

Radon Assessment Program

The District has proactively undertaken testing for radon gas in our buildings. This testing is a voluntary exercise to determine if any of the District's facilities have elevated levels of radon present following the Health Canada's guidelines and recommendations.

Radon is a gas that is formed naturally by the breakdown of uranium in soil, rock and water, which is colourless & odorless and cannot be detected by the senses. However it can be detected with specialized monitoring devices. Radon usually escapes from the ground into the outdoor air where it mixes with fresh air resulting in levels too low to cause concern. When radon enters an enclosed space such as a building with inadequate ventilation, levels could accumulate to higher concentrations which become a concern.

Phases & Testing

As part of the District's due diligence, a 5 years proactive program approach to testing for radon gas started in 2015 across every school in the District.

Phase	Year	# Schools	Positive
Phase I	2015	22	0
Phase II	2016	33	2
Phase III	2017	35+ 2	
Phase IV	2018	30	
Phase V	2019	27	

* Subject to change as program is implemented

Health Canada recommends that remediation measures should be in place within 2 years for radon levels in excess of 200 Bq/m³, and 1 year for levels in excess of 600 Bq/m³. The testing is only the first step of the program and any school exceeding the Health Canada limits will immediately be assessed for proper ventilation and re-verified.


<200 Bq/m³ No Action Required	200-600Bq/m³ Remediate within 2 years	>600Bq/m³ Remediate within 1 year
		

SCHOOLS PER PHASE OF RADON TESTING				
Phase I	Phase II	Phase III	Phase IV	Phase V
2015	2016	2017	2018	2018
Adrienne Clarkson	A. Lorne Cassidy E.S.	Alta Vista P.S.	Carson Grove E.S.	Administration Bld.
Avalon P.S.	A.Y. Jackson S.S.	Arch Street P.S.	Confederation Centre	Agincourt Road P.S.
Bayshore P.S.	Albert Street Centre	Bayview P.S.	Convent Glen E.S.	Bell H.S.
Bells Corners P.S.	Barrhaven P.S.	Brookfield H.S.	Dunning-Foubert E.S.	Broadview Avenue P.S.
Blossom Park P.S.	Berrigan E.S.	Cambridge Street P.S.	Emily Carr M.S.	Churchill A.S.
Cairine Wilson S.S.	Briargreen P.S.	Canterbury H.S.	Fallingbrook Comm. E.S.	D. Roy Kennedy P.S.
Chapman Mills P.S.	Bridlewood Community	Carleton Heights P.S.	Forest Valley E.S.	Findlay Creek E.S.
Colonel By S.S.	Castlefrank E.S.	Castor Valley E.S.	Glen Ogilvie P.S.	Half Moon Bay P.S.
General Vanier P.S.	Cedarview M.S.	Centennial P.S.	Henry Larsen E.S.	J.H. Putman P.S.
Gloucester H.S.	Crystal Bay Centre	Charles H. Hulse P.S.	Heritage P.S.	Knoxdale P.S.
Henry Munro M.S.	Earl Of March S.S.	Clifford Bowey P.S.	Hillcrest H.S.	Lakeview P.S.
Jockvale E.S.	Elizabeth Wyn Wood A.S.	Connaught P.S.	Hopewell Avenue P.S.	Meadowlands P.S.
Le Phare E.S.	Farley Mowat P.S.	Devonshire P.S.	Kars on the Rideau P.S.	Merivale H.S.
Leslie Park P.S.	Frederick Banting S.A.	Dunlop P.S.	Manotick P.S.	Munster E.S.
Manordale P.S.	Glen Cairn P.S.	Elgin Street P.S.	Maple Ridge E.S.	Pinecrest P.S.
Richmond P.S.	Goulbourn M.S.	Elmdale P.S.	Metcalfe P.S.	Regina Street P.S.
Roch Carrier E.S.	Huntley Centennial P.S.	Featherston Drive P.S.	Norman Johnston A.S.	Sawmill Creek E.S.
Rockcliffe Park P.S.	Jack Donohue P.S.	Fielding Drive P.S.	Orleans Wood E.S.	Severn Avenue P.S.
South March P.S.	John McCrae S.S.	First Avenue P.S.	Osgoode P.S.	Sir Robert Borden H.S.
Stonecrest E.S.	John Young E.S.	Fisher Park P.S.	Osgoode Township H.S.	Sir Wilfrid Laurier S.S.
Vincent Massey P.S.	Katimavik E.S.	Glashan P.S.	Ottawa Technical S.S.	Sir Winston Churchill
W. Erskine Johnston	L.D. Heights H.S.	Glebe Collegiate Inst.	Pleasant Park P.S.	Stittsville Depot
	Mary Honeywell E.S.	Greely E.S.	Queen Elizabeth P.S.	Summerside P.S.
	North Gower P.S.	Hawthorne P.S.	Queen Mary Street P.S.	Terry Fox E.S.
	Roland Michener P.S.	Hilson Avenue P.S.	Ridgemont H.S.	Trillium E.S.
	Sir Guy Carleton S.S.	* Jack Donohue P.S.	Riverview A.S.	Woodroffe Avenue P.S.
	South Carleton H.S.	Kanata Highlands P.S.	Robert Bateman P.S.	Woodroffe H.S.
	Stephen Leacock P.S.	Lady Evelyn A.S.	Robert E. Wilson P.S.	
	Steve Maclean P.S.	Lisgar Collegiate Inst.	Robert Hopkins P.S.	
	Stittsville P.S.	Manor Park P.S.	Roberta Bondar P.S.	
	The Adult H.S.	Mutchmor P.S.		
	W.O. Mitchell E.S.	Nepean H.S.		
	West Carleton S.S.	Richard Pfaff S.A.		
	Westwind P.S.	* Roland Michener P.S.		
		Viscount Alexander P.S.		
		W.E. Gowling P.S.		
		York Street P.S.		
22	34	35 + 2	30	27

