

CHEM DIGEST

A quarterly publication by the Singapore Chemical Industry Council Limited

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- + ChemEx 2014
– The Chemical Industry Experience
- + SCIC Annual Golf Trophy Challenge 2014
- + 13th Meeting of
the Chemical Dialogue

SCIC
SINGAPORE CHEMICAL
INDUSTRY COUNCIL

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the chemical industry experience

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SCIC ChemDigest is a quarterly newsletter by the Singapore Chemical Industry Council Limited. Whilst Singapore Chemical Industry Council Limited takes every reasonable care to ensure that the information in this publication is accurate, Singapore Chemical Industry Council Limited does not accept any responsibility for any errors or omissions. All information is correct as at date of print.

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Singapore Chemical Industry Council Limited

ChemEx 2014 – The Chemical Industry Experience

ChemEx – The Jurong Island Open Day, for the 7th year running is one of the key outreach programmes organised by the Singapore Chemical Industry Council's Chemical Manpower Advisory Committee (CHIMAC).

Held on 2 August 2014, more than 600 students and lecturers from the various Institutes of Higher Learning (IHL) attended this event including the Institute of Technical Education (College East and West), Nanyang Polytechnic, Ngee Ann Polytechnic, Republic Polytechnic, Singapore Polytechnic, Temasek Polytechnic, National University of Singapore, Nanyang Technological University as well as Singapore Institute of Technology.

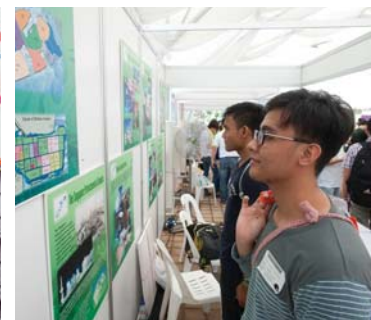
Both the narrated bus tour around Jurong Island and the visit to ChemGallery has provided the students a good overview of the Singapore's petrochemical hub. They also had the opportunity to interact with the Technicians and Engineers during their plant visit and learned more about their job scopes and career prospects that the chemical industry can offer.

After the morning tours, the students were gathered back to the marquee area where they visited the exhibition booths of the participating companies. It was followed by a buffet lunch and some interactive inter-school competition games which then culminated with some lucky draws at the end of the event.



CHIMAC would like to thank all participating companies as well as Institute of Chemical and Engineering Science (ICES), JTC Corporation, Singapore Economic Development Board (EDB), Singapore Workforce Development Agency (WDA) for their support and dedicated commitment in making this event a success. Special thanks to all institutions for their encouragement towards their students' active participation in this event.

For more information on SCIC activities, please send in your enquiries to secretariat@scic.sg



Energy Efficiency Management

Why Energy Efficiency

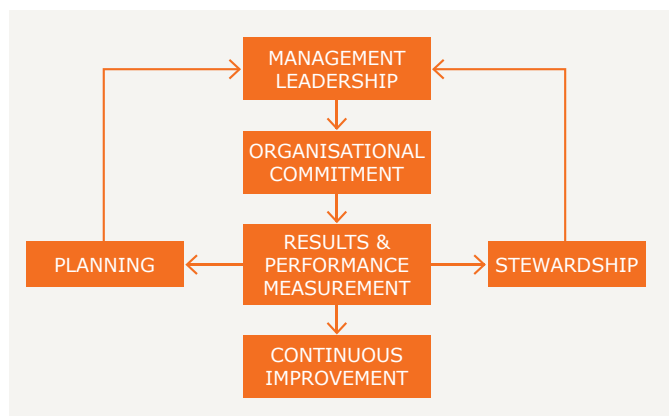
Energy efficiency is one of the key focus areas in the chemical process industry, and has long been regarded as an essential contributing factor in ensuring a secure, affordable, sustainable energy supply. Competitive business environment and tighter margins are creating greater incentives to further identify and develop opportunities for energy efficiency. Uncertain energy prices in today's marketplace significantly affect operating costs, and thus improving energy efficiency is a key determining factor for sustained profitability. Energy typically accounts for a significant part of controllable operating costs in oil refineries and petrochemical plants, with further opportunities for efficiency at attractive paybacks.

