

Project 10/2007 – Recycling of CRT glass from discarded computer monitor and TV sets

Project Number	10/2007				
Project Title	Recycling of CRT glass from discarded computer monitor and TV sets				
Principal Investigator (PI)	Prof. Chi Sun POON, The Hong Kong Polytechnic University				
Project summary	To develop a technology to beneficially reuse glass derived from recycling of cathode ray tubes (CRT) generated from discarded computer monitors and TV sets. The PI will assess the feasibility of replacement natural aggregates by crushed CRT glass for preparing concrete mixes and assess the radiation shielding ability of the produced concrete mixes.				
Project Duration	18 months				
Proposed Budget	<p>The total budget is \$869,500, comprising the following items:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Staff cost – 1 SRA and 1 RA II</td> <td>\$769,500</td> </tr> <tr> <td>General expenses on consumables, small equipment, laboratory charges, transportation and organization of a seminar</td> <td>\$100,000</td> </tr> </table>	Staff cost – 1 SRA and 1 RA II	\$769,500	General expenses on consumables, small equipment, laboratory charges, transportation and organization of a seminar	\$100,000
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Assessments/Remarks	<p>EPD considers the proposal worthy of support. Due to the introduction of the digital broadcast, it is envisaged that there will be a gradual increase in CRT TVs being disposed of over the next few years. The proposed concrete CRT glass product can block the penetration of x-ray radiation, which could be applied in the construction of partition walls at hospitals and laboratories. If the test results are positive, there is also a good potential to use it as a tile in basements and ground floors to cut down on radon emissions from granite into the building.</p> <p>In order to cope with the generation of waste CRTs, the PI has taken the advice of EPD to shorten the project period</p>				

	<p>from 24 to 18 months by adding 1 additional RA whereas the total budget only increases by 11%.</p> <p>External Assessor 1 opines that the proposal satisfies value-for-money and good quality criteria. External Assessor 2 also considers the proposal worth supporting as it gives an alternative to promote the utilization of scrap CRT glass.</p> <p>Members are invited to advise whether the application for ECF should be supported and if supported, the exact amount of fund to be recommended to the ECF Committee for approval.</p>
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Secretariat, ECF Research Projects Vetting Subcommittee
May 2008