



Hong Kong Waste Management Association

P.O. Box 28705
Gloucester Road Post Office
Hong Kong

Web Site: www.hongkongwma.org.hk

Message from the Editor:

This Newsletter requires your participation. We would like to hear your experience in implementing good waste management practices in Hong Kong or overseas. If you have an interesting story to tell, please write to me at pk_fung@chevalier.com

Risk-Based Remediation Goals for Contaminated Land Management in Hong Kong – Consultation with Stakeholders, 15 November 2006

– By Mr. Alexi BHANJA

In September 2006, EPD invited HKWMA to comment on its proposals for moving towards risk-based remediation goals for contaminated land management. On 15 November 2006, EPD invited HKWMA and other stakeholders to a consultation meeting at which the new approach was explained and questions were taken from stakeholders. Stakeholders were also requested to provide comments by 8 December 2006. Subsequent to that meeting, HKWMA Members prepared an initial response, which was circulated to those Members who had earlier expressed an interest in preparing the draft response. The final response from HKWMA (a three page letter) included the following key points:

1. The HKWMA is in principle supportive of the current proposal, but the precondition for this support is that the new guidelines should be technically and scientifically sound and cost-effective to implement by the industry.
2. The proposed establishment of RBRG using a generic model for all sites by assuming that every site has same soil / hydrogeological characteristics and chemical exposure pattern deviates significantly from purpose of using risk assessment.
3. Within the 54 Chemicals of Concern (COC) selected, some appear to be less toxic than others. On the other hand, some of the toxic chemicals that are included in the current guidelines are not shown on the proposed RBRGs. Justification should be given to the selection of the COCs and the de-selection of those currently in use.
4. EPD's current proposal is to replace the current remediation goals that are designed for protection of human health, groundwater and ecology by a standard that is based only on human health risk. By eliminating reference to groundwater and ecology, how do RBRGs provide environmental protection?
5. Previous experience has shown that each contaminated site is unique and requires site-specific information to formulate a conceptual site model upon which risk levels are derived and clean-up goals established. A set of pre-determined values derived from a template/generic model, as currently proposed, is insufficient to achieve this and thereby dilutes the benefits normally associated with a risk-based approach.

6. The pre-determined RBRGs were reported to have been derived in a "conservative" manner (i.e. providing more stringent values and offering greater environmental protection) yet this does not appear to be the case (numerous examples cited).
7. The use of soil saturation limits as a tool to determine whether NAPL may be present at a site is unusual, to say the least. Typical methods involve either a rule-of thumb approach or mathematical calculations utilising fraction of organic carbon in soil.
8. The tabulated values of RBRGs have not taken into account the composite human health effects due to presence of multiple contaminants; the effect of multiple sites in the vicinity; and the background levels of contaminants – the concentration of arsenic in soil in some parts of the New Territories is known to be high and would likely exceed the proposed arsenic COC level, thereby classifying large tracts of the New Territories as "contaminated".
9. In terms of exposure scenarios, only four types of premises are considered (i.e. urban residential, rural residential, industrial and public parks) and it is difficult to clearly separate the use of land. Clearly, urban development (where there is the greatest potential for land contamination) will also include retail and commercial operations in multi-storey structures and so additional exposure scenarios should be included to address this. Public parks may include commercial or retail buildings. It might be advisable to tie the types of land uses with existing land use definitions as employed by the Planning Department, with the scope of applicability of the RBRGs being clearly stated.

The letter concluded by stating that "HKWMA welcomes the proposed changes in principle, but without addressing the serious concerns raised above we cannot give our support to the new guidelines as they presently stand."

We have received feedback from EPD on our comments and these will be discussed at the evening seminar on 26 March 2007 "Risk-based Remediation: An Overview of the UK Contaminated Land Regime" – details are provided in "Up-coming Waste Management Events/Conferences in Hong Kong and Overseas" elsewhere in this newsletter.



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Technical Visit to Low Level Radioactive Waste Storage Facility, 2 December 2006

– By Mr. Willy YU

A group of twelve HKWMA members visited Low Level Radioactive Waste (LLRW) Storage Facility at Siu A Chau on 2 December 2006. The facility was built in two years with tremendous engineering efforts to design and build from scratch to a world-class facility on an uninhabited island.

The members got the chance to go into the controlled area of the facility and have a closer look at the state-of-the-art monitoring system and advanced equipments: the remote control semi-automatic electric overhead travelling crane featuring a matrix system to automatically and precisely identify the waste containers; the automatically regulated ventilation

system preventing build-up of air borne matters and maintaining the facility in negative pressure to prevent air leakage to undesired areas and the receiving chamber and glove box which are isolated place for waste sorting, processing, packaging and retrieval etc.

The facility is designed to operate unmanned with all the CCTV images, operational status, and security alarms monitored by a 24 hour monitoring centre run by the contractor in the urban area by means of a microwave transmission system.

The facility is currently handling over 270 LLRW storage containers and its capacity is expected to accommodate the existing as well as future waste arising in Hong Kong in the next century.



