

Yale Hydroelectric Project
FERC Project No. 2071

Exhibit C - Construction History

PacifiCorp
Portland, Oregon
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1.0 INTRODUCTION

PacifiCorp owns and operates the Yale Hydroelectric Project (FERC Project No. 2071). The initial license was issued on April 30, 1951 and expires on April 30, 2001. PacifiCorp seeks a new license for the project. This application for new license is submitted in 3 volumes which contain the following:

Volume I	Initial Statement and Exhibits A, B, C, D, F, G, and H.
Volume II	Exhibit E
Volume III	Appendices to Exhibit E

Exhibit C contains a brief history of project construction, including both initial construction and major modifications. The information contained in this exhibit is organized into several sections and generally follows the list of information required in 18 CFR, Section 4.51(d).

2.0 CONSTRUCTION HISTORY

The Yale Project construction began on March 1, 1951 and was completed in 1953. Commercial operation of Unit No.1 began on September 5, 1953 and Unit No. 2 on November 16, 1953. Included in original construction was the construction of the main and saddle dams, diversion tunnel, intake structure, penstocks, powerhouse, spillway, and the Merwin-Yale transmission line (Table 2.0-1).

Since original construction, significant improvements have been made to project facilities. Improvements include replacement or upgrades of several features listed in Table 2.0-2. In 1998, a new concrete bridge was built over the spillway to provide improved access to the powerhouse. No other major structural changes have occurred since original construction.

3.0 PROPOSED CHANGES TO PROJECT FACILITIES

PacifiCorp has studied the feasibility of upgrading the existing project auxiliary equipment and systems to improve plant reliability, operation, and safety. No additional changes to major project facilities are currently being considered.

Table 2.0-1. Chronology of progress of construction.

Item	Date
Preliminary Development Begun	January 1, 1914
Preliminary Permit Applied For	November 24, 1928
Preliminary Permit Issued	August 15, 1929 *
Water Use Permit Obtained From State	June 25, 1929
Reservoir Permit Obtained From State	June 25, 1929
Extension of Time Allowed for Construction by State	August 5, 1947
FPC License Applied For	January 19, 1951
Authorization of Construction Issued by FPC	February 27, 1951
Construction Started	March 1, 1951
Construction of Transmission Line Started	March 10, 1951
License Accepted	March 20, 1951
Excavation Started	April 26, 1951
Amendments to License Accepted by Licensee	May 12, 1951
Driving of Diversion Tunnel Started	May 19, 1951
First Concrete Placed	May 26, 1951
Diversion Tunnel "Holed Through"	August 8, 1951
Project Concrete Plant Commenced Operation	August 8, 1951
First Embankment Placed For Main Dam	August 17, 1951
Transmission Line Energized	September 10, 1951
Cofferdam Closed and River Diverted	September 16, 1951
Power Tunnel Excavation Started - Lower Heading	September 29, 1951
First Concrete Placed For Arch Toe Wall	October 20, 1951
First Concrete Placed For Powerhouse	November 3, 1951
First Concrete Placed For Spillway	February 26, 1952
Power Tunnel Driving Completed	June 14, 1952
First Speed Ring Set	June 16, 1952
Diversion Tunnel Closed, Ponding Started	August 1, 1952
First Unit Started Up	November 1, 1952
Power Tunnel Repair Work Started	January 15, 1953
First Unit in Commercial Operation	September 5, 1953
Second Unit in Commercial Operation	November 16, 1953
* Preliminary permit issued for a 2-year period beginning August 15, 1929. Application for license made August 17, 1929, for development of the Ariel and Yale sites. On October 16, 1929, the Federal Power Commission issued a license for Ariel site only. Certain additional investigations were made at the Yale site during the interim period, and the Company applied for a license January 19, 1951.	

Table 2.0-2. Major capital additions to the Yale Project.

Activity	Dates
Plant Automation - Remote Control and Monitoring	1980
Microwave Communication System	1980
Spillway Gate Seal and Lifting Chain Replacement	1980
Unit No. 2 Generator Rewind	1986
Unit No. 1 Generator Rewind	1987
Frazier Valley Wildlife Enhancements - Pond Construction	1987
Auto Synchronizer Upgrade	1992
Generator Breakers	1992
Unit No. 2 Generator Winding Modification	1993
Yale Village Housing Improvements	1994
Gantry Crane Upgrade	1994/95
Unit No. 2 Runner Replacement and Overhaul	1995
Microwave Communication System Upgrade	1995
Emergency Generator Replacement at Spillway	1995
Unit No. 2 Static Excitation	1995
Unit No. 1 Runner Replacement and Overhaul	1996
Unit No. 1 Static Excitation	1996
Water and Septic Improvements at Powerhouse	1996/97
Generator Transformer Cooling System Upgrade	1997/98
Construction of New Bridge over Spillway	1998