Not only does energy efficiency continue to extend our world's energy supplies, it is also one of the largest and lowest-cost ways to reduce greenhouse gas emissions. Energy use is a major source of emissions in the chemical process industry, making energy efficiency improvements an attractive opportunity to reduce emissions and associated environmental costs. Corollary benefits include corresponding reduction in emissions, facilitating compliance with environmental regulations such as SO_x, NO_x, and CO₂ etc. Thus energy efficiency should be an important component of a company's environmental strategy.

Energy Efficiency Management

Similar to any management systems, energy efficiency management also involves a Plan, Do, Check and Act (PDCA) cycle.

An Energy Management System is a combined strategy of utilising management processes and monitoring tools, plant data etc., aimed at continuously optimising energy usage and costs while identifying opportunities for efficiency through sustainable practices.



Management leadership, organisational commitment and personal accountability are required to drive continuous improvement. While management is

uniquely positioned to make energy performance an organisational priority, clear objectives and strong leadership are necessary to get the ball rolling. The real, sustainable, and continuous improvement that follows will in turn require firm commitment throughout the organisation, where real opportunities exist to improve energy performance within process units, equipment, systems and design. Everyone has a role to play, from plant managers to process engineers and equipment specialists to operators. Detailed plans and layered stewardship emphasise accountability for operating results and system performance to drive continuous improvement at all levels throughout the organisation.

Energy Management System

The key elements and focus areas for an Energy Management System are:

→ Energy Performance Monitoring

- Identification of key energy variables for major equipment and process units and continuous monitoring, e.g., furnace excess O₂, stripping steam ratios.
- Monitoring of fouling in heat exchangers, furnaces, etc., and maintaining an effective cleaning program.
- Regular maintenance of major energy users like compressors, heaters, etc.
- Structured identification and repairs of steam leaks and failed steam traps.
- Regular monitoring and optimisation of utilities systems.

→ Performance Gaps and Benchmarking

- Periodic internal and external benchmarking exercises help to identify operational efficiency and structural gaps. This, in turn, aids to build gap closure plans and develop energy improvement roadmap.
- Develop an annual energy plan and set target for each business unit. The annual energy plan can then be broken down to quarterly and monthly targets.
- Measure and track actual energy performance against planned energy improvement items regularly. This helps to quickly identify deviations from plan and promote the proactive development of alternate strategies to meet targets.

→ Organisation accountability and Stewardship

- Improving energy efficiency is not just the business of the energy team in the plant – it is everybody's business. It is thus important to generate energy focus at all levels – right from plant operators to site leadership team.

- The roles and responsibilities must also be made clear at all levels. For e.g., the plant shift teams are engaged on a daily basis to address the gaps in key energy variables, actual vs planned performance bridging, etc.
 - Leadership commitment to energy excellence is of utmost importance. It is vital for the leaders take ownership of the energy roadmap and strive to achieve the targets.
 - Recognise and appreciate value contributions to energy improvement.
- Sustainment and Continuous improvement
- Ensure dedicated resources are in place to continuously look for energy improvement projects, improved work processes, tools, etc.,
 - Adopt structured approach to energy project development and energy efficiency inclusion in all projects.
 - Clear expectations and guidelines are developed for energy efficiency improvement investments.
- Implement best in class technology to drive efficiency by leveraging on research and development programs and adoption of commercially available technologies – For e.g., Enhanced Heat exchanger technologies, Automation and Real time optimisation, etc.
 - Leverage on global network of energy practitioners – sharing lessons learnt and best practices from initiatives at other sites.

As the industry sector accounts for more than half of Singapore's energy demand, the companies in industry sector play a major role in national efforts to become more energy efficient.

Save energy today for a brighter tomorrow!

Contributed by:
SCIC Process & Engineering Committee



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The Human Element
at Work.

BIG SOLUTIONS FOR A GROWING PLANET

Dow combines the power of science and technology to help address many of the world's most challenging problems. Together, the elements of science and the human element can solve anything.