Group Photo at the LLRW Storage Facility

International Green Purchasing Congress 2006, 30 November to 1 December 2006

– By Mr. C.F. LAM

On 30 November and 1 December 2006, the International Green Purchasing Congress was jointly organized by the Green Council and Hong Kong Polytechnic University with the support of HKWMA. Our Past Chairman Ir. C.F. LAM was invited to be a member of the Organizing Committee.

The objectives of the congress were to promote sustainable consumption and assist industrial and

manufacturing sectors businesses in planning and implementing eco-innovations and product-based technological advancements. The congress provided a platform for presentations, discussion and exchanges of knowledge and opinions on recent green purchasing initiatives and advancements both locally and internationally.

Distinguished speakers included officials from the United Nations, International Green Purchasing Network and Global Eco-labelling Network, government officials, academics and industry representatives from nine countries.



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Dr. Sarah LIAO, Secretary for the Environment, Transport and Works and Hon. Audrey EU, Chairperson of the Environmental Affairs Panel of the Legislative Council, gave opening speeches.

In this two-day congress, presentations were given on timely and hot topics on green purchasing including global and local perspectives on green purchasing; government green procurement in practice; green markets and practices in China and Hong Kong; international examples of effective green procurement/purchasing strategies and approaches, international examples of effective green procurement/purchasing strategies and approaches, local and overseas case studies on green purchasing practices.

At the congress, the Green Council announced the results of its recent market survey which indicated that 97% of the respondents agreed that the government should take lead in practising green purchasing. Over 80% respondents considered essential to establish a public green product database. This reflected the rising recognition and the importance of green purchasing, in particular, from 1 January 2007, the Mainland Central

Government instructed all governmental units from the central to provincial levels to purchase green products. Moreover, the Green Council indicated that they would launch the Hong Kong Green Purchasing Network to provide a platform for exchanging green purchasing information.

At the end of the congress, Ir. C.F. LAM acted as the modulator of a technical workshop. During the workshop various measures adopted by the Mainland Government in promoting the use of environmentally preferable products were introduced and discussed. The testing requirements and authenticity of China Environment Labelling Scheme were also introduced. In addition, the problems encountered by Hong Kong Government in adopting green purchasing and the ways to promote green purchasing in Hong Kong were investigated.

Through this congress, local business community, industrial companies, and their counterparts in Mainland China, are benefited from the stimulation for and guidance in the application of eco-innovation, environmental performance improvements and sustainability practices.



Group Photo of Guests and Speakers in the Congress

Green Carnival 2007, 28 January 2007

– By Mr. C.F. LAM

This is the fourth year that HKWMA participated in the Green Carnival organized by Green Council at Wan Chai Sports Ground on 28 January 2007. The objective of the event was to enhance environmental awareness of students and members of the public. It was very well received with an attendance of thousands of primary and secondary school teachers, students and their family members.

A number of game booths and educational displays were set up by commercial and educational organizations at the venue. The highlight of the Carnival was the Eco-Hovercraft Tournament. Our Past Chairman Ir. C.F. LAM was invited as the judge for this competition. Three winning teams were selected based on the functionality, innovation and green concept of the models.



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To tie in with our mission of heightening public awareness on waste management, HKWMA set up a booth with displays showing waste management facilities including refuse collection fleets, refuse transfer stations and landfills. Thanks to the contribution of volunteers (university students and graduates assisted by boy scouts) for manning the booth. By taking part in a specially designed recycling game and well explained displays, participants were able to bring home ideas and good practices of sustainable waste management.



Our Past Chairman C.F. LAM (second from the left) was invited as the judge for Eco-Hovercraft Tournament



Our booth has been visited by primary and secondary school teachers, students and their family members

Managing Contaminated Lands in Hong Kong – A Perspective on Current Practice and New Development, 9 February 2007

– By Mr. Alexi BHANJA

Following on from the EPD consultation in December 2006, in which HKWMA was an invited stakeholder, CIWEM arranged a workshop to further explore the risk-based approach to remediation. A number of HKWMA Members attended this workshop and HKWMA was also a supporting organisation.

Topics covered soil contamination due to leakage of sewerage; in-situ and ex-situ remediation technologies for organic and inorganic contaminated lands; environmental and industrial waste management approach to contaminated lands; case studies of remediation of contaminated shipyards for brownfield redevelopment; case studies on site investigation in contaminated land; testing protocols for environmental monitoring & remediation programmes; and mechano-chemical remediation of contaminated soils.

The very strong attendance at this workshop is further evidence that the issue of land contamination continues to be a “hot topic” in Hong Kong. Given this level of interest, HKWMA will be organizing a follow-up evening seminar on 26 March 2007 “Risk-based Remediation: An Overview of the UK Contaminated Land Regime” – details are provided in “Up-coming Waste Management Events/Conferences in Hong Kong and Overseas” elsewhere in this newsletter, and Members should have already received email notification.



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Industry News

Dunwell Scores Brace of International Awards

Dunwell's VMAT oil recycling process won two international awards in October 2006 - the "2006 IChemE Awards - Environment Award" on 5 October 2006 in London, and the "2006 Wall Street Journal Asian Innovation Award - Bronze Medallist" on 31 October 2006 in Singapore.

