attachment 4 to letter to the Commission from South Fork; WP&RC's letter filed with the Commission on April 18, 1985.

⁶ The site-ranking study is being prepared by the Council pursuant to Section 14.2 of the Northwest Conservation and Electric Power Plan, which itself was prepared pursuant to Section 4(d) of the Pacific Northwest Electric Power Planning and Conservation Act, 16 U.S.C. §839 b, *et seq.*

⁷ 42 U.S.C. §4332 (1982).

⁸ Environmental Assessment, Twin Falls Project, FERC Project No. 4885--Washington, January 31, 1985, prepared by the Division of Environmental Analysis, Office of Hydropower Licensing, Federal Energy Regulatory Commission. This document is available in the Division of Public Information and in the Commission's public file associated with this proceeding.

⁹ The estimated generation is equivalent to the electric energy that could be produced from 32,062 tons of coal or 113,705 barrels of oil annually.