

Québec and the pyrrhotite problem – An update

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In 2011 we discussed the problem of pyrrhotite at the IHHWC Conference in Cape Town. Since then 3 years have passed and I now have an opportunity to give you an update on our experience with what some have come to call a Black Swan Event.

A Black Swan Event refers to an almost improbable event that exceeds any scenario a warranty plan may have foreseen. In our case a pyrrhotite laden aggregate was used in the fabrication of concrete elements, mostly foundations and basement slabs in the region of Trois-Rivières, Québec, Canada.

La Garantie des maisons neuves de l'APCHQ (GMN) is a Compulsory Warranty Plan Administrator, approved in 1999 by the Régie du bâtiment du Québec, the government body charged with supervising warranty administrators. GMN operated for almost 15 years without major incidents affecting its financial position. GMN met all financial requirements set out by the legislation and took the prudent initiative of subscribing to excess loss insurance.

The excess loss agreement called for the insurer to pay out claims above a set amount. If GMN paid out claims above a pre-set trigger point, say 7 million dollars for homes built in a specific year, the insurer would step in and pay excess claims up to a maximum of 5 million dollars for the claims attributed to the homes built in that year. The Canadian reinsurance market for our type of business is limited; warranty plans like ours are just too small for the big reinsurance suppliers. Nonetheless, we did find a reinsurer for all the years we were in business. A key factor in securing a reinsurance agreement was probably the confidence the reinsurer had in the abilities, control and expertise the warranty plan had developed over the years.

Ironically, GMN had difficulty justifying to government authorities the higher level of reserves it had established. Back in 2009, GMN had 20 million dollars in extra reserves above the required claims reserve based on past experience. GMN argued that unexpected events should be accounted for and set extra reserves aside.

APCHQ, the Québec Home Builder Association held GMN as a completely independent Company. APCHQ also held non-compulsory warranty plans, one of them dating back to 1976. Neither APCHQ nor GMN were newcomers in the field.

On average, claims per year came in between 5 and 7 million dollars for about 20 000 homes. Big claims took the form of payouts for one condominium building affected by many different problems (2007). They also took the form of a series of claims, all related to a single common problem, be it foundation failures due to soft clay soils (2008) or even pyrite in the concrete aggregate (2003), none of which cost more than 2 million dollars and for which GMN recovered a significant portion of the costs.

Then, late in 2009, GMN was faced with a rapidly mounting number of claims relating to concrete basement failures. That was the tipping point. Pyrrhotite contained in the aggregate first caused the concrete elements to show star shaped cracks in the elements and later the expansion of the concrete due to the oxydation of the pyrrhotite. Ultimately the concrete was sure to fail. A typical claim for concrete foundation replacements runs at \$145,000 Canadian. Repair calls for lifting homes off their foundations, demolishing the concrete basements, including footings and slabs, putting in place new concrete foundations, insulation, and hooking services back up; all the while the homeowners are living in the homes.

The improper aggregate was introduced in concrete elements between 2004 and 2008. Mandatory warranty in Québec in regard to major structural defects (vices de construction) runs for 5 years from the end of construction.

To this day more than a thousand faulty concrete claims have been handled by GMN and from these approximately 700 have been or will be deemed receivable. The total cost to GMN will approach 100 million Canadian dollars. On June 12th 2014, Judge Michel Richard awarded GMN almost 70 million dollars for the first group of homes (500) that had gone through legal proceedings. The amount is to be paid by the responsible parties: the engineering firm and the geologist (70%), the quarry and concrete manufacturers (25%) and the homebuilders (5%).

The GMN claims involving builder constructed homes were not the only structures affected by pyrrhotite. Owner built homes, commercial buildings and institutional buildings (municipal recreation center, ambulance center, law court) have also been affected by the same disorder. The June 2014 decision by Judge Michel Richard covers claims totaling 200 million dollars; out of which GMN's share is 70 million dollars.

According to different sources, the projected total cost of repair work to all types of buildings affected by pyrrhotite is undetermined but could very well lie between 375 million and 750 million dollars. For their part, homeowner representatives have said there may very well be as many as 4,000 to 5,000 homes affected by pyrrhotite, pushing the potential costs closer to one billion dollars.

A race against time

As GMN was analysing the trend in claims, it appeared that there was a probability that it would run into an actuarial deficit. The idea of a surcharge on enrolment fees for the purpose of creating a Catastrophic Claims Reserve emerged and was endorsed by all three authorized warranty plan administrators. Deliberately, the warranty providers and the Régie du bâtiment du Québec acknowledged the need for such a fund and started charging and putting aside an extra 300\$ for each new home enrolled. Presently the CCR holds a little under 2 million dollars.

But before GMN was awarded 70 million dollars, it had to pay out about 50 million dollars and reinsurers paid about 20 million dollars for the pyrrhotite claims. Suffice to say that in 2013, the projected cost of the claims overcame the solvency of GMN and that the provincial Government had no choice but to take back from GMN its authorisation to act as an approved Warranty Plan Administrator. Since 2013, GMN is in the hands of a Provisional Administrator (Guardianship/ Tutelle) named by the Régie du bâtiment du Québec.

Dealing with a very quickly rising number of claims is by itself difficult to handle. GMN also had to invent ways to classify new problems, to create new procedures adapted to the context and to hire more people to handle the claims. It also had to quickly diagnose the problem and start building the Home-to-Quarry paper trail leading to the responsible parties.

