



Ottawa, Canada K1A 0H5

JUL 28 2017

Mr. Frank Clegg  
Canadians for Safe Technology  
P.O. Box 33, Maple Grove Village Postal Outlet  
Oakville, Ontario L6J 7P5

Dear Mr. Clegg:

I am writing with respect to your Environmental Petition no. 398, submitted to the Auditor General of Canada under Section 22 of the *Auditor General Act*, on "Failure of the Government of Canada to provide appropriate warnings so Canadians can take actions to protect themselves from excessive exposures to radiofrequency/microwave radiation from common personal and household wireless devices such as cell phones, baby monitors, cordless phones and Wi-Fi internet routers through normal, everyday use."

The Office of the Auditor General of Canada forwarded your questions to the Honourable Jane Philpott, Minister of Health, and to me. I am writing in response to questions 2, 4, 5, and 10, which fall under Innovation, Science and Economic Development Canada's (ISED) mandate and responsibility. Minister Philpott will be providing you with a separate response addressing the remaining questions that fall under her department's mandate and areas of responsibility.

**Question 2: What science based evidence does the Government of Canada have to make the above statement "cell phones are still safe when carried directly against the body"?**

ISED requires that all manufacturers of wireless products, including cell phones, meet the regulatory requirements set forth in its technical standards, which are based on recognized international testing procedures that have been adopted by most countries around the world.

When cell phones are tested for compliance, they are tested at full power for the duration of the test. In reality, cell phones operate at much lower power levels, to preserve battery life, maximize call time, and avoid network interference. As such, under normal operating conditions, a cell phone yields much lower radiofrequency (RF) exposure levels than those measured during compliance testing performed in laboratory settings.

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Furthermore, ISED has adopted Health Canada's Safety Code 6 limits for the RF exposure compliance of wireless devices. In turn, Health Canada's scientific evidence indicates that the recommended peak specific absorption rate (SAR) limit of 1.6 W/kg for cell phones is not the threshold for the occurrence of adverse health effects. As a precautionary measure, the peak SAR limit in Safety Code 6 was set to more than 50 times below the level at which excessive tissue heating could occur in the most sensitive tissue (the eye). This means that the peak SAR limits in Safety Code 6 would need to be exceeded by a factor of more than 50 before one would see any thermally related adverse health effects.

Canada's approach to cell phone safety testing is among the most stringent in the world. As such, ISED strongly believes that all products evaluated following the test procedures set forth in Canadian regulatory standards that comply with Health Canada's Safety Code 6 limits are safe.

**Question 4: How do the Ministries of the Government of Canada plan to address the fact that instructions require users to keep cell phones at 5 mm to 15 mm from the body and the reality that 67% of Canadians said they hold their devices against their body, in terms of: 1) the lack of awareness (81% of Canadians are unaware that instructions exist); and 2) the practicalities that cell phones can only be used in a manner complying with Safety Code 6 when used on speakerphone or with ear buds?**

To comply with applicable domestic regulations, equipment manufacturers are required to provide clear information to end users on the subject of proper intended use in the user manual of their products. For instance, cell phone manufacturers shall provide the minimum separation distance to maintain compliance to applicable body-worn exposure limits.

In response to your point regarding the lack of public awareness, ISED will continue to work with Health Canada, international standards bodies, other regulators, manufacturers, and other stakeholders on improving communication with users.

Concerning the second part of your question, please be informed that cell phones can, in fact, be held against your head without requiring the use of speaker phones or ear buds while remaining in compliance with Safety Code 6 limits since, as previously mentioned, SAR head compliance testing is performed at a zero millimetre distance.

The assessment process to verify if a cell phone complies with all applicable Health Canada limits requires two types of evaluations:

- 1) SAR – Head compliance testing
- 2) SAR – Body-worn compliance testing

ISED requires that head compliance testing be performed directly against a simulated head at a zero millimetre separation distance.