Pictorial Guide on Discharge Operation Protocol – for Flexitank

Required Equipment

- Hoses – 2 sets
- Coupling – 3" Female Camlock fitting – to connect to RhinoBulk



Fig 1 Cross check container and seal number against Bill of Lading



Fig 4 Discharging process commences and to be monitored



Fig 2 Left container closed at all time during loading and discharge operation



Fig 5 Product almost reached completion of discharged operation



Fig 3 Prepare working platform in accordance to safety operation



Fig 6 Empty flexitank folded ready for recycling operation

Courtesy of TransOcean
Contributed by: SCIC L&D Committee

SCIC Annual Golf Trophy Challenge 2014



The Singapore Chemical Industry Council (SCIC) held its Annual Golf Trophy Challenge on 24 July at the Singapore Island Country Club and was well attended by more than 100 golfers and diners. Currently in its 5th year running, this is one of the key networking events organised by SCIC for its members and non-members.

The event commenced at 11 am with registration followed by a light buffet lunch where the enthusiastic golfers had the opportunity to interact with one another. The shotgun tournament then began at 1 pm and continued till 6 pm.

After the game, the golfers proceeded for the networking cocktail session. The networking dinner commenced at 7 pm with an opening speech given by Mr Bay Yew Chuan, Organising Committee Chairman of the SCIC Annual Golf Trophy. The prizes for novelty games; nearest to pin and nearest to line were presented to the 3 lucky golfers.



A total of 40 lucky draw prizes were presented to lucky golfers and diners by Mr Andrew Lim and Mr Kazuyuki Sakata, Organising Committee Members of the SCIC Annual Golf Trophy.

This year champion, Mr Michael Lee was presented with a Callaway Driver X hot 2 driver shaft worth \$938 sponsored by Pride Chem Industries Pte Ltd and a crystal trophy sponsored by Neste Oil Pte Ltd. His name would be engraved on the Golf Challenge

Trophy as well.

SCIC would like to take this opportunity to thank our sponsors, namely David Lim and Partners, Neste Oil Pte Ltd, Pride-Chem Industries Pte Ltd, Singapore Oxygen Air Liquide Pte Ltd and Stone Forest Payroll Serve for their generous support for making this event a huge success. SCIC would also like to thank the organising committee, golfers and diners for their active participation in this event.



Chemical Standards Exchange 2014 – “Building Confidence with Health & Safety Standards”

The robustness and effectiveness of the Health & Safety Standards that we use make our environment safer and healthier to live, work and play.

The Chemical Standards Committee (CSC), one of 12 Standards Committees under the Standards Council, featured the latest key achievements and developments in standards that accomplish these goals through the seminar. The Chemical Standards Exchange 2014 organised on 19 September 2014 at Grand Park City Hall attracted more than 280 participants. The focus on health and safety attracted not only the chemical industry but also its related industries dealing with hazardous materials. This was evident from the continuing flow of registrations right up to the week before the seminar despite being told that the maximum capacity had been reached.

The seminar offered the audience an insight into the current and future national and international chemical standards for the chemical industry. The Chairman of Standards Council, Mr Edwin Khew, announced the election of Singapore into the ISO Council, the highest ISO policy committee, the fourth time Singapore has been elected a member of the ISO Council. Mr Cheong Tak Leong, Director for Standards, SPRING Singapore presented on the National Standardisation Programme driving the quality and standards in businesses.



A panel of distinguished speakers were also invited to share their insights on the key standards project and upcoming projects which are closely related to the chemical industry.

