Grease traps are mandatory in eating establishments to prevent grease from escaping into the public sewers. Proprietary manufactured grease trap systems have been allowed in Singapore when space constraint mega malls started mushrooming in downtown Singapore in the 1990s. Nowadays such systems have become a common sight in large commercial buildings but inherent limitations in design, performance and reliability remain a formidable challenge in operation and maintenance to meet regulatory requirements.

PUB takes a serious view of improper and irregular maintenance of the sanitary system; in particular, grease traps in commercial buildings as this can lead to pollution of our precious water resources and trigger public health concerns. As Singapore continues to expand her downtown area and other regional centers with dense commercial development, a compact and highly efficient grease separation system that facilitates easy maintenance needs to be implemented to maintain a healthy sanitary system, boost real estate value and contribute towards the greening of a sustainable Singapore.

Specially tailored to public utilities engineers, building design consultants, facility managers and specialty plumbers, this seminar takes the participants into an in-depth understanding of the practical issues faced in designing and operating grease separation systems and offers feasible solutions based on latest international plumbing standards and time tested design practices.

Aim:
- Explore the most effective methods of grease control in the United States and compare them against the grease control methods in Singapore.
- Equip participants with the essential know how of implementing effective and compact grease removal system for sustainable facilities development in Singapore and Asian context

Learning Objectives
At the end of the seminar, participants are able to:
- Appreciate the problems associated with Fats, oil and grease (grease) laden kitchen waste water has on the facility sanitary system and public sewer system, especially impact from sanitary sewer overflows.
- Understand the regulation on grease traps according to NEA/PUB code of practice.
- Understand kitchen flow and sources of grease pollution.
- Apply concept of Isolation and Containment in arresting grease problems
- Understand the limitation of a conventional grease trap and how to overcome it.
- Apply the BS EN 1825 and ASME standards on grease separators
- Size and Select the appropriate grease trap in the Singapore (and Asian) context.
- Use innovative pumping systems to effectively dispose greasy waste and kitchen effluent.
- Recover trap grease as a sustainable energy resource and its contribution towards a green building.
Venue:  Singapore Swimming Club (Ballroom)  
45, Tanjong Rhu Road, Singapore 436899  
(Parking at SSC Multi-Storey car park)

Date:  5 August 2011

Time:  9.00 am – 1.00 pm  Seminar  
1.00 pm – 2.00 pm  Buffet Lunch

PDU Points:  Pending PEB’s Approval (will be awarded to attending PEs)

Submit your registration before 29 July 2011 with your name, designation, PE No., company and contact number to:

- Secretariat, ACES (Tel: 63242682), Email: secretariat@org.sg
  Or
- Mr Chia Wai Chon, SPS (Fax: 6295 6166), Email; sinspa@singnet.com.sg

ACES Member registration fee of $10.00

Programme

<table>
<thead>
<tr>
<th>Time</th>
<th>Topics</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>0900 - 1030</td>
<td>Understanding sanitary sewer overflows and Fats, oil &amp; grease (FOG) as the major cause of sanitary plumbing and sewer blockages. Explore the most effective methods of grease control in the United States and compare them against the grease control methods in Singapore.</td>
<td>John Shaffer</td>
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<td>1030 – 1040</td>
<td>Short Break</td>
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<tr>
<td>1040 - 1145</td>
<td>Review of PUB grease trap design and NEA code of practice. Understanding Kitchen flow and point source pollution. Applying the Isolation and Containment concept in arresting grease problems. Understanding the limitation of a conventional grease trap and how to overcome it. Review and apply BS EN 1825 and ASME standards on grease traps and sizing methods</td>
<td>Thomas Chan</td>
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<tr>
<td>1145 - 1230</td>
<td>Practical sizing of grease removal system in the Singapore context with Case studies. Effective and innovative pumping technology for greasy sludge and kitchen effluent disposal. Maintenance tips for problem free operation. Reuse of trap grease as an sustainable energy resource</td>
<td>Leslie Leong</td>
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<tr>
<td>1230 - 1300</td>
<td>FAQ and Discussion</td>
<td>ACES/SPS Participants</td>
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<td>1300- 1400</td>
<td>Buffet lunch</td>
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1. **John Shaffer, President, EEC Inc (www.eecworld.com)**

   John Shaffer is the President and founder of Environmental Engineering and Contracting, Inc. (EEC), an environmental engineering and consulting firm in California. Mr. Shaffer is a wastewater chemist and is best known for conducting the largest research study in the United States on Fats, Oils, and Grease (Grease) control. Mr. Shaffer speaks nationally on the grease control issues on behalf of the EPA, the Water Environment Federation, the National Restaurant Association and the American Society of Plumbing Engineers. He is an expert on sewer blockages caused by grease, and grease control technologies including all forms of grease interceptors, grease traps, or grease removal devices. EEC has designed over 30 grease control programs and has performed over 15,000 grease interceptor compliance inspections.

2. **Thomas Chan, Director, Birkhall Pte Ltd**

   Thomas introduced the first automatic grease trap (with skimming device) into Singapore in 1993 which has become a standard requirement in the PUB sanitary code of practice. As the Master Representative of a world leading manufacturer of kitchen grease removal systems, Thomas traveled widely in Asia helping many organizations from emerging Vietnam to highly developed Japan implement effective grease removal systems that save on real estate and carbon footprint. His experience and projects are highly demonstrated in Singapore where he worked with consulting engineers, facility managers and developers optimize their sanitary system with an ASME certified innovative grease removal system that yields sustainable green returns.

   Thomas is a strong advocate of Education for Sustainability. He is a WSQ certified ACTA trainer and is an executive committee member of the Association of Professional Trainers, Singapore.

3. **Leslie Leong, Sales Manager ITT Water & Wastewater Singapore Pte Ltd**

   ITT Water & Wastewater is the world leader in innovative treatment and pumping technology. Leslie has more than 10 year experience in this field and takes a holistic approach in grease removal and disposal system in the Singapore environment. He will share the practical know-how on the effective sizing of grease trap and pumps with special highlight on the pit-falls to avoid in designing and operation of such systems.