However, GMN did not expect a few things to happen:

- 1- The Warranty Plan is left responsible for the defects, without support from industry: homebuilders, concrete manufacturers and quarries.
- 2- Government expected the Warranty Plan to pay for repair of the defects even if they were not covered by the mandatory warranty plan.

There was very strong criticism of homeowner's representatives, accusing GMN of working in bad faith.

Looking back at a little over five years of work dealing with homeowners and their very real personal sorrow, we are regularly asked if we could have handled things differently. From a practical point of view the answer is most probably "no".

GMN is in the business of fixing building problems, according to a regulated mandatory warranty plan. At no point in time were the problem houses posing a security threat to the occupants, the homes were livable and repairs could be made in the next 2 to 5 years. But there were and still are humanitarian aspects like:

- Families unfamiliar with the demolition and rebuilding processes, hoarded for 3 to 4 months through the repair calendar;
- Families forced to move to another city for work but unable to sell the problem house scheduled for repair a few years down the road;

- The elderly retired couple, both spouses treated for cancer and who could not wait 3 or 4 years to see their home repaired;
- The homeowner who lives in a semi-detached house and whose neighbor refused to file a claim although both sides of the building had the same faulty concrete.

Homeowner groups complained that GMN staff did not show empathy or care towards the problems the grieved homeowners were living. Their argument was that in an exceptional situation like this one - A Black Swan Event- there should be an exceptional way to resolve the problems.

Homeowners certainly had a point but that did not give GMN any more power to go beyond what was set out in the mandatory warranty regulation without jeopardising its financial position, its ability to fulfill its obligations and its recourse to obtain refunding from responsible parties.

In 2009-2010, the rationale for GMN was sound:

- GMN could fix more houses if it did not spend money on additional finishing some homeowners had put in, work that was not covered;
- GMN had a better chance of recuperating the cost of repairs from other parties if it stuck to its legal responsibilities;
- If the legal procedures went quickly, GMN would recover a significant part of the paid out claims and would remain solvent;
- As long as GMN was solvent it would continue operating and do its job.

Was that a leap of faith an exercise in futility?

One definition of stubbornness is to repeat actions over and over the same way and hope for a different outcome.

So, what different outcome could have been hoped for? Certainly a chance for GMN to do its job well and completely.

GMN cannot claim to have done the job well if homeowners are unsatisfied, and GMN cannot claim to have done the job completely if it fails financially.

Looking for a different avenue to handling the pyrrhotite claims and looking at the big picture five years later, WHAT IF GMN had approached claims not on a "fix it" basis but on a «we will painlessly put you back the way you were» basis?

Satisfied Homeowners

To satisfy homeowners, GMN would have had to meet their expectations and would have had to "go the extra mile... or extra millions". This requires a decision, very early in the process, to

incur significant additional costs. Conservative estimates, in regard to those extra costs range from 20 to 30 million additional dollars. It could have kept track of these extra costs as outside the strict legal obligations. The classification would have been useful in the process of recuperating the sums from other parties. Extra costs would include an office in Trois-Rivières with staff rather than working with emails, phones and postal mail from the Montreal Head Office (Anjou).

In that scenario, GMN would fail more quickly and create a larger actuarial deficit, pushing the deficit envelope probably from 34 million to somewhere over 60 million dollars. Doing so would also mean that GMN claims originating from other sources than the pyrrhotite problems would never be honored. Roughly 60,000 homes would lose coverage because reserve money put in the pyrrhotite cases would no longer be available to settle these newer claims.

In an unstated way, GMN and Government were jointly bound together to fix the problems.

That meant that government would, eventually, put forth additional sums of money to compensate for insufficiencies in the government mandatory warranty plan GMN was operating. And it did happen. Government did announce that it would pay, although partially, for repair work on owner-built homes and for costs incurred by warranty covered homeowners that fell outside of the warranty plan legal coverage.

WHAT IF GMN had taken a leap of faith thinking that government would eventually step in?

If it had done so:

- 1- The cost for government may ultimately be the same:
 - a. Actuarial deficit (government announced it would cover the 34 million dollars deficit);
 - b. Homeowners partial extra costs for work not covered by GMN (government has begun to pay out 15-20 million dollars);
 - c. Partial financial support for owner built homes.
- 2- GMN would be handling the claims with perhaps much less criticism from homeowners, although not for long since it would fail sooner;
- 3- GMN staff would have been perceived as doing the expected job rather than cutting costs at the expense of homeowners' health and wellbeing.
- 4- The Provisional Administrator would step in earlier and take charge of GMN, with the entire rigor such responsibilities require.

But all that is hypothetical. In real life, IF GMN now collects from all parties the sums of money awarded by Judge Michel Richard and also collects the payment of future claims on the same basis, GMN will not require the injection of government funds and should even regain actuarial solvency.

On final analysis, a strong catastrophic loss reinsurance agreement covering all three Approved Warranty Plan Administrators would have done the job on the financial side. The homeowner satisfaction side would remain unfulfilled.

Timing of the pyrrhotite problems coincided with a Government review of the mandatory warranty system legislated 15 years ago. The pyrrhotite problem was an opportunity to change the rules. Starting January 1st 2015, the mandatory warranty plan will be run by a single not for profit company sponsored by the Régie du bâtiment du Québec. The board of the new company will have representatives from government, financial sector, consumer sector and very few builders. Builder associations will no longer create and hold a mandatory warranty plan company.

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