Highlights of New Frontiers in Chemical Standards for Business

- ▶ Dr Keith Carpenter, Chairman of the CSC presented on Stimulating Research – Nanotechnology & Fine Ceramics (Photo – catalysis application)
- ▶ Dr Tay Kin Bee, Deputy Chairman of CSC presented on Supporting Chemicals and Related Industries – Water Sustainability and Plant and Lab Safety



Hazardous Waste Management

- ▶ Mr Richard Reidinger, Convenor of Working Group on CP 100, provided an overview of the upcoming changes to CP100: 2004 Code of Practice for Hazardous Waste Management. Public comments are now being invited for this standard. Please see the following link: <http://www.spring.gov.sg/QualityStandards/Std/Pages/singapore-standards-public-comments-20140820.aspx>
- ▶ Mr Lee Aik Beng, Principal Engineer (Quantitative Risk Assessment/Industrial Allocation), National Environment Agency, presented the highlights of SS 593: 2013 Code of Practice for Pollution Control

Hazard Communication

- ▶ Ms Veronica Chow, Senior Assistant Director (Chemical), Occupational Hygiene, Ministry of Manpower showcased Singapore's implementation of Globally Harmonised System through Singapore Standard SS 586 Hazard Communication for Hazardous Chemicals and Dangerous Goods. Ms Chow informed the audience that the MOM deadline for mixtures (for users) was extended by one year to Mid-2016.

Process Safety

- ▶ Ms Jaime Lim, Convenor of Working Group on SS 506, highlighted the key revisions in the Singapore Standard SS 506: Part 3 Occupational Safety and Health (OSH) Management Systems - Requirements for the Chemical Industry
- ▶ Ms Ng Mee Lin, Section Manager, HSE & Technical Coordination, The Polyolefin Company (S) Pte Ltd presented an outline of the the Implementation of Process Safety Performance Indicators (PSPI)

Paint industry briefing session on wet-scrub resistance

A new Singapore Standard SS 5 *Methods of test for paints, varnishes and related materials – Part F6 – Determination of wet-scrub resistance* was developed to replace the Singapore Standard SS 5 *Methods of test for paints, varnishes and related materials – Part F5 – Washability (Wet abrasion) of emulsion paint*. A Standards Working Group (WG) under the Technical Committee (TC) for Surface Coatings had been appointed to review SS 5 : Part F5 : 2003 which adopts the Federal Standard, FED-STD-141A: 1965 Method 6142. As this Federal Standard, a qualitative test, has been cancelled without replacement and some of the equipment used are increasingly difficult to source, this WG on SS 5 recommended the development of SS 5 : Part F6. This new standard is a modified adoption of a quantitative test, ISO 11998 : 2006 *Paints and Varnishes – Determination of wet-scrub resistance and cleanability of coatings*.

The change of test method from qualitative to quantitative affects 3 major performance paint standards (SS 150 Emulsion paints for decorative purposes, SS 345 Algae resistant emulsion paint for decorative purposes and SS 500 Elastomeric wall coatings). Over 90 samples of SS 150, SS 345 and SS 500 were submitted by paint manufacturers for a round robin on washability tests.

An industry briefing session on wet scrub resistance was held on 20 Jun 2014, during the public comment period of the SS 5 Part F6, to inform the paint industry on the following:

- the tests supporting the upcoming SS 5 Part F6 standard
- how to conduct the test using SS 5 Part F6 method
- wet-scrub resistance for SS 150, SS 345, SS 500 (in terms of mean loss of film thickness)
- standards implementation timeline

Prior to the above industry briefing session, three stakeholder feedback sessions were held in June, July and December 2013 respectively to solicit feedback from the paint manufacturers. In May 2014, the TC for Surface Coatings approved the WG's recommendations and the proposed requirements for wet-scrub resistance were issued for public comment from 2 Jun to 1 Aug 2014.



The table below summarised the new requirements for wet-scrub resistance for SS 150 Type 1 and Type 2, SS 345 and SS 500 paints which have recently been approved by the Chemical Standards Committee.

Paint Type	New requirements for wet-scrub resistance
SS 150 Type 1	not more than 20 μm mean loss in film thickness
SS 150 Type 2	not more than 35 μm mean loss in film thickness
SS 345	not more than 10 μm mean loss in film thickness
SS 500	not more than 10 μm mean loss in film thickness

The new standard, SS 5 Part F6, as well as the amendments to SS 150, SS 345 and SS 500 will take effect and be reflected in HDB's specifications once they are officially launched on 30 Jan 2015.



