

# Quinsam Coal's Watershed History



*Can Vancouver Island learn from its coal mining past?*

*by Quentin Dodd*

There is a saying along the lines that those who do not learn from history and past mistakes are destined to repeat them.

A strong parallel to the proposed Comox Joint Venture (under the Compliance Energy partnership) coal mine in the Cowie Creek watershed near Fanny Bay, to find a strong parallel on Vancouver Island not too far away, can be seen just north at the Quinsam Coal mine near Campbell River, and its history.

The two sites could even be considered twins, (though not identical ones), created at the same moment geologically, with similar coal deposits and a list of similar characteristics.

## 1984 Quinsam Coal Public Inquiry

Where the two diverge significantly is at the public inquiry stage. The scope of the environmental assessment the proposed Cowie Creek mine will undergo has yet to be decided, but currently there's no indication it will be the full formal inquiry accorded the Quinsam Coal Project proposal back in 1984.

The inquiry happened because of high levels of concern about the mine's location close to watercourses in the Quinsam River watershed. The Quinsam is a tributary of the Campbell River, which was then still at the height of its fame for its large chinook salmon. Then, as now, the Campbell's chinook runs were bolstered by the federal Quinsam Salmon Hatchery downstream from the mine and the watershed.

The inquiry ran for seven weeks and both the company and the provincial government had full legal representation, but not the cash-strapped public interveners.

In the end, the commission decided in favour of the project, despite its own report that "the Quinsam and its watershed are very sensitive to environmental damage."

The inquiry also resulted in the formation of the Environmental Technical Review Committee (ETRC), which was mandated to oversee the synthesis of data from the mine's environmental monitoring program into a summary report for the public each year.

The ETRC had "public" representation through a representative from Campbell River's City Hall. After several years though, the ETRC was found to be honouring more the letter of its mandate than the spirit. We'll come back to that shortly.

At the inquiry, much emphasis was placed on the plan by Quinsam Coal to employ open-pit mining. That caused great concern because the first part of the mine was close to Long, No Name and Middle Quinsam Lakes and Middle Quinsam's outflow to the Quinsam River. Based on experi-

### A few fast facts on the Quinsam Coal Mine

- Started as an open pit operation in 1987.
- Began underground production in 1990.
- Since 1994, has been 100 per cent from underground workings.
- Produces what it terms "high-volatile, low-sulphur bituminous" thermal coal, which is claimed to be relatively hard, and that corresponds to "lower fines" and "good handling characteristics."
- Pegs its annual production of cleaned coal at 500,000 tonnes a year.
- Primarily serves power utility companies and the cement industry.
- Ships to Vancouver, the Pacific northwest and Japan, through Campbell River's Middle Point stocking piling facilities and barge-loading dock.
- Ships under agreement with Vitol SA, of Geneva, Switzerland, part of the Vitol Group, a major energy and commodity trading conglomerate.
- In December 2009, became the property of Vitol after shareholders overwhelmingly approved a purchase offer to take over owner-operator Hillsborough Resources.

ence with another mine not too far to the south, there was fear about the potential for acid-generating runoff from storm events flowing down into the Quinsam River.

The open-pit part of the proposal also led to considerable focus on site restoration and reclamation, how difficult those would be, and how the pit might affect the area's natural ecology.

While some concerned citizens were relieved when the mine moved underground, the handling and treatment of waste water from its coal-cleaning plant stayed above ground. Over the years, this has led to numerous issues, much consternation, and a plethora of questions from those keeping a close eye on the mine.

Foremost among these was and is what was initially called the Campbell River Environmental Council, now the CR Environmental Committee (CREC).

The operation started producing coal in 1987, with the anticipation that it would fairly quickly and regularly be producing 910,000 tonnes of cleaned thermal coal a year. Quinsam now says it has a yearly output of 500,000 tonnes.

