ACOUSTICS STANDARDS ACTIVITY IN CANADA - 2009

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ABSTRACT

2009/2010 will be a critical year for Acoustical Standards activity in Canada. Traditionally organised under the auspices of the CSA Z107 Technical Committee, these activities may have to find a new home due to budget constraints, either within an expanded Z94.2 committee devoted to hearing conservation or within a reformed Canadian Committee on Standards within the CAA. The final form of this change will become clear in the first few months of 2010.

1. INTRODUCTION

For over 30 years the Canadian Standards Association (CSA) Technical Committee Z107 – Acoustics and Noise Control and its subcommittees have looked after all but one of the 10 Canadian Acoustics Standards (the exception is Z94.2 Hearing Protection Devices, which has its own technical committee) and coordinated other acoustical standards activities. This year, due to budget constraints, the Environment group of CSA has informed the Z107 committee that they can no longer support its activities. Since there is no "White Knight" available to fund its activities, we are looking with CSA at what can be done to find new homes to those activities which can be preserved and decide what standards must be dropped.

At present, CSA is looking at the possibility that Z94.2, the hearing protection committee, can be expanded to encompass Hearing Conservation standards under its Strategic Steering Committee for Occupational Health and Safety Standards. This would expand this group to include three Canadian standards:

Z94.2 – Hearing Protection Devices – Performance, Selection Care and Use, the best selling CSA acoustics standard, referred to in many provincial health and safety regulations, this standard sets out the unique A, B, C designations for hearing protectors.

Z107.56 – Guidelines for Measurement of Occupational Noise Exposure, Z107's top selling standard, again referred to in Federal and Provincial regulations and the first standard of its kind we know of in the world. Its basic approach is now found in many different occupational noise measurement standards around the world, including ANSI and ISO.

Z107.58 - Noise Emission Declarations for Machinery, the newest Canadian acoustics standard, helps customers to buy and manufacturers to certify quiet equipment for industry. Health Canada is expected to shortly come out with a technical guideline promoting its voluntary use. In the European Union, the ISO standards which it summarises are law.

CAN3-Z107.4-M86 - Pure Tone Air Conduction Audiometers for Hearing Conservation and for Screening and CAN/CSA-Z107.6-M90 Pure Tone Air Conduction Threshold Audiometry for Hearing Conservation, are not widely used and while they fit within a Hearing Conservation committee, they might be replaced with similar international or US standards.

This combination of standards would cover measuring noise exposure, buying quiet equipment, hearing protection and measurement of hearing loss, basically the activities required for hearing conservation in industry. As such, they would make a sensible package of acoustical standards to be looked after within the auspices of the CSA Strategic Steering Committee for Occupational Health and Safety Standards.

A final standard, Z107.52-M1983 (R1994) Recommended Practice for the Prediction of Sound Pressure Levels in Large Rooms Containing Sound Sources would fit within this group, but it is quite out of date and as Z107 could not identify any group willing to take it on, it is unlikely it would be transferred to Z94.2.

There is also an Acoustics chapter within the CSA Office Ergonomics standard, written by a working group from Z107. It is likely this group would now be appointed by Z94.2.

The other Z107 standards consist mostly of standards relating to environmental noise, an area outside the purview of Health and Safety. They include:

- CAN3-Z107.54-M85 (R1993) Procedure for Measurement of Sound and Vibration Due to Blasting Operations. This standard requires revision but is referred to by Ontario noise guidelines. It may be withdrawn.
- CAN/CSA-Z107.9-00: Standard for Certification of Noise Barriers. This standard provides municipalities,

developers, road and highway departments, railways and industry with a standard specification which can be used to define the construction of barriers intended to be durable enough for long term use in Canadian conditions. It has been widely cited in both Canada and the US. Specifically it is quoted verbatim in Ottawa regulations and forms the basis for the US Highway Barrier Design Manual. This standard might be suitable for the CSA Built Environment committee.

- Wind Turbines – A group chaired by Brian Howe assisted the CSA wind turbine committee with the acoustical aspects of their standards, specifically with adopting the ISO measurement procedures in ISO 61400.

- ISO 1996 Description, Measurement and Assessment of Environmental Noise has been endorsed by CSA. This endorsation may now be withdrawn. If it is, it will be recommended within Standard Z107.10, discussed below.

In addition, Z107 has traditionally been a venue for reviewing other Canadian standards activities. As such it has subcommittees providing liaison with Canadian Advisory Committees to related ASTM, ISO and IEC committees specifically in Building Acoustics, Instrumentation, Acoustics and Noise. These advisory committees are run by the Standards Council of Canada and are harmonised with the Z107 committee to which they have reported regularly on progress and upcoming issues. Draft international standards are provided on a private website to which members have access in order to review them and recommend Canada's position. It would be useful if these groups could find a home within Z94.2, but they are somewhat broader in scope than just Health and Safety.

The Canadian Acoustical Association (CAA) has agreed in principle to provide a home for those acoustical standards activities not picked up by CSA and to continue the coordinating role carried out by Z107. CAA was originally founded as the Canadian Committee on Standards until it transferred this role to Z107 and since then the two groups have had close ties, with the Z107 meeting being held each year as part of the CAA Acoustics Week in Canada conference.

One standard which would clearly fall within CAA's scope would be Z107.10, Guide for the Use of Acoustical Standards in Canada. This standard is intended to be a review of Canadian and International acoustical standards judged suitable for use in Canada and includes references on the scope of each standard and notes on their use in a Canadian context. The intent was to make this an online standard, upgraded each year and with references to the standards writing organisations where each standard could be purchased. So far, it has been limited to a static paper or pdf version which is slow to update, especially when CSA has no funds for such work. Given the ease of online publication, this is a natural standard for CAA to take over. It can be updated just as originally planned, and published on the CAA website. Available at little or no cost to acousticians and the general public, both in Canada and around the world, this standard's wider availability would promote the use of acoustical standards and also provide a useful service to CAA members, especially the consulting community.

The CSA is one of only four standards writing organisations accredited by the Standards Council of Canada and as such is entitled to write standards which can become National Standards of Canada. While the CAA can prepare standards useful to its members and others willing to use them, its standards will not become National Standards of Canada. This makes it less likely such standards will be recognised in legislation. However it can continue to coordinate the various groups representing Canada on Canadian, US and International standards committees.

This summary outlines the present situation as of December 3, 2009 following a meeting with CSA. Until CSA decides what they wish to do in terms of expanding Z94.2, which will likely happen before March 2010, there is the possibility of further change. However, within CSA or within CAA the acoustical standards activities and coordination will continue. The next full meeting is expected to be in October during the Victoria conference.

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