

New Zealand

Report on EMF Activities

9th International Advisory Committee Meeting on EMF

June 2004

New standards, legislations and ordinances

The existing standards and guidelines in use in New Zealand have remained unchanged over the past year. These include *New Zealand Standard 2772.1: 1999 Radiofrequency Radiation – Maximum exposure levels 3kHz-300GHz* and the Ministry for the Environment/Ministry of Health *National Guidelines on Managing the Health Effects of Radiofrequency Transmissions* (2000). Compliance with either document is voluntary although the Standard and Guidelines may be referenced and implemented through local body plans. Both documents are based on, and consistent with the ICNIRP guidelines.

We have had some correspondence with ICNIRP regarding apparent ambiguities or contradictions in their 1998 Guidelines. These particularly concern the treatment of exposures at frequencies below 10 MHz, and exposures at multiple frequencies. The rationale for some of the guidelines in this area is not well developed, and as these Guidelines have some legal standing under New Zealand law, it is important that any areas of uncertainty are clarified.

Although there is much support in principle for a review of Part 2 of the NZ Standard 6609:1990, which deals with measurements of RF fields in order to test compliance with NZS 2772.1:1999, the high costs of doing this through the Standards process have held back the formal adoption of such a project. Ways to achieve the same end at less expense will be explored.

There is increasingly rapid adoption of new technologies. Whilst some new technologies may increase exposures by using a greater bandwidth, others may reduce exposures as power levels are decreasing. Ultra wide band transmitters (eg through the wall imaging systems) are gaining limited use in New Zealand.

The Ministry of Health's National Radiation Laboratory is reviewing and redrafting the Radiation Protection Act. This Act has previously only managed ionising radiation sources and exposures but proposals are being developed that will include provisions to reduce risks from high-risk non-ionising exposures. Examples may include industrial strength lasers, therapeutic magnetic fields, etc

Research activities

The Interagency Committee on the Health Effects of Non-Ionising Fields continues to meet twice a year and provides the New Zealand Director General of Health with high quality, independent scientific and technical advice on any potential health effects from exposures to extremely low or radiofrequency fields including the quality and completeness of information on which findings and recommendations have been made and an assessment and review of the impact of research and information published locally and overseas, on policies, guidelines and advice promulgated by the Ministry of Health, Ministry for the Environment or Ministry of Economic Development.

The Committee includes representatives from the following agencies, organisations, and sectors: Ministry of Health, Ministry of Economic Development, Ministry for the Environment, Occupational Safety and Health Service of the Department of Labour, public health service, local government, academics/scientists, consumers, electrical industry (transmission and supply) and telecommunications industry.

To date, the Committee has found that there was no need to change the current recommendations in New Zealand, which follow exposure guidelines published by the ICNIRP (and adopted in the New Zealand standard and guidelines); and encourage operators to take low or no cost measures to reduce exposures where possible.

Researchers at the Wellington Medical School are continuing their study into cellphone use and incidence of brain tumours, which forms part of the Interphone project. A paper based on work carried out as part of this project was published in June 2003¹.

Data on exposure levels to general public or workers for static fields, ELF and RF

The Ministry of Health's National Radiation Laboratory continues to monitor a percentage of existing and new cell sites. Results to date have found exposures consistent with historical levels and well within ICNIRP guidelines. Some of this monitoring has been carried out at the request of one of the industry operators, and data is available on the NRL website².

A very limited set of narrowband measurements has been made in 5 city centres, covering the frequency range 0.5 – 1000 MHz. Principal findings from the results were that exposures were generally less than 0.02 microwatts per square centimetre ($\mu\text{W}/\text{cm}^2$). In central Auckland, where measurements were made about 500 metres from a main TV/FM radio transmitter, exposures reached 0.04 $\mu\text{W}/\text{cm}^2$. Generally, a relatively high proportion of the exposure could be attributed to AM radio stations.

Public concern and ways to deal with them

The level of public concern seems to be decreasing with very little media coverage, correspondence and public complaint. This lack of perceived public concern may be due to work over the past several years with industry, community groups and the media to provide information that is evidenced-based and also incorporates risk communication strategies. Government agencies have provided advice to local councils, community groups, the media, and industry on health issues associated with EMF. Agencies have used an evidence base for statements, provided proactive public advice and comment, developed and distributed health education information, commissioned and published independent reviews of reports, provided media statements in response to media reports, and maintained up to date websites for the public to access information.

The telecommunications and electrical supply industries have also been proactive in providing information to members of the public before developments of new power line corridors or radiofrequency transmitters proceed. The industries also provide information on request (including exposure levels from sites) and maintain updated websites with links to Government and other useful websites.

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¹ Cook A, Woodward A, Pierce N, Marshall C. Cellular telephone use and time trends for brain, head and neck tumours. New Zealand Medical Journal (116), 475 – 483. 2003

² www.nrl.moh.govt.nz – follow menu choices FAQs and Advice | Radiation in the Environment | ELF and RF Surveys