Title	High Risk Extra-Low Consequence Design and Management Approach on Nuclear Power plants
Description	Speakers: Ir K P Cheung, Associate Professor, Department or Architecture, The University of Hong Kong, HKSAR and Ir K S Fung, Senior Lecturer, Department of Engineering, Tuen Mun Campus, Institute of Vocational Education, HHSAR. Ir K P Cheung is mechanical engineering and fire safety engineering by background of education and professional training. Ir Cheung has published strategically in the field of fire engineering, among other research interests. He adopts a rational and cross disciplinary approach in research, including using mobile water chilling techniques of the air conditioning industry in removing a large amount of heat from nuclear power plants in nuclear accidents. He is also researching on people protection devices and demountable isolation rooms for controlling airborne infection, and nuclear contaminated air. Ir Cheung is currently Associate Professor in Department of Architecture, HKU. <u>Abstract</u> The **Fukushima** I nuclear accidents (福島第一原子力発電所事故) of March 2011 have induced a lot of international discussion on what the civil sectors should and could do for this accident, and other possible similar accidents happening on nuclear power plants in the future. Traditionally core melt down events of nuclear reactors of nuclear power plants are considered UNTHINKABLE and not attended to. But this did happen in **Fukushima I nuclear accidents on 2011.** There are other 50 nuclear power plants in earthquake active regions in the world, among a current total of 450 nuclear power plants. This seminar will present proposals on closed loop mobile cooling systems as design, operation and management tools, in attaining **High Risk Extra-Low Consequence Performance on Nuclear Power plants.** **“C**ore melt down events” of nuclear reactors of nuclear power plants will no longer be the end events, which will be substituted by “Core Cooled Events”. Based on Cheung’s paper of 1991 on the same concept, the speakers have

	updated the proposal of mobile pumps and water chillers, and mobile electricity generators, to be delivered to site, to provide closed loop water cooling for nuclear power plants. The proposed equipment is commonly available in the air conditioning industry. With proper planning and training, it will take a short time to deliver the equipment to site. Sufficient mobile systems deployed to site will remove the large amount of nuclear power heat from the problematic nuclear power plant, without adding water to the cooling process, and without discharging contaminated water to outside, because the proposal consists of a closed loop cooling circuit on radiation contaminated water. This proposal will turn **High Risk nuclear power plants INTO Extra-Low Consequence power plants, allowing nuclear power to continue to provide energy to people WITH an Extra-high level of Safety.**
Event date	25 (Tue) September 2012.
Assembly Place & Time	Auditorium, Kowloon Tong Fire Station, 3 Baptist University Road, Kowloon Tong, Kowloon / 1815-1930
Fee	Free of Charge
Contact Person	Mr LU Chau-ming
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Remarks	Light refreshment will be served before the seminar.