

# Boundary Unit 53 Emergency Rewind



## Unit 53 Scope of Work

### Seattle City Light Work

- Rotor Removal and Generator Disassembly
- Turbine Disassembly & Removal
- Stationary Turbine Parts
- Wicket Gates
- Turbine Reassembly
- Set Generator Rotor and Align Machine and Core

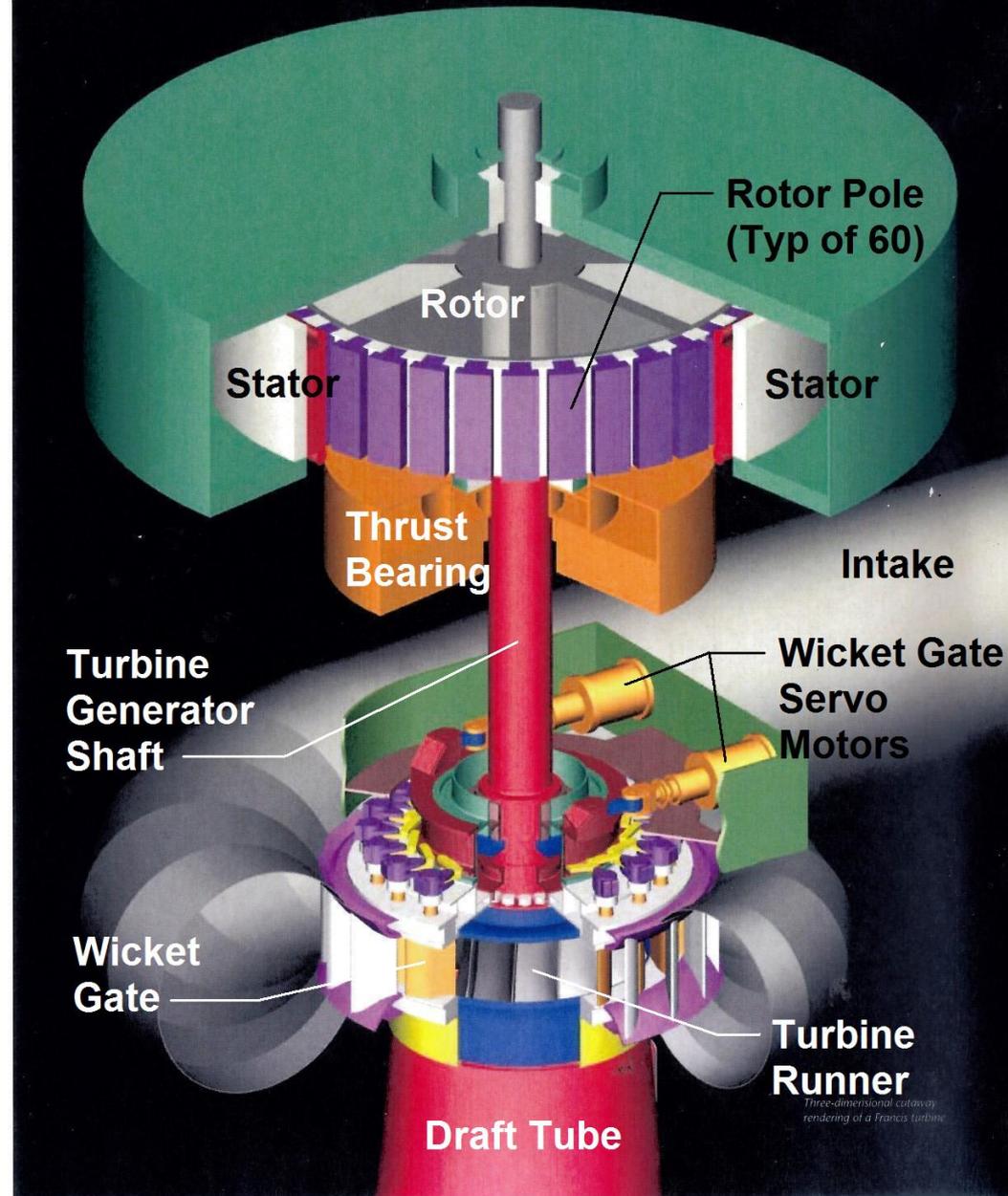
### Alstom Work

- Remove Old Stator Winding/Core
- Install New Stator Core (Stacking Steel Plates)
- Install New Stator Windings and Make Connections
- Assemble Rotor and Make Connections

### Joint

- Condition Monitoring of Systems
- Commissioning and Testing

## GENERATOR



**Generator Disassembly: Combined work where SCL performs general disassembly but Alstom removes the stator core/windings. Alstom would perform Main and Neutral lead removal as shown here.**



**Turbine Disassembly (SCL Work): Turbine shaft shown. Workers are removing the last of work deck supports—one of the workers is standing on the Wicket gate shift ring regulator**