Dunwell's Managing Director, Ir. Daniel CHENG, said "*These two awards signify our world-class expertise in the areas of technological advancement and cost-effectiveness, and contribute to safety, environmental protection and sustainable use of resources*". He went on to say "*VMAT is an innovative vibrating membrane technology that has numerous applications; it has been used for treatment of landfill leachate, pig waste and industrial wastewater treatment. Internationally, VMAT has been accepted by a number of oil refineries in the USA for recovering water for zero discharge applications*".

For further details, please contact Ir. Daniel CHENG (dancheng@dunwellgroup.com) or visit the Dunwell website at www.dunwellgroup.com

ERM Awarded Waste Management Projects in Hong Kong and Overseas

ERM-Hong Kong's waste team has involved in a number of major waste management projects in Hong Kong and overseas in financial year 2006-7. In early 2006, they started work on two major long-term government waste infrastructure projects for Hong Kong: the feasibility study for the Refurbishment and Modification of Island East Transfer Station and the South East New Territories (SENT) Landfill Extension.

The team has also undertaken waste management Environmental Impact Assessments, waste management-related environmental due diligence exercises and waste management audits for a wide range of oil and gas, power and other industry clients in the region during the year.

For further details, please contact Mr. Frank WAN (frank.wan@erm.com) or visit the ERM-Hong Kong website at www.erm.com

Hyder Consulting Wins EcoPark Management Contract EM&A

In November 2006, Serco Guardian Joint Venture were awarded the seven-year management contract for the operation of EcoPark in Tuen Mun Area 38. Hyder Consulting, who supported Serco Guardian Joint Venture during the tendering process, have been engaged as the Environmental Team for the seven year contract. Duties will include monitoring and audit works of both the Operator and the tenants, advice on EcoPark operations as well as implementation of the Process Review and Design Audit mechanisms (defined in the EIA Report) to ensure that new tenants to EcoPark meet the requirements of the "umbrella" EIA.

For further details, please contact Mr. Alexi BHANJA (alexi.bhanja@hyderconsulting.com) or visit the Hyder Consulting website at www.hyderconsulting.com

BMT Asia Pacific Provides Specialist Advice on Waste Management Strategies

BMT Asia Pacific Limited has been commissioned by a leading multi-national food and beverage packaging company to provide ongoing specialist advice on feasible waste management strategies for Hong Kong and potential opportunities to recycle related packaging material in Hong Kong and in the region.

For further details, please contact Mr. Ben RIDLEY at rbr@bmtasia.com.hk or telephone at (+852) 2815 2221.



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HKWMA News

HKWMA Appointed to Government's EcoPark Advisory Committee

In December 2006, HKWMA were invited to sit on Government's EcoPark Advisory Committee (EAC), the purpose of which is to advise Government on the development of EcoPark. Also invited to sit on the EAC are representatives from the Federation of Hong Kong Industries, the Hong Kong General Chamber of Commerce, the Environmental Division of HKIE and the Environmental Management Division of the Hong Kong Productivity Council. HKWMA Chairman, Mr. Alexi BHANJA, represents HKWMA.

Further details of the EAC can be found at
http://www.epd.gov.hk/epd/english/environmentinhk/waste/prob_solutions/eco_eac.html

Up-coming Waste Management Events/Conferences in Hong Kong and Overseas

- **Seminar on Risk-based Remediation: An Overview of the UK Contaminated Land Regime**

The presentation will cover UK regulations; soil guideline values; a case study on the Thames View Estate, UK, one of the sites for the 2012 London Olympics, for which a site-specific risk assessment had to be undertaken when soil guideline values were exceeded.

Date and time: 26 March 2007, 6:15pm for 6:30 pm to 7:30pm

Venue: Room HJ303, The Hong Kong Polytechnic University, Hung Hom

Guest speaker: Mr. James POTTER, Principal Consultant, Hyder Consulting Limited.

- **Spring Networking Reception**

HKWMA is pleased to announce that the Spring Networking Reception will be held on Wednesday 25 April, 2007, in the Victoria Suite, 1/F Hong Kong Club.

The event is basically HKWMA's traditional Annual Cocktail Reception, moved earlier in the year, with more emphasis on networking and updating Members on current developments in the industry (see "Industry News" elsewhere in the Newsletter). We look forward to seeing you there. A notice and a reminder will be issued to all Members shortly.

- List of seminar and technical visit in 2007 * (Tentative)

- Seminar on EcoPark project
- Technical visit to Dunwell's vibrating membrane waste oil treatment facilities
- Technical visit to Pillar Point Landfill Restoration
- Technical visit to EcoPark
- Technical visit to NENT Landfill Gas Utilisation Plant
- Technical visit to Sai Tso Wan Landfill
- Technical visit to Sludge Incinerator in Macau
- Technical visit to incinerators and off-shore landfill in Singapore (subject to Member interest)

* There will likely be seminars on the sites and facilities prior to the visit.