

SOLUTIONS

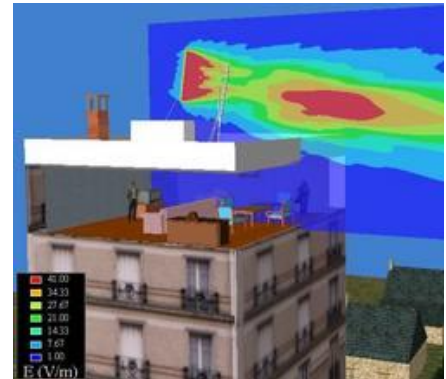
YRH provides multiple elements to help you achieve Safety Code 6 compliance: surveys, antenna position redesign, pre-installation assessment and mitigation solutions research. We will help you complete your projects in compliance with Safety Code 6.

ENGINEERING

Our proprietary software and Satimo's EMF-Visual simulation tool as well as years of experience in training and educating in the field of Safety Code 6 ensures that our engineering team will identify the most efficient solutions to assess, measure and mitigate your Safety Code 6 concerns.

CONSULTING

Our broad experience and reputation in multiple telecommunication areas gives our engineering team the knowledge to help you in your telecommunication projects. We value our independence from service providers and manufacturer to provide the best evaluations and solutions.



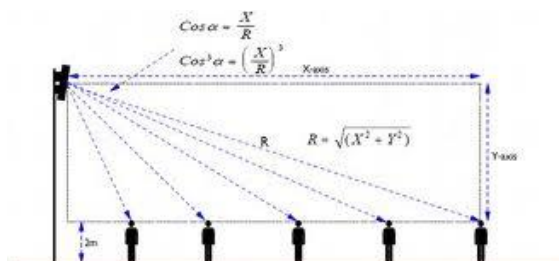
Safety Code 6 has recently moved from the background of RF engineering, where it has been positioned for years, into relative spotlight, as its validity is questioned by some and a new version is under development. In this context, it might be interesting to look back at the evolution of Safety Code 6 over the years.

The earliest ancestor of what we call now Safety Code 6 was published in the 1980s and was meant as a guideline for limiting radiofrequency exposure for operators of medical short-wave diathermy equipment. It was then called Safety Code 25.

1991 saw the first version of Safety Code 6, intended more widely as guidelines for limiting exposure to RF fields. It targeted frequencies between 10 KHz and 300 GHz and addressed occupational exposure as well as exposure of persons other than RF workers.

The next big change came in 1999 when the frequency range was expanded to 3 kHz to 300 GHz and limits were increased in the upper range, above 150 GHz.

Throughout this time, the Safety Code 6 document contained a mix of exposure limits, measurement techniques, theoretical equations and safety recommendations. It retained from its earliest version some recommendations and terminology that, while appropriate for diathermy machines, was confusing or simply irrelevant in the context of RF communications.



Safety Code 6: A timeline (continued)

ABOUT YRH

At the heart of our organization is a dynamic, involved and innovative team of consulting engineers specialized in broadcasting and telecommunications, with a solid reputation for problem-solving.

In its more than 45 years of existence, YRH has operated in more than 45 countries on 5 continents, in a variety of climatic conditions and work environments. Our varied experience is at your disposal in this increasingly competitive domain.

Our strength lays in our dedication to the excellence of our work and our attention to the needs of our clients. At YRH we not only work for you but with you to ensure your entire satisfaction at every stage.

Yves R. Hamel et Associés Inc., your consultant-experts in telecommunications, broadcasting and mobile networks since 1967.

The 2009 edition retained the same safety limits but brought a substantial change in the way the two sets of limits were defined. Until now, occupational exposure or workers vs. the general public limits were defined in terms of persons who could be submitted to either type of limits. From 2009 onwards, the limits are specified for Controlled / Uncontrolled environments and specific conditions are set to qualify people for access to controlled environment.

A flurry of activity occurred early in 2013 with more restrictive exposure limits being proposed. The rationale for these changes was not based on new and hitherto unknown health risks but rather the desire of having SC6 harmonised with the ICNIRP (2010) and IEEE standards. The other reason for tightening the exposure limits was based on improved dosimetry and measurement of human exposure, especially for individuals other than adult males.

In the spring of 2014 the Royal Society of Canada Expert Panel published a review of the proposed 2013 Safety Code 6 standards. The report, available online, did a thorough examination of the available science and the conclusion of the panel was that *"the basic restrictions recommended in Safety Code 6 do provide adequate protection against known adverse health effects across the radiofrequency range"*. The panel however did recommend tightening the uncontrolled environment limits to better adapt the field limits to the basic restriction values. These changes should be implemented in the upcoming version of Safety Code 6.

KEY CONTACTS

Code 6 Expert

Mrs. Agnieszka Zubek, Eng.
Email: azubek@yrh.com

Director RF Engineering

Mr. Joseph Sadoun, Eng.
Email: jsadoun@yrh.com

Remember: Owners and operators of telecommunications infrastructure should ensure their compliance with Safety Code 6 guidelines.

Yves R. Hamel et Associés Inc. (YRH) is an independent telecommunication consulting engineering firm. This article is a sole property of YRH and is distributed for general awareness and information at the indicated time of releasing.

Each client and each project are unique and so require a specific analyse or study.



Yves R. Hamel et Associés Inc.

102-424 Guy, Montreal (QC) Canada H3J 1S6
Tel.: 514-934-3024 | Fax: 514-934-2245
Email: telecom@yrh.com