It also requires that body-worn compliance testing be performed with the use of a simulated body at a maximum separation distance of 15 millimeters or less.

Further information on compliance testing can be found online at [www.ic.gc.ca/eic/site/ceb-bhst.nsf/eng/h\\_tt00084.html](http://www.ic.gc.ca/eic/site/ceb-bhst.nsf/eng/h_tt00084.html).

**Question 5: Do current legislation and regulations enable the Government of Canada to require manufacturers to place their existing warnings on the packaging of wireless devices in a more readable font size and location, and/or at the point of sale? If this cannot be accomplished under current legislation and regulations, what changes would need to be made in order to require this of manufacturers? What Department(s) and Ministry are responsible for such regulation?**

Under the *Radiocommunication Act*, I have the power to establish standards, rules, policies, and procedures relating to radiocommunication. The Governor in Council may make regulations with respect to spectrum management pursuant to section 6 of the *Radiocommunication Act*; these regulations have been prescribed under the *Radiocommunication Regulations*.

As per the technical standard developed, pursuant to the *Radiocommunication Act*, ISED requires manufacturers to provide information on the proper usage of wireless devices in their user manuals, including the minimum separation distance at which a product shall be kept from the body to be in compliance with RF exposure limits.

Under subsection 25(4) of the *Radiocommunication Regulations*, “no person shall mark, label or otherwise indicate that Category I<sup>1</sup> or Category II<sup>2</sup> equipment complies with applicable standards, unless that equipment complies with those standards.” This label is the certification number or a statement that the device complies with specific technical standards.

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<sup>1</sup> Category I equipment, which comprises radio apparatus equipment for which a technical acceptance certificate (TAC) is required pursuant to subsections 4(2) of the *Radiocommunication Act* and 21(1) of the *Radiocommunication Regulations*. A TAC may be issued by the Certification and Engineering Bureau of ISED (the Bureau) or a certificate may be issued by a recognized certification body (CB).

<sup>2</sup> Category II equipment comprises radio apparatus for which standards have been prescribed. Category II equipment is certification-exempt. Therefore, no TAC from ISED or certificate from a CB is required, pursuant to subsection 4(3) of the *Radiocommunication Act*. The manufacturer and/or importer shall ensure compliance with all applicable procedures and standards for Category II equipment. Note that certification application for Category II equipment is not necessary and will not be accepted.

Your questions regarding what changes to legislation and regulations would need to be made in order to require this of manufacturers, and what Department(s) and Ministry are responsible for such regulation, essentially ask for a legal opinion. In other words, those questions ask which legislative or regulatory changes would be needed to require this and what Department or Ministry would have authority to make such amendments. Unfortunately, as noted in the guide to the environmental petitions process, the Department of Justice Canada cannot provide legal opinions to Canadians.

**Question 10: In North America, devices such as baby monitors and portable home phones send out a constant signal (emitting radiofrequency/microwave radiation) at all times. In Europe, these devices have been modified for safety so that they only emit radiation when the baby makes a noise or someone speaks into the handset (on demand). Why are these devices not available in Canada? What will the Government of Canada do to facilitate the access of Canadians to these reduced risk products?**

ISED requires that all manufacturers of wireless products, including baby monitors and portable home phones, meet the technical and RF exposure regulatory requirements set forth in its technical standards.

The Canadian standards currently in place do not prevent equipment manufacturers from introducing such products on the Canadian market as long as all applicable regulatory requirements are met. ISED cannot comment on any business decisions taken by private industry not to introduce specific products in Canada. We recommend that you contact equipment manufacturers directly for enquiries pertaining to product-specific Canadian market availability.

I appreciate this opportunity to respond to your petition, and I trust that this information is of assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "N. Bains".

The Honourable Navdeep Bains, P.C., M.P.

c.c.: The Honourable Jane Philpott, P.C., M.P.  
Minister of Health

Ms. Julie Gelfand  
Commissioner of the Environment and Sustainable Development