

# World Radon Solutions Database

## Existing Buildings

[www.worldradonsolutions.info](http://www.worldradonsolutions.info)

### Existing Buildings

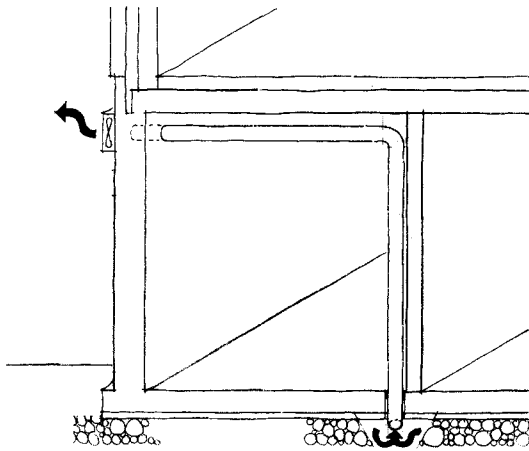
### Case Study

Sheet N°

**Type** Internal radon sump

**Country** Switzerland

### Illustration



### Description

The soil air is extracted under the floor. The pipe (10 cm) entry must be fitted tightly. According to the properties of the soil and the size of the building, one extract point may be enough, or several may have to be installed. If the exhaust vent is placed high enough above the roof, a fan may not be necessary. Otherwise, the exhaust vent should be sheltered (snow, rain) and be at least 2 metres away from windows and doors.

### **Selection**

This solution could be used in many configurations: Houses with crawl space, or built on a soil with high permeability.

### **Pre-installation Diagnosis**

Drill a 5 cm suction hole in the floor and install a temporary fan and measure the radon concentration in the inhabited rooms with a continuous monitor.  
It is better to effect this simulation in the cold period.

### **Radon reduction achieved**

Radon reduction from 1500 Bq/m<sup>3</sup> down to 120 Bq/m<sup>3</sup>

### **Problems**

The opening should be made at the most accessible place, at least 2 metres away from windows and doors, so that the severely contaminated air does not reinfiltre the interior.  
Sealing: It is very important to seal around the pipe-work to prevent air leakage.

### **System enhancements**

Increase the surface area of the suction point: the largest possible cavity is created around the pipe, by hand or using a vacuum cleaner.

### **Further Information**

More information about this system in the "Swiss Radon Guide" could be bought or downloaded from our website [WWW.CH-RADON.CH](http://WWW.CH-RADON.CH)  
[www.bag.admin.ch/strahlen/ionisant/radon/pdf/d/Radonhandbuch-en.pdf](http://www.bag.admin.ch/strahlen/ionisant/radon/pdf/d/Radonhandbuch-en.pdf)

or direct from

Swiss Federal Office of Public Health  
Division of Radiation protection  
Radon Technical and Information Centre  
Roserens Georges-André  
CH-3003 BERN  
E-Mail: [georges.roserens@bag.admin.ch](mailto:georges.roserens@bag.admin.ch)  
FAX: ++41 (0)31 322 83 83

Date Prepared : July 2003