# Turbine Disassembly (SCL Work): Placing Runner on floor of Powerhouse



## Seal Rings (SCL Work)

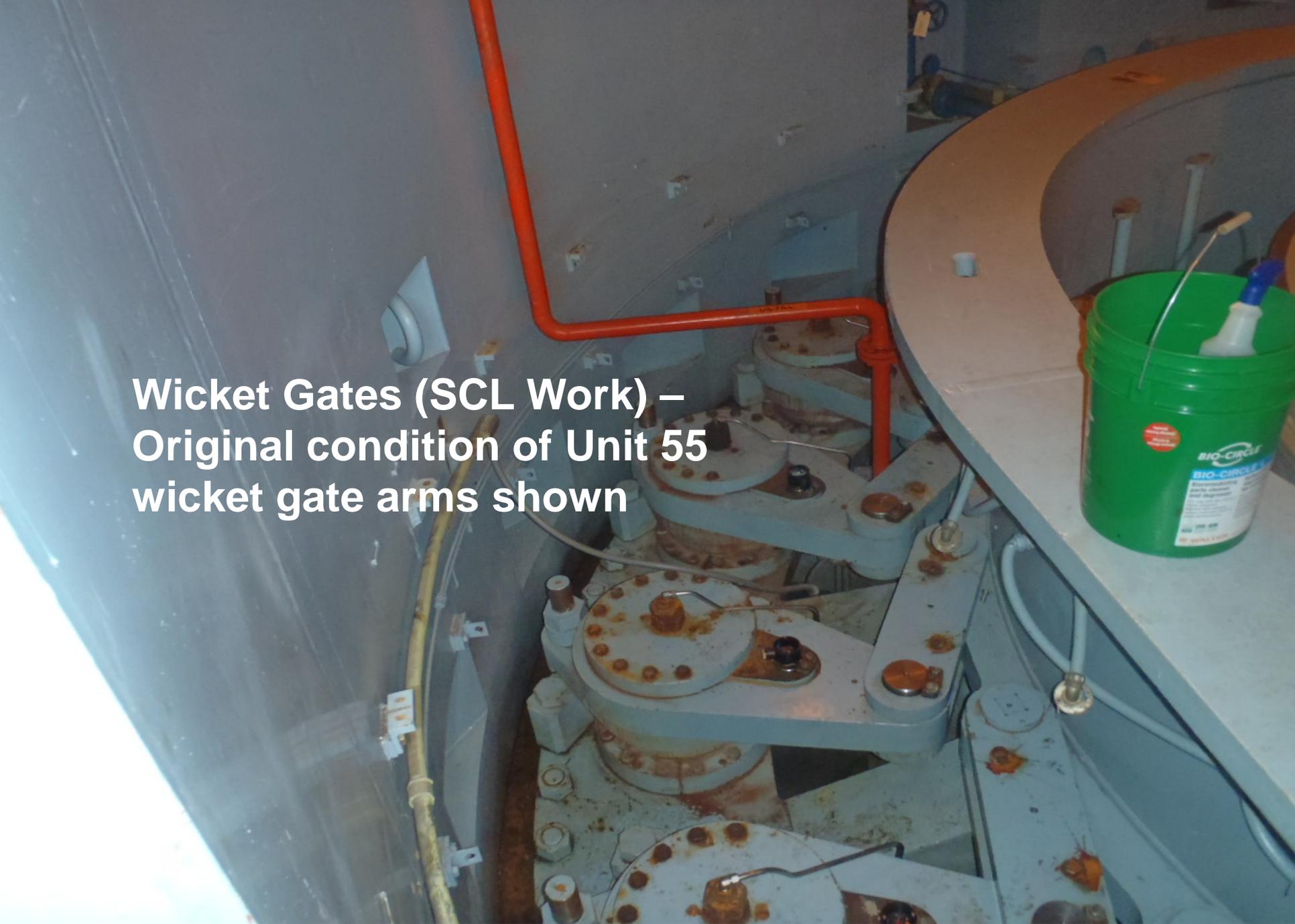
Lower Runner seal ring being drilled for attachment



Upper Runner seal ring being installed, checking fit



**Wicket Gates (SCL Work) –  
Original condition of Unit 55  
wicket gate arms shown**





**Rotor Assembly - Individual Rotor Poles will be placed around the perimeter of the Assembly**



**Inside the Stator looking at old laminations – Removal by Alstom**

**Alstom work – Stacking of  
new Stator Laminations  
(core steel)**



# **Status of Contract with Alstom**

## **Contract Value:**

\$10,740,000 (pre-tax)

## **Total Liability:**

Parties agreed to balanced language with no consequential damages

## **Remedies:**

Liquidated Damages: \$15K/day after 10-day grace to 10% cap.

Warranty: 3 Years

## Other Alstom/SCL Coordination

- Options for some ancillary work from Alstom
- Pre-construction meeting held Thursday, September 19<sup>th</sup> at Boundary
- Contract terms completed November 7; Alstom began site work on November 12
- Alstom submitted a robust (Environmental, Health, Safety) EHS plan – very important to SCL

# Status of Field Work

- All contract field work completed on April 28<sup>th</sup> following successful core loop test
- Unit watered up on May 19<sup>th</sup>
- Commissioning tests, WECC tests and governor tuning completed on May 23<sup>rd</sup>
- Total outage duration just less than 13-months