

CANADA

# RADON MONITORING REPORT

## Description of the measurement

The measurement was performed with a closed alpha-track detector (Radtrak<sup>2</sup>®/Radtrak<sup>3</sup>®) following the quality guidance given in CNRPP-AL-DF-v6.

The detector(s) arrived to Radonova Laboratories **2023-05-09**.

They were measured **2023-05-17**.

*Test data have been given by Melissa Robinson*

## Property data and address

### MEASURE SITE ADDRESS

Colletville Elementary School

2021 Birch Ave.

Merritt BC V1K 1K2

### BUILDING ID

TYPE OF BUILDING:

School

BUILDING YEAR:

VENTILATION TYPE:

FOUNDATION TYPE:

PURPOSE OF TEST:

## Test results

DETECTOR	MEASUREMENT PERIOD	DESCRIPTION / LOCATION	FLOOR	RADON RESULT
182570-2 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary		< 23 Bq/m <sup>3</sup>
190953-0 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 2		26 ± 18 Bq/m <sup>3</sup>
202498-2 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 3		35 ± 18 Bq/m <sup>3</sup>
136759-8 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 3		23 ± 16 Bq/m <sup>3</sup>
965418-7 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 3		< 23 Bq/m <sup>3</sup>
671917-3 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 4		< 20 Bq/m <sup>3</sup>
680512-1 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 5		< 27 Bq/m <sup>3</sup>
576435-2 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 6		29 ± 16 Bq/m <sup>3</sup>
951714-5 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 7		24 ± 16 Bq/m <sup>3</sup>

## Comment to the results

### Trygve Rönqvist (Electronically signed)

Signature Radonova Laboratories Laboratory Measurement Specialist

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### RADONOVA INC.

1 EAST 22nd STREET, SUITE 200

LOMBARD, IL 60148

331.814.2200, help@radonova.com

CANADA

BY  
Interior Health - EPH

REPORT RECEIVER(S)  
Interior Health - EPH  
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469236-4 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 8		< 25 Bq/m <sup>3</sup>
696690-7 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 9		33 ± 16 Bq/m <sup>3</sup>
157413-6 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 10		35 ± 18 Bq/m <sup>3</sup>
509142-6 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 11		< 23 Bq/m <sup>3</sup>
658587-1 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 12		21 ± 16 Bq/m <sup>3</sup>
392020-4 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 13		< 20 Bq/m <sup>3</sup>
107552-2 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 14		< 22 Bq/m <sup>3</sup>
607944-6 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 15		< 24 Bq/m <sup>3</sup>
278725-7 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 16		37 ± 16 Bq/m <sup>3</sup>
551304-9 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 17		< 22 Bq/m <sup>3</sup>
732695-2 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 18		< 29 Bq/m <sup>3</sup>
288506-9 [Radtrak <sup>2</sup> ®]	2023-01-04 – 2023-04-04	Colletville Elementary, 19		< 27 Bq/m <sup>3</sup>

### Comment to the results

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582965-0 [Radtrak <sup>2</sup> <sup>®</sup> ]	2023-01-04 – 2023-04-04	Colletville Elementary, 20		< 20 Bq/m <sup>3</sup>
266984-4 [Radtrak <sup>2</sup> <sup>®</sup> ]	2023-01-04 – 2023-04-04	Colletville Elementary, 21		< 20 Bq/m <sup>3</sup>
341717-7 [Radtrak <sup>2</sup> <sup>®</sup> ]	2023-01-04 – 2023-04-04	Colletville Elementary, 22		<b>DNR</b>
586897-1 [Radtrak <sup>2</sup> <sup>®</sup> ]	2023-01-04 – 2023-04-04	Colletville Elementary, 23		26 ± 18 Bq/m <sup>3</sup>
430386-3 [Radtrak <sup>2</sup> <sup>®</sup> ]	2023-01-04 – 2023-04-04	Colletville Elementary, 24		26 ± 18 Bq/m <sup>3</sup>
916790-9 [Radtrak <sup>2</sup> <sup>®</sup> ]	2023-01-04 – 2023-04-04	Colletville Elementary, 25		< 18 Bq/m <sup>3</sup>
466827-3 [Radtrak <sup>2</sup> <sup>®</sup> ]	2023-01-04 – 2023-04-04	Colletville Elementary, 26		38 ± 16 Bq/m <sup>3</sup>
945561-9 [Radtrak <sup>2</sup> <sup>®</sup> ]	2023-01-04 – 2023-04-04	Colletville Elementary, 27		25 ± 16 Bq/m <sup>3</sup>
174639-5 [Radtrak <sup>2</sup> <sup>®</sup> ]	2023-01-04 – 2023-04-04	Colletville Elementary, 28		25 ± 16 Bq/m <sup>3</sup>
302793-5 [Radtrak <sup>2</sup> <sup>®</sup> ]	2023-01-04 – 2023-04-04	Colletville Elementary, 29		36 ± 16 Bq/m <sup>3</sup>
964494-9 [Radtrak <sup>2</sup> <sup>®</sup> ]	2023-01-04 – 2023-04-04	Colletville Elementary, 30		48 ± 16 Bq/m <sup>3</sup>
501399-0 [Radtrak <sup>2</sup> <sup>®</sup> ]	2023-01-04 – 2023-04-04	Colletville Elementary, 31		22 ± 14 Bq/m <sup>3</sup>

