Environment and Forestry Directorate
Drinking Water Quality Division

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The Scottish Government
Riaghaltas na h-Alba

LEGACY 2014
XX COMMONWEALTH GAMES
SCOTLAND

Rob Gibson MSP
Convener
Rural Affairs, Climate Change and Environment Committee
The Scottish Parliament
Edinburgh
EH99 1SP

22 December 2015

Dear Mr Gibson

This letter responds to the points raised on the Private and Public Water Supplies (Miscellaneous Amendments) (Scotland) Regulations 2015 (SSI 2015/346) at the Rural Affairs, Climate Change and Environment Committee's meeting on 11 November 2015, confirmed in Jenny Mouncer's email to the Scottish Government of 14 December 2015.

Who will be affected and how individuals will be affected

The regulations transpose the requirements of European Council Directive 2013/51/Euratom into Scottish legislation. This was required to be done by 28 November 2015, the date of coming into force of the regulations, to avoid the risk of infraction proceedings.

The purpose of the drinking water elements of the Directive is to limit the contribution that radon in drinking water makes to the total concentration of airborne radon. Radon is an odourless, colourless, radioactive gas that occurs naturally. It is released from certain rocks and the risk of occurrence varies according to geology. Although direct ingestion of radon in water is harmless, prolonged exposure to radon in air by inhalation has been linked to an increased risk of lung cancer. It is likely that any radon dissolved in water will readily gas off upon exposure to atmospheric pressure, adding to the total radon content of the air.

The regulations provide additional safeguards for all consumers of water, both from public supplies provided by Scottish Water and from private supplies from a variety of sources, but not bottled water, which is regulated separately.

Drinking Water Quality Division will be issuing guidance to Scottish Water and local authorities on implementing the regulations. The Scottish Ministers will issue notices to Scottish Water and local authorities which state that monitoring for radon is not required where -

- the supply is a surface water, or

- the supply is not in an area with a known high risk for radon in air (based on data provided by the James Hutton Institute), or
- the supply is a groundwater in a high risk area but the previous radon sample(s) have shown the radon concentration to be less than half the prescribed concentration or value (PCV) of 100 Bq/l.

Where a sample exceeds the radon PCV of 100 Bq/l on a public water supply, and a resample confirms this to be a representative result, Scottish Water must undertake further investigation to identify the source of the high radon value.

It is not considered appropriate for public water supplies to exceed 100 Bq/l as they supply many properties with potentially varying characteristics as far as radon risk is concerned. Where it is identified that a public water supply consistently exceeds 100 Bq/l, action to reduce radon concentrations will be taken. Such action may include treatment, or the abandonment of the source and substitution of an alternative source of water.

For private supplies, where a sample exceeds the radon PCV of 100 Bq/l, and a resample confirms this to be a representative result, the local authority must undertake further investigation to identify the source of the high radon value. Advice should be provided to the users of the supply that –

- their water supply has been identified as a source of radon; radon is a naturally occurring gas that is released from certain rocks;
- radon is radioactive and prolonged exposure to radon by inhalation has been linked to increased instances of lung cancer;
- radon ingested directly within the water is unlikely to be a health issue itself, but this radon may contribute to the total amount of airborne radon within the building;
- radon in air monitoring within the buildings served by the supply may be appropriate; and
- where further information on radon may be obtained.

Treatment of water to remove radon is unlikely to be necessary on private water supplies, but if required is relatively simple. There are two main methods of treatment, on which specialist advice should be sought if necessary -

- aeration - as radon is a gas, it can be stripped from the water by cascading the water or bubbling air through it;

- adsorption - radon can be adsorbed onto GAC filters, which are available as simple cartridges. These will need to be periodically replaced, with the replacement interval depending upon the flow rate and concentration of radon in the water.

Who was consulted and how individual users were consulted

The regulations were the subject of a public consultation which ran from 3 July to 28 August. The consultation documents were published both on the Scottish Government web pages and on the new Scottish Government consultation hub Citizen Space. Scottish Water and all Scottish local authorities, who are responsible for implementing the regulations, were notified of the consultation, and Citizens Advice Scotland and stakeholder organisations with members who are likely to be owners or users of private supplies were also alerted. Seven responses were received, including one from CAS, but none from individual consumers.

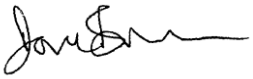
What is the total number of extant private water supplies in Scotland?

Around 3.5% of the population of Scotland use water from a private supply, of which there are 20,170 registered with local authorities. 5,660 of the supplies are within an area with a known high risk of radon in air.

What resources are available to help people who have private water supplies to adapt in the light of the proposed changes

The impact on individual owners and users of private supplies is expected to be minimal and the overall cost to local authorities and businesses associated with additional monitoring are expected to be of the order of £58,000 to £94,000 across Scotland. Grants of up to £800 (or more in cases of undue hardship) are available to owners and users of private supplies for improvement of the supply.

Yours sincerely



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