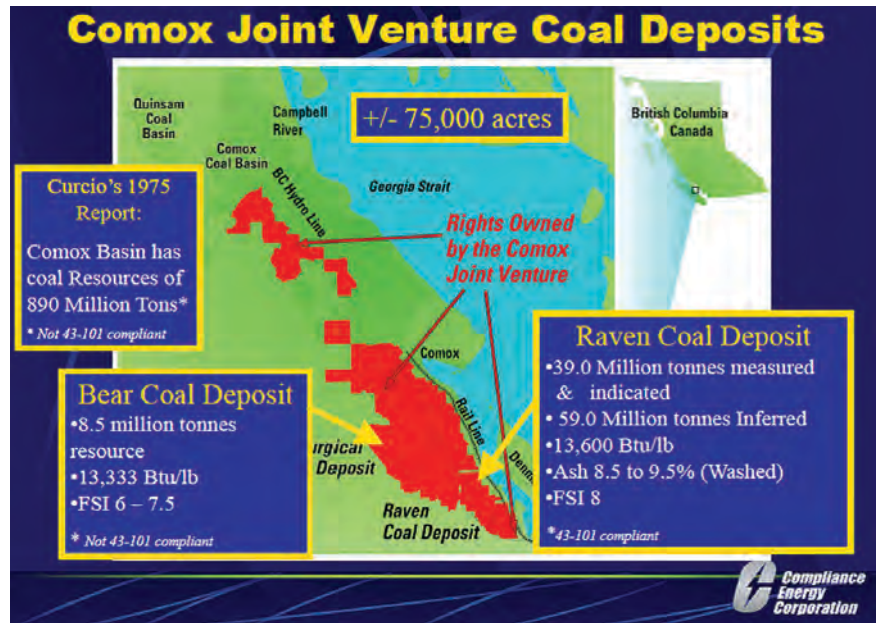
As the years went by, CREC and others started to look more carefully at those required annual summary reports from the ETRC and the mine's own environmental-monitoring program, and began to get a distinctly uncomfortable feeling.

This writer was unable to find the ETRC's 2008 summary report – reportedly produced in about August 2009 – in the local Vancouver Island Regional Library, where it's supposed to be lodged each year for public scrutiny.

What is known is that, as successive annual summary reports came out, they were judged by members of the public—both inside CREC and outside it—who looked into them, and found they were distressingly lacking in detail and information, and even, on occasion, misleading. Year after year, the summary report contained only about four paragraphs to a total of 10-to-12 lines, and was clearly intended to reassure the public that all was well.

And that public representation through City Hall? It emerged that there had been no city representation on a number of occasions at the all-important annual meetings of the ETRC when they sat down to thrash out what to put into the summary report.

Worse still, it became increasingly evident that the company had been stepping outside the water quality requirements of its waste-discharge permit on many occasions.



Those requirements, states a mid-1980s report by the BC Ministry of Environment (MoE), were based on the state of the receiving waters into which the corporation would discharge its waste water.

“Receiving water quality objectives are proposed [by the MoE],” noted that report, “for those characteristics that may be altered by future mining activity. These objectives are formulated to protect existing and anticipated water uses, and are based on consideration of current water quality criteria, and existing water quality and hydrology in the Quinsam watershed.”

What was the regulatory authority's response to Quinsam Coal so frequently going outside its waste-discharge permit limits?

Instead of tightening its reins on the company and demanding compliance for the sake of the watershed, its fish, wildlife, and downstream inhabitants, MoE did little more than simply sit back and wait. And in the end, the inevitable request arrived from the corporation, asking for the permit to be re-written to allow double the amount of waste material it could legally discharge. That way it would be in compliance with its permit – at least most of the time.

Putting aside renewed concerns from CREC, environmentalists, and a number of other observers, the government granted the company's request in fairly short order in 1998.

### Permit Non-compliance

But the trouble with the ETRC's summary reports didn't stop there, as is well documented in CREC correspondence with the provincial government.

When CREC started referring to the large number of non-compliances that were not being noted in the yearly

*Continued on Page 28* ➔

↔ *Quinsam continued*

summary reports, and calling them exactly what they were – permit violations – a senior government official working alongside the company on the ETRC minimized the omissions as minor “exceedences” of no great significance

That’s not the conclusion CREC reached in looking into the details and possible trends of the monitoring data. It came up with a list of concerns the organization is trying to deal with. Not the least are sulphates, the leading cause of acid mine drainage – which has long been the central concern about the whole project – and arsenic, known to be associated with many coal-mining operations.

Just what has CREC identified in the past few years that leaves its members more than a little anxious about the future for the Quinsam watershed?

A letter from CREC veteran Stan Goodrich to MoE official Herbert Bunce, one of the lead members of the ETRC, provided quite a list. It all added up, said CREC, to the organization having what it called “grave reservations” about the company’s proposed expansion.

Arsenic was right up there.

The letter said that a study had identified arsenic in the sediment in Long Lake, near the company’s settling pond outflow, at levels, Goodrich noted, that were “50 times higher than samples from Upper Quinsam Lake, which was used as a control for the study.”

Goodrich went straight to the point.

“It appears to us [CREC],” he wrote, “that there’s a gap between what the monitoring data indicates and what is found in the receiving environment. How is this arsenic getting into the (lake) system when it’s not showing up in the monitoring data?”