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999945-9 [Radtrak <sup>2</sup> / <sup>®</sup> ]	2023-01-04 – 2023-04-04	Colletville Elementary, 33		25 ± 18 Bq/m <sup>3</sup>
909934-2 [Radtrak <sup>2</sup> / <sup>®</sup> ]	2023-01-04 – 2023-04-04	Colletville Elementary, 32		34 ± 16 Bq/m <sup>3</sup>

### Comment to the results

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**Measurement method: Closed alpha-track detector (Radtrak<sup>2</sup>®/Radtrak<sup>3</sup>®)**

OWN ID N/A

The radon measurement was performed with a closed alpha-track detector following the quality assurance guidance given in CNRPP-AL-DF-v6. The detector container is manufactured from electrically conducting plastic. Through a small slit (filter), radon gas enters the detector. The track-detecting material (film) inside the detector is hit by alpha particles generated by the radon entering the container and the decay products formed from it. On the film, the alpha particles make small tracks which are enlarged through chemical etching and later analyzed via our proprietary Track-Etch(R) methodology to determine the radon exposure. Radonova Laboratories (P.O. Box 6522, SE-751 38 Uppsala, Sweden) is accredited (no. 1489) by SWEDAC to conduct radon-gas measurements using the closed alpha-track detector method. The analysis equipment is checked daily and the detectors are calibrated at regular intervals. CNRPP License CRT 201475.

**Measured radon concentrations**

For each detector, the measured value of the radon concentration is provided. For each value an uncertainty associated with the measurement to a 95% confidence level is also provided. For example a measurement result of 200 ± 30 Bq/m<sup>3</sup> means that the radon concentration is most likely contained in the range 170 - 230 Bq/m<sup>3</sup>. If the start or end date of the measurement has not been provided, the radon concentration cannot be calculated. In such cases, the total exposure in kBqh/m<sup>3</sup> will be reported. The average radon concentration can be calculated by dividing the total exposure with the number of measured hours and multiplying that result with 1000. The reported measured values are related to the detectors as received by Radonova Laboratories. Detector deployment is not performed by Radonova Laboratories. Measurement information such as monitoring period (dates) and placement location is provided to Radonova Laboratories by the end user. The presented results apply only to the samples tested.

**Codes on non-reportable detectors**

- DNR** Not Reported – Detector Not Returned
- VTW** Not Reported – Visibly Tampered With
- FBD** Not Reported – Film Broken or Damaged
- LIL** Not Reported – Lost in Lab
- DTO** Not Reported – Detector Too Old

**Measurement method versions used when the report was created**

CNRPP-AL-DF-v6, October 2018, Quality Control and Quality Assurance Manual for Radon Sampling and Analysis  
 ISO 11665-4:2021, Measurement of radioactivity in the environment — Air: radon-222

**Radon measurements in Schools and Public Buildings**

Health Canada recommends that the radon test performed in a home or public building be a long-term measurement. Health Canada does not recommend a test of duration less than one month. A minimum of 3 months is recommended and 12 months is optimum. If the long-term measurement results are below 200 Bq/m<sup>3</sup>, the average annual concentration in the home or building is probably below 200 Bq/m<sup>3</sup> and further measurements are not necessary and remedial action is not recommended. If the measured concentration is above 200 Bq/m<sup>3</sup> in schools, a follow-up short-term measurement is recommended in order to estimate the radon concentration during school hours:

**Schools\_hours\_concentration = Long\_term\_concentration \* (Short\_term\_schools\_hours / Short\_term\_average).**

If the long term average radon concentration during school hours is above 200 Bq/m<sup>3</sup>, remedial action is recommended (see the Health Canada Publication Guide for Radon Measurements in Public Buildings for more information)

**Workplaces**

Radon in workplaces should be handled according to the Canadian Guidelines for the Management of Naturally Occurring Radioactive Materials (NORM).

Average Annual Concentrations	NORM Program Classification
800 - 3000 Bq/m <sup>3</sup>	Radiation Protection Management
200 - 800 Bq/m <sup>3</sup>	NORM Management
< 200 Bq/m <sup>3</sup>	Unrestricted

**Signature on the report**

With the signature on the report, the person responsible for the radon analysis at Radonova Laboratories follows the guidance in accordance with CNRPP-AL-DF-v6 and that the demands from SWEDAC

Measurement information displayed in italics on report has been provided by the customer.



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