Process Safety Management (PSM) Engagement Seminars

The Process Safety Management (PSM) Engagement Seminar Series was held on 13 August and 26 September 2014 which offered a comprehensive overview of the local PSM regulation and an in-depth look into PSM elements. This seminar series, an initiative of the SCIC's Process and Engineering Committee, attracted close to a total of 100 industry members.



managing process safety. Specific PSM elements ie. Hazard Identification, Safe Work Practices, Pre-Startup Safety Review, Management of Change, Control of Hazardous Substances and Emergency Response were highlighted in the seminars.

The sessions provided participants with an appreciation of the scope of PSM elements that constitute a comprehensive PSM programme. Through understanding the role of PSM in managing the risks of a chemical process facility which handles hazardous materials, the participants can better grasp the techniques to properly manage these risks.

To continue the effort in building capacity of process safety in the industry, SCIC is organising the Workshop on Process Safety Performance Indicators (PSPI) on 17 Oct 2014, 9am to 5pm at Singapore Polytechnic Graduates' Guild.

Each interactive session also enabled the participants to learn methodologies and technical elements in

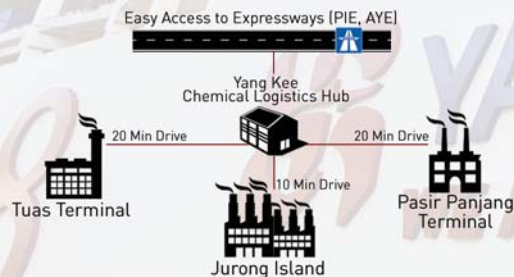
Interested members, please visit the link below for more information: <http://www.scic.sg/index.php/upcoming-events-test/event/173-workshop-on-process-safety-performance-indicators-pspi>



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Chemical Watch Regulatory Summit – Asia

The Chemical Watch Regulatory Summit – Asia was held on 3 September 2014 at Marina Mandarin, Singapore. Organized by Chemical Watch, the one-day summit was attended by practitioners of regulatory compliance, product stewards and industry professionals. The Summit assembled a diverse panel of industry experts to share updates on regulatory affairs in the chemical industry, and their thoughts on said changes.



Perspectives from Korea, China, India and the European Union were also extensively shared at the Summit. EU-REACH was given coverage as well in recognition of EU-REACH's prevalent influence on regulatory trends in Asia.

Q&A sessions were held following every few presentations, providing participants with a brisk pace of different topics and giving participants a wide range of potential queries, and provided an interesting and varied discussion for

every Q&A session.

The one-day Summit was attended by more than 80 participants – panellists included. The leading panellist, Ms Cissie Yeung, Product Regulatory Manager, APME – Downstream, Shell Eastern Petroleum and Chairman of the Regulatory Affairs Committee of SCIC opened the Summit as the panellists covered topics ranging from the updates of regulations in Malaysia, China and the USA, and also provided perspectives and feedback from the industries affected by these regulatory changes.

At the conclusion of the final Q&A session, Ms Cissie Yeung closed the Summit and thanked the panellists for their invaluable contributions towards greater knowledge and understanding of regulatory affairs for the chemical industry, not only for Asia but for the global stage.

For more information on key highlights and learning points from this summit, please refer to the following link (For SCIC members' access only): <http://www.scic.sg/index.php/members-corner/membersresourcespublic>

Courtesy visit to Association of International Chemical Manufacturers (ACIM)



The key objective of the Emerging Regulations Working Group of the SCIC Regulatory Affairs Committee which was formed recently, aimed to establish a platform for the chemical industry to discuss regulatory and technical matters that have technical barriers to trade (TBT) impacts. Through such platforms, it will enable emerging regulations to be shared among the

members and thus enhance the knowledge building capacity in complying with these regulations. This will ultimately benefit both MNCs as well as Singapore-based companies.

Ms Cissie Yeung, Chairperson of SCIC Regulatory Affairs Committee paid a courtesy visit to the ACIM and was hosted by Ms Beryl Ma, Executive Director of AICM. There was a fruitful discussion and exchange of information on the following:

- Regulatory related issues in China such as China REACH, Hazardous Chemical Registration and the new SDS GB Standard.
- Progress updates on China Petroleum and Chemical Industry Federation (CPCIF)

This is part of the efforts in building a close working relationship with counterpart chemical associations such as AICM, ACC RAIN, KCMA etc and promoting active sharing of regulatory updates and information in respective countries.