* Re-test

Testing Process

Attached is an electronic copy of your school's floor plans indicating the proposed room locations for the installation of the Alpha-track radon gas detector devices. These devices will be suspended from ceilings to be out of the reach of the children during this process. The devices are placed in all of the highly occupied rooms (Classrooms & Offices) on the lowest floor levels of the school & every 3rd highly occupied rooms for the levels above, if there is more than one floor level, as per Health Canada's Guide for Radon Measurements in Public Buildings.

	Device
	Alpha-Track radon gas detector
	Size
	3" dia x 2" high

Monitoring devices are placed in normally occupied spaces (Classrooms, Main Office, Staff Rooms, etc.) for the heating season to provide an accurate long term analysis, over a 4 month duration. Long term testing is the only accepted measure under the Health Canada's guidelines, since levels could fluctuate over time and any short term test could result in false readings.

WHY LONG-TERM TESTING?

- **Indoor radon levels vary greatly, even over a 24 hour period**
- **Several factors including building design, building condition, occupancy pattern etc. influence radon levels in a house**
- **Two houses built side-by-side can have different indoor radon levels**
- **So, measurements gathered over a longer period of time will provide a better estimate of the annual average exposure**

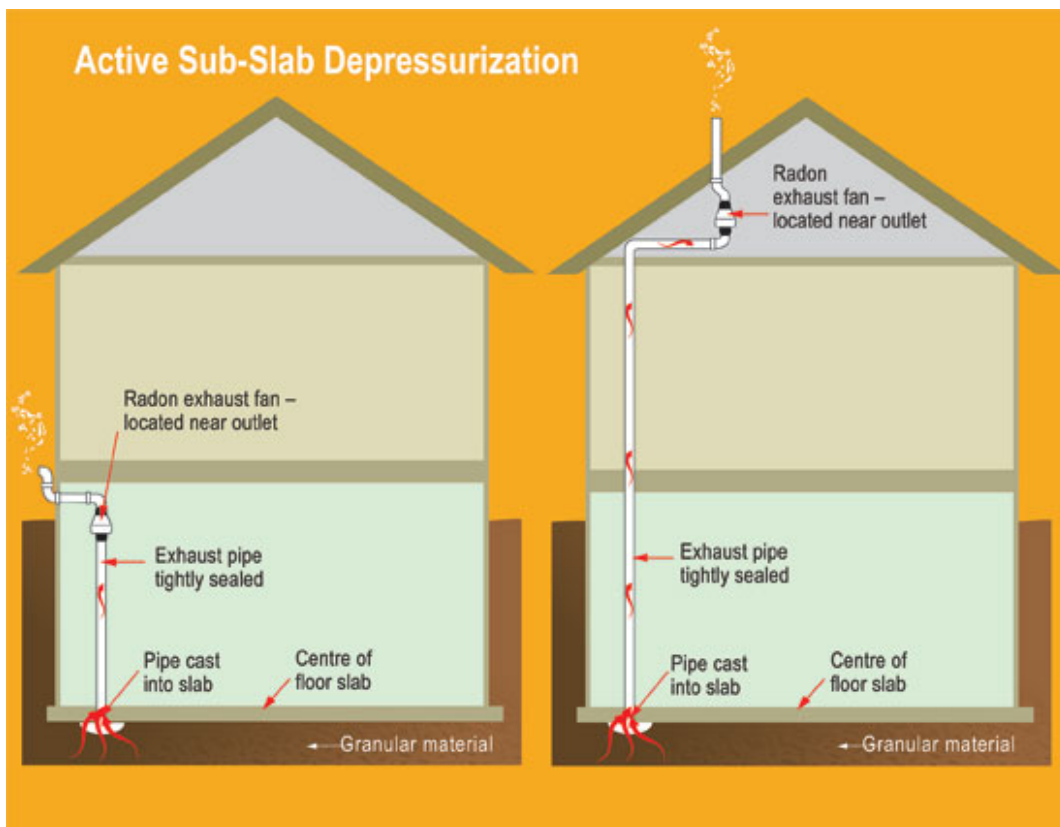


The winter season test results are expected to be received in April/May with a report following in June. Once copies of the results are received by the District, they will be reviewed and shared with the School, staff and central Joint Health and Safety Committee (JHSC). Two (2) hard copies of the final report will be sent through internal mail to each school's attention. One copy should be stored in the custodian's DSR inventory binder and the second copy shall be posted on the H&S board or the main office.

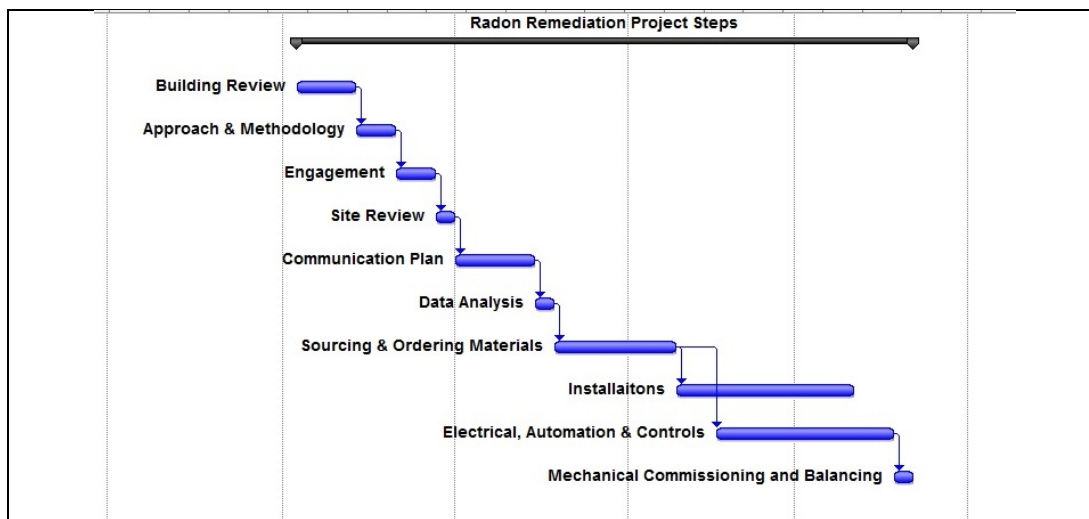
Remediation