Goodrich went on to cite several other issues which needed resolving to CREC’s satisfaction:

- Toxic metals, in that same area of Long Lake as the arsenic, that Goodrich noted exceeded the BC Sediment Guidelines for the Protection of Aquatic Life;
- Polycyclic Aromatic Hydrocarbons (PAHs) that “far exceed” both the government guidelines and the levels found in control samples from Upper Quinsam Lake;
- Scientific findings that showed the benthic invertebrate community “in and near Long Lake” had been adversely affected, which was considered to have been caused by mining activity;
- The MoE’s admission at a public meeting in December 2007, that there were no plans to remove the contaminated sediment found in the test site in Long Lake, or to “change mining practices that may be contributing to the problem,” and that the only plan proposed by MoE

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(with regard to the metals, the PAHs, and the damaged invertebrate community in Long Lake) was further study (being carried out as of late 2009) into the “inter-relationships” between the three variables;

- A lack of demonstrable results from mitigation measures by the company that it said were intended to “result in a reduction of sulphates within the receiving environment.”

### Sulphates and Acid Mine Drainage

Sulphates continue to plague the Quinsam Coal Project in many observers’ minds.

CREC’s correspondence says the study showed that the background levels for sulphates in the Quinsam watershed were a mere 1 or 2 mg/L. That skyrocketed “dramatically” (to use CREC’s own word) in the late 1980s and 1990s, climbing past the government’s sediment guidelines ceiling of 100 mg/L in Long Lake, the outflow of the lake, and occasionally at bottom depths in Middle Quinsam Lake.

Sulphur and sulphates are linked to both acid mine drainage and arsenic, according to Dr. William Cullen, a now-retired chemistry professor, who is internationally renowned for his work on arsenic in the environment.

Cullen appeared before Campbell River’s city council in December 2008, when CREC made a presentation on the study it had launched some months before.

Cullen explained to council that arsenic could be a ticking time bomb for the Quinsam watershed.

Highly poisonous, arsenic occurs naturally in the environment, where it is usually bound with rock and soil. However, “under certain circumstances, (and) given the right conditions, bacteria can transform most rocks in some way or another,” said Cullen, and it can then release arsenic directly to the environment. Fortunately, he said, initial indications were that hadn’t yet started to occur in this instance. He and several other experts are now involved in a new study on Quinsam Coal’s effects on the watershed.

The study is intended in part to provide some background base data, should the expansion go ahead. In a letter to MoE, CREC reminded that the minutes of the Oct. 17, 2008 ETRC meeting had noted that the coal the company wants to mine in its expansion program has a higher sulphur content.

To soothe fears that that sulphur could lead to increased sulphate generation, the company had also stated it intends to “take measures to mitigate against that possibility.” In fairness to the company, CREC acknowledged that in its

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correspondence with the provincial regulatory authority.

But, as noted above, the watchdog group said it had seen no demonstrable effects from mitigation efforts to date. And it said that because PAHs are also associated with soil disturbance, “it seems reasonable to expect” increases in those, too, if the expansion is allowed to go ahead.

When contacted by the *Watershed Sentinel*, Goodrich said Cullen’s latest study, which is expected to go well beyond just the arsenic problem in the Quinsam watershed, is due sometime early in the new year.

So back to this new proposed mine by Compliance Energy a few kilometres from Fanny Bay in the Cowie Creek watershed. It seems much of its metallurgical coal may well head in the same direction as Quinsam Coal’s thermal coal, i.e. offshore to Asia.

When discussing some of the similarities between the two projects, Compliance CEO John Tapics said the cleaned coal, which he described as “probably at the low end” of the scale in terms of sulphur content, will go mainly to mills in Japan and Korea, where Compliance’s partners are located.

Compliance has issued numerous reassurances that it intends to operate in “an environmentally and socially responsible manner,” complete with a public advisory group.

It has also said it’s considering three options for shipment sites: one each in Nanaimo and Port Alberni, using ready access to the nearby Inland Island Highway near the Buckley Bay intersection. The third possible port could be Campbell River’s Middle Point dock, which is used by the Quinsam Coal mine. However, Tapics said that site currently isn’t set up for deep-water vessels.

Meanwhile, Quinsam Coal was told to keep its covered trucks off city streets as much as possible. So now there is also some incipient concern that added use of the Inland Island Highway and some city streets by heavily laden mining trucks from the proposed Fanny Bay mine could seriously damage the highway and roads in the city on their way to the Middle Point terminal.

Could it be though that Compliance has learned from the area’s experience with Quinsam Coal and will avoid the pitfalls associated with it? Time will tell.



Quentin Dodd is an award-winning freelance journalist who has spent all of his more than 30 years in Canada and Campbell River, covering the C.R. area’s resource industries and local, federal and provincial politics.

**arthurcaldicott**@sqwalk.com

writing  
research  
presentations  
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250-384-5551  
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