

June 15, 2021

File No.: 53719

BarrierTek  
7123 Sparrow Drive  
Leduc, AB T9E 7L1

Attention: Dennis Cuku

**RE: Large Scale Efficacy Field Test**  
**Location: Nisku Fire Department Training Center**

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This report documentation is further to the request of our involvement in the assessment of and adjustment of this potential claim scenario running through the BarrierTek large scale efficacy field test project.

Diverse Claims Adjusters was brought in to play a role in assessing damages between two test burns that were being completed as part of the BarrierTek large scale efficacy field test project. The test included two identical wood buildings constructed at the initial framing stage where one building was treated with the BarrierTek product and the second building was untreated. The analysis of the experiment measurements or results are not addressed or included as part of DCA's role in the evaluation of damages between the two buildings nor was the scope to create a report on the details of the fire, flame spreads, and the net results of the test burns.

From our involvement leading up to and including the day of the test burn, as well as thereafter, it was evident that the building that was treated with the BarrierTek product simply did not catch on fire and burn to any degree similar to the building that did not have the BarrierTek product applied.

Specifically as it relates to the BarrierTek building and the timelines involved, we understand that both buildings were subjected to the same test pattern, same burn pattern, and same ignition points, using the same materials and products available. After an extensive time lapse on the BarrierTek building, there was only minimal damage sustained to the building structure.

Our review of the extent of damages is dependent upon the evaluation that was completed by Stephan Pasche with Fast and Epp. The repair requirement was established based on the structural engineering review of the site. We were provided with the one-page repair drawing detailed by the Engineer on record. In addition to the Engineer's Report, we received an invoice through Capital City Connects Ltd. identifying the labour costs of \$500.00 plus GST to complete the labour repair portion of the engineering requirements. We further note that we were advised that the materials cost involved was \$426.00, supplied directly to the site for the contractor to do the work.

As we were getting through the review of the rest of the building, we noted that there had been a minimal amount of fire damage / flame damage and flame spread throughout the BarrierTek building. This is evident from the instructions through the Engineer wherein only a single joist was to be replaced, as well as some floor sheeting. During the review of the BarrierTek building fire, the Fire Department monitored the timelines as to when they were set up to attack and extinguish the fire. At the designated time for the Fire Department's involvement, we noted that minimal water was used to extinguish the fire in the origin of the room where the fire was ignited.

In review of the appraisal consideration for the damage sustained to the property, we note that the net result of BarrierTek product substantially reduced the overall net effect of damages from the same fire. The resulting damages would carry a budget of approximately \$14,000.00 to \$15,000.00 to complete the repairs. This work includes the following:

- Framing ..... \$926.00
- Water extraction and drying ..... \$1,500.00 (budget)
- Smoke seal the entire framing cavity ..... \$8,826.93 (budget)
- Profit, overhead, GST not included in the above

Using the calculations above, we noted that the general contractor that typically would be hired on an insurance claims of this nature would have their profit and overhead margins and considerations. We have identified a budget of \$14,178.69 being necessary to resolve the direct fire damage and resulting smoke seal of the entire building cavity in the size and square footage provided by BarrierTek for the test building. We note that our above calculation includes general water extraction and drying equipment that would be used to at least dry out the area with dehumidifiers and other drying equipment within a short period of time after the fire. While we have established that there was some minor water used by the Fire Department, that water would still have to be cleaned up and addressed in a course-of-construction fire where the structure has a basement or parkade. In this case, there was no basement at play and the water simply dissipated accordingly. We have made the allocation on the assumption that it would be necessary due to typical house construction.

The overall consideration from an engineering perspective is that the Engineer needs to establish that the rest of the building has not sustained any damages. While the net result of the repair is fairly minor and the Repair Scope from the Engineer can be captured on one page, the Engineer would be required to sign off on the entire building and, therefore, they would need to establish how, if in any way, the fire changed, altered, or created any damages to the structure, including if it shifted, changed, or altered before and/or after the fire. In this case, we are budgeting \$3,000.00 to \$5,000.00 for the Engineer to be in a position to create a formal report and validate the entire structure to be in a usable condition for the net result of the Homeowner / Building Owner carrying on with the repairs. The inspection would include an initial site visit and detailed review of the building and issuing a general repair scope. The Engineer would then be required to reattend after the renovation was completed on his drawings and sign off on the building permit requirements for the structural engineering repairs, that the repairs were undertaken correctly.

The net result of the building that did not have the BarrierTek product is that it was rendered an immediate total loss, even prior to when the Fire Department would have typically arrived and set up their extinguishing attempts on the building. The building caught fire immediately and was rendered a total loss and could not be successfully saved. Based on the extensive destruction and flame spread, there would be clarifications that the concrete foundation would have sustained substantial damages as well.

Remarks:

This report has been prepared on the basis of engineering principles and standards based on information available for the exclusive use of BarrierTek Inc. pertaining to the BarrierTek large scale efficacy field test project.

Our review of the provided information was on a random basis with no intent to inspect every element or portion of the documents and/or program.

Our services have been provided in a manner consistent with the level and skill ordinarily exercised by the practicing profession and determining our opinions and recommendations.

The conclusions and recommendations presented in this report have been prepared based on the information referenced herein. Should new or contradictory information become available, we request the opportunity to review the same, as well as the effect on our report including conclusions and recommendations. We trust this information is adequate. If you have any questions or concerns, contact the writer.

Yours truly,

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PW/tb