In the event of a positive result, the District will promptly review the mechanical systems to determine if there are deficiencies within the ventilation system(s) since the building functions as a whole and could contribute to elevated concentrations of radon gas due to poor ventilation. If no deficiency is discovered, the mechanical systems will be reviewed for possible upgrades or improvements to the ventilation levels throughout the school or within areas of concern in order to reduce radon levels. There have been instances, after subsequent testing at an affected school, where ventilation improvements or re-balancing/re-commissioning of mechanical systems were a simple solution to successfully reduce background radon levels.

For schools or buildings with radon concentrations in excess of the allowable limits, a building specific radon gas mitigation plan will be put into place and actioned, in order to reduce the levels and meet the recommendations as set out by Health Canada. As part of the remediation plan, short term testing may be conducted to determine if the approach / remediation is successful, with monitoring continuing on an annual basis to ensure that the remediation actions are effective. The installation of a Sub-Slab Depressurization system is an effective way to negatively depressurize or vent the radon gas directly to the exterior, reducing the risk of radon from entering the building.



If remediation work is necessary, the process of implementing a complete mitigation plan varies depending on the size and complexity of the building/school. The following is a sample approach with steps and milestones that could span across several months.



Radon Remediation Project Steps

In order to conduct radon testing, there is a requirement that all measurement and mitigation professionals be certified under the Canadian National Radon Proficiency Program (C-NRPP). Currently the District has engaged the services of CM3, Greenough Environmental & EHS Partnerships Ltd as certified (C-NRPP) environmental consultants to support this program.

The District has developed a Radon Assessment Program flow chart which indicates all the steps, stages and actions as part of the program and should be posted with this information package on the schools O&H bulletin board.

Further information is available on the Health Canada's website through the following links:

<https://www.canada.ca/en/health-canada/services/environmental-workplace-health/radiation/radon.html>

<https://www.takeactiononradon.ca/test/ontario>

If you have any questions, please do not hesitate to contact Daniel Fournier, Project Officer 613-596-8211 ext. 8690.