SCIC-Accidents Investigation Workshop

The investigation of incidents and critical near-misses must form an essential part of any safety improvement strategy. The identification of weaknesses in Safety management systems that failed to prevent the incident or near-miss from happening is not only crucial, it will also provide learning opportunities for employees so as to prevent future occurrences.



10 July 2014 for participants to learn more about such a process and why it is important for safety improvement.

Other topics that were discussed including linking root causes to management system failures, knowing the effectiveness of the accident investigation, barriers to an effective investigation as well as review of case studies.

Understanding of the incident investigation process and its pitfalls are crucial in ensuring that an effective process exists in any company. Hence, a full day workshop on Accidents Investigation was organised on

The workshop has been awarded a total of 7 SDU points under the Continuing Professional Development (CPD) programme for Registered Workplace Safety & Health Officers.



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The world is growing. Every day, more people, vehicles, homes and factories are driving an ever-increasing demand for energy. That's why ExxonMobil is investing more than US\$1 billion annually in research, development and technology application — part of our commitment to developing the breakthrough technologies required to meet the world's rapidly growing energy needs.

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Learn more about our work at exxonmobil.com.sg

SCIC-MOM Dialogue Session 2014

On 14 August 2014, the Ministry of Manpower (MOM) and the Singapore Chemical Industry Council (SCIC) jointly organised a dialogue session for the industry members. The dialogue was co-led by Commissioner Ho Siong Hin, Director of Occupational Safety and Health (DOSH) of MOM and Mr Akira Yonemura, SCIC Board of Director.

The dialogue session started with a warm welcome speech by Ms Cissie Yeung, Chairperson of SCIC Regulatory Affairs Committee, followed by Commissioner Ho's opening address. Following was a presentation of an overview of SCIC's initiatives and past events/planned events by Ms Cissie Yeung.



MOM then shared the following initiatives to the industry:

- Overview of Workplace Safety and Health Statistics in Chemical Industry
- Update on Pressure Vessels (PV) Extension
- Update on Combustible Dust Project
 - Sharing of Finding of Bulk Oil Terminal Project
- Update on WSH (Asbestos) Regulations
- SS 506 Part 3- An Update
- Updates on Globally Harmonised System of Classification and Labelling of Chemicals

The dialogue session further provided a platform for participants to raise queries that they had pertaining to the topics which were presented. In closing, MOM took note of all the feedback from the industry and will continue to work closely with the industry through SCIC on future chemical-related regulatory matters.

SCIC-SCDF Dialogue Session 2014



On 25 September 2014, the Singapore Civil Defence Force (SCDF) and the Singapore Chemical Industry Council (SCIC) jointly organised a dialogue session for the industry members. The dialogue was co-led by LTC Ng Geok Meng, Assistant Director Hazmat Department (Industrial Risk) of SCDF and Mr Akira Yonemura, SCIC Board of Director.

This dialogue session is part of SCIC-Regulatory Affair Committee's workplan to have a series of dialogue sessions that SCIC organises annually with key government agencies to continue the close engagement between government and industry.



The dialogue session started with a warm welcome speech by LTC Ng Geok Meng.



Following up, Ms Cissie Yeung, Chairperson of SCIC Regulatory Affairs Committee presented an overview of SCIC's initiatives and past events/planned events. SCDF shared the following initiatives to the industry:

- Fire Statistics
- Fire Incidents
- Update on Petroleum & Flammable Materials Pipeline Licensing Regime
- Update on Petroleum Materials Storage Licensing Regime
- Update of the new regulated Petroleum & Flammable Materials

The dialogue session further provided a platform for participants to raise queries that they had pertaining to the topics which were presented.

In closing, SCDF took note of all the feedback from the industry and will continue to work closely with the industry.

The slides presented would be uploaded to SCIC website (For SCIC members only): <http://www.scic.sg/index.php/members-corner/membersresourcespublic>

Oronite Completes Major Expansion

Chevron Oronite has completed a major expansion of its lubricant additive plant in Singapore. Already the largest additive manufacturing facility in the Asia-Pacific region, the expanded site will help Oronite meet expected increases in lubricant demand as countries such as China, Indonesia, Thailand, Vietnam and Malaysia as they continue to build infrastructure and upgrade their transportation systems.

Additives produced by the Singapore facility are currently used to improve the performance of lubricants in passenger cars, heavy-duty trucks, marine vessels, locomotives, tractors, construction equipment and natural gas engines.

Expansion of the plant, which is located on a 57-acre (23-hectare) site on Jurong Island, began more than two years ago and touched virtually every aspect of the facility. Upgrades include:

- New reactors to increase dispersant production capability
- Increased overall storage capability for raw materials and intermediate products
- A new quality control lab for efficient product sampling
- An expanded central control room to upgrade production control processes
- New blending and shipping facilities to increase delivery efficiency, including new ISO tank [portable tank] loading bays, expanded ISO-tank parking and a new jetty loading arm
- Chevron Oronite Celebrates Singapore Expansion

The expansion of Oronite's manufacturing facility is the culmination of a multi-discipline approach and in this visual we look at the efforts of those involved.

The successful completion of the expansion was commemorated at an event last month in Singapore. Guests included customers, suppliers, contractors, representatives from the Economic Development Board and the JTC Corporation, Singapore's principal industrial development agency. Lim Hng Kiang, minister of Trade and Industry for Singapore was the guest of honour.

Speaking at the event, Jirong Xiao, vice president, Sales & Marketing, Chevron Oronite, welcomed guests, recounted Chevron Oronite's longstanding commitment to the Asia-Pacific region and thanked everyone who contributed to the project's success.



"The hard work of hundreds of Oronite employees and contractors, combined with the effective collaboration and outstanding support of the Economic Development Board, the JTC Corporation and other Singapore authorities, will help ensure Oronite remains the premier manufacturer of additives for fuels and lubricants in this region for years to come," said Xiao. "With this expansion, we are in an even better position to continue reliably supplying customers around the world through our global supply chain."

Xiao went on to tout the expansion project's safety performance. "Even though extensive construction took place in the middle of an operating facility, we collectively logged over 6.6 million work hours without any injuries prompting a day away from work, and there were no process safety incidents. Our workers went home safely every night, and our customers enjoyed an uninterrupted supply of product."

Contributed by: [Chevron Oronite Pte Ltd](#)



Report of the 13th Meeting of the Chemical Dialogue

12 August 2014 – Beijing Hotel, Beijing, China

On 12 August 2014, 79 representatives from 17 APEC economies attended the 13th Meeting of the Chemical Dialogue ("Dialogue") in Beijing, China. The Dialogue took place after three days of related meetings: the Industry Pre-Meeting ("IPM") on August 9, the joint meeting of the Regulator's Forum ("RF") and the OECD New Chemicals Clearinghouse on 9-10 August, and a workshop on Advancing Regulatory Cooperation in Chemicals on 11 August.

The Dialogue agreed on the following action items to support its work program as follows:

Overview Emerging Challenges facing Chemical industry

Meeting Summary

Discussion of Key Elements of the Strategic Framework

Shared Goal 1: GHS Implementation

1.1 Consolidation of GHS-related work

– Led by Australia

- Australian industry presented the results of its survey on GHS priorities that it developed and circulated in response to an action item from the CDSG. 13 responses were received. These concluded that the CD's highest priorities should be: (1) the need for training of regulators, businesses, and end-users; (2) the need to publish plans in advance; and (3) the need for adequate transition times.
- The three key challenges are: (1) the different building blocks being used; (2) the divergence in classification; and (3) lack of capacity to implement GHS.
- These responses were similar to those that were received as part of the GHS reporting template which had concluded that the priorities and challenges were: (1) the need for capacity building particularly amongst SMEs; (2) divergent classifications leading to different labels; (3) different building blocks; and (4) increased testing of mixtures.

1.2 Updates on Regional GHS Implementation and Emerging issues

- Singapore's Ministry of Manpower representative Ