

A. Owen Brown
835 Poirier Street,
Bathurst, New Brunswick
E2A 2T9

19-July, 2023

RE: Recent residential radon reduction experience

To whom it may concern:

On January 19, 2023, between 10:00 to 11:00 am, I installed 3 long term radon Test Kit (Alpha Track AT100) dosimeters to measure indoor radon concentrations. We purchased our home nine days earlier, on January 10.

The home is a 26 ft x 44 ft 3 bedroom Kent Homes (factory built) bungalow, originally constructed in 1984. Dosimeters one and two were suspended from the ceiling in the semi finished basement. The first dosimeter was placed in the exercise at one end of the house (eastern elevation). The second unit was placed at the opposite end of the house in the electrical room (western elevation) a distance of approximately 38 feet away. The third device was placed in the main floor master bedroom, directly above the exercise room. Manufacturers suggested guidelines were followed during the setup.

After 92 days, the tests were completed. The dosimeters were sealed and mailed on April 21 and received by the laboratory on April 27, 2023. Analytical work was completed on June 29, 2023 and results were reported by email on July 3, 2023.

The radon concentrations for our home at 835 Poirier Street, Bathurst, New Brunswick, E2A 2T9 were reported as follows:

Basement exercise room	dosimeter # 6104855	1321 Bq/M ³
Basement electrical room	dosimeter # 6104886	1591 Bq/M ³
Main floor master bedroom	dosimeter # 6104887	969 Bq/M ³

Although higher than the recommended Health Canada Guidelines of 200 Bq/M³ the results were not unexpected. The province of New Brunswick has some of the highest radon readings in Canada and the northeastern part of the province is especially susceptible. The bedroom levels are quite high and the Venmar 200Pro air exchanger,

manufactured in 2006, has little effect in the dispersion or reduction of radon levels on the main floor.

A bit of research on Monday morning, July 10 revealed Jean Dallaporta of Enviroporta Inc. was a Certified radon Mitigation Professional in our area. After making initial telephone contact with Jean, I emailed a copy of the laboratory report to him. Jean visited our home before noon and before long we agreed to an Active Soil Depressurization (ASD) system in our basement. The site chosen was the electrical room.

The system was successfully installed and in operation by 6pm the following day. A C-NRPP certified Corentium Radon Monitor was setup to monitor the effectiveness of the installation. After the initial test of 42 hours I am very happy to report the following reduction in radon levels:

AVERAGE CONCENTRATION Bq/m³	EXTRACTION INTERVAL
487	0 - 12 HOURS
149	12 - 24 HOURS
111	24 - 36 HOURS
97	36 - 43 HOURS

One final reading was actually recorded at 48 Bq/m³. The system is currently being monitored again and I will be able to make comparative results. We are also looking forward to slightly lowered humidity levels as the system matures continually extracting vapour. Using the current costs of electricity in our province we estimate annual electrical costs of the Fantech RN-1 extraction fan used in our system to be \$21.50 per year. Quite a bargain.

We are exceptionally pleased with Jean's sincere approach to our problem and his professional work ethic. His open mindedness to discussion quickly reveals his valuable experience.

For more information I may be contacted anytime at:

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Sincerely,

A. Owen Brown, B. Tech. (Environmental Health)