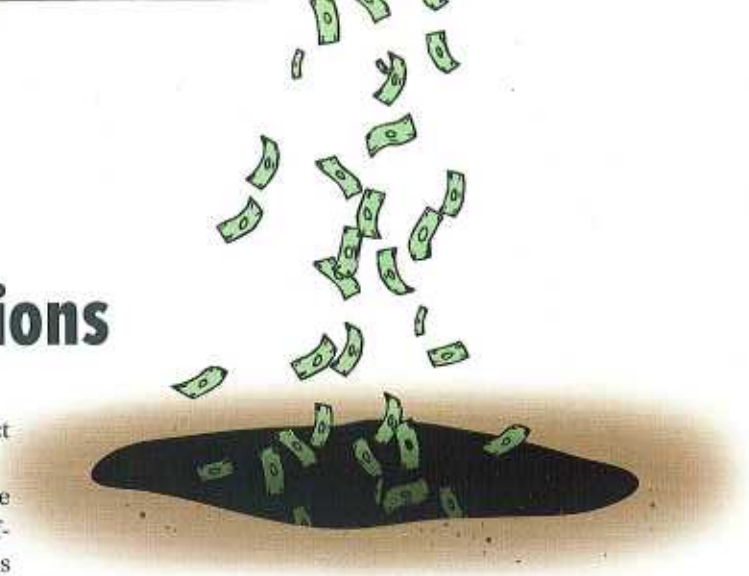
by Tonia Jurbin

Changed conditions



What's going on at the Seymour-Capilano Filtration Project (SCFP)?

I've been following the Seymour-Cap epic and most of the associated projects for seven years. I've published some half-dozen articles, attended two moving St. Barbara celebrations and have a genuine fondness for the project.

St. Barbara—the patron saint of those who work underground or with explosives—is commonly celebrated in Europe. Bilfinger Berger (BB), a European contractor, built a modest shrine in her honour at the bottom of the shaft and celebrated her day annually.

It's an interesting project. Explosive compaction was used downstream of an operating dam, the capacity of the Seymour UV disinfection plant is the largest in the world, the filtration capacity the largest in Canada, green-roof technology is planned for the filtration plant and clear wells and the twin tunnels are the largest civil tunneling project in B.C. in decades.

The $600-million undertaking includes a pumping station (one of Canada's largest) and energy-recovery plant at Capilano with twin, 7.1-km., 3.8-m. dia. tunnels that will eventually carry untreated water from the Capilano reservoir to be treated at Seymour and then returned. Over and above the $600 million, three dams that hold back Metro Vancouver's (MV) water supply have undergone major upgrades.

So why has Seymour-Cap been shut down?

In a nutshell, the wheels that pushed this project started turning in 1984 when the City of Vancouver determined that the Canadian drinking-water standards were not consistently being met in its water supply. The pH level was often low, non-pathogenic bacteria were present and the turbidity was often higher than the standards.

In 2003, three of eight pre-qualified contractors bid on the tunnels. BB was the winning bid at $99 million, the next-higher bid was $186 million and the highest was $237 million. BB wanted to enter the North American market, it liked the terms of the contract, and—I remember this well—it liked the dispute-resolution mechanism, so they bid aggressively. The engineer's estimate wasn't divulged.

The tunnels were to be bored over four years, starting and finishing in the fall of 2004 and 2008 respectively. Difficulties with sinking the 640-m. entry shaft put BB behind schedule from the get-go, but during my visit in late 2006, they were still confident they'd make the deadline.

Fast-forward to January 2008, 4.1 km. into the raw-water tunnel and 3.8 km. into the treated tunnel—and it's over!

BB claimed that rock conditions were causing safety issues. MV's consultants issued a plan to address these concerns, but BB rejected it, countering with a "pay as you go" option. In response, MV terminated their right to work.

Today some $38-million worth of equipment is sitting idle; MV has seized one of the tunnel-boring machines under the terms of the contract (the other is leased); and BB is suing MV for $22 million.

How will the work proceed? Submissions for "Expressions of Interest and Statement of Qualifications" closed in August. MV hopes to pre-qualify three contractors. Déjà vu. Since the job is about half done and the original duration was four years, I suppose it would be fair to allow two more years—but I doubt the bids to complete the work will be anywhere near $99 million in this market.

Meanwhile an interim contractor has 30 workers maintaining the pumps so that the tunnel doesn't flood and destroy the electrical components of all the gear that may not see the light of day for years to come. It will be many more years before MV or BB is vindicated.

Ironically, MV has started a campaign to get people off bottled water and the City of Vancouver is talking about an outright ban. In fairness, the filtration plant is on schedule and filtered water from the Seymour reservoir will be available for wider distribution during periods of high turbidity.

With a dispute-resolution that was attractive to the contractor, you have to ask how this could have been avoided.

Two years ago, someone involved in the project noted that "changed geology is normal; the difficulty is who pays for it."

I would counter that with the most profound pearl of wisdom I've ever heard in my years of business writing: "there's no such thing as changed conditions—only what we choose to find out about the existing conditions."

Sadly, the most valuable lesson to come out of this won't be about tunneling and it might even be something we already know—you get what you pay for.◆

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