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TO WHOM IT MAY CONCERN

We from the Department of Chemistry, Materials and Forensic Science of the University of Technology, Sydney are pleased to provide this letter of support for John Harrison, Managing Director, TecEco Pty Ltd. We firmly believe that the implications of the work by John Harrison of TecEco have the potential of revolutionising the production of cement-based materials worldwide.

The TecEco technology has deservedly received worldwide publicity in the last twelve months for its medium and long term potentials and the department is keen to undertake and participate in collaborative research into the new TecEco cement system.

Seven (7) million tonnes per year which equates to roughly $ 900 million dollars worth of Portland cement concrete (PCC) are produced annually in Australia and accounts for more embodied energy than any other material in buildings. Due to growing environmental concerns and the need to use less energy-intensive building products, alternatives and improvements to PC are being actively researched worldwide. In recent years the use of supplementary cementitious materials such as fly ash, blast furnace slag and alkali activated slag, to produce blended PC has increased. In Australia, supplementary cementitious materials now account for 20% of all cementitious materials sold. The increased interest in the use of supplementary materials is largely due to the fact that manufacture of PC is one the biggest single contributors to the greenhouse effect accounting for between 5% and 10% of global anthropogenic CO_2 emissions. To this end, John Harrison from TecEco has recently patented modified PC formulations utilising reactive magnesia which they have demonstrated can be readily blended with other hydraulic cements.

The built environment offers immense potential for sequestration. According to the Australian Federal Department of Industry, Science and Tourism, buildings are responsible for some 30% of the raw materials used, 42% of the energy, 25% of water, 12%of land use, 40% of atmospheric emissions, 20% of water effluents, 25% of solid waste and 13% of other releases. In recent years, the production of Portland cement has come under scrutiny and the concrete industries recognise the need to reduce the impact of concrete made from Portland cement. Now that the Kyoto Protocol has been ratified by many

nations, industrial researcher around the world are examining alternative building products as a means of sequestering carbon and reducing the impact of potential CO_2 taxes as well as for encapsulating industrial wastes. Alternative cements may prove to be more economic in the long run than Portland cements. The use of magnesia cements offers one such possibility.

The magnesia cement technology developed by TecEco offers enormous potential for the development of a new generation of durable, environmentally responsible building product.

Benefits to arise from the technology with further research will include the application of magnesia-based cements to concretes, resulting in increased durability of concretes and steel reinforcement. Longer term benefits will include a lowering of CO_2 emission through partial replacement of conventional Portland cements by magnesia cement and substantial savings in the cost of infrastructure replacements through improved durability of both concrete and the associated reinforcement throughout Australia. The research findings will facilitate the acceptance of the new technology and enhance Australia's reputation to lead the world in sustainable building materials, offering opportunities for sequestration. The technology will also form the basis of a new industry based on magnesite, an ore available in abundance in Australia. General acceptance of new generation cement formulations will provide further export opportunities and enhance Australia's reputation in the international arena as a leading provider of technical innovation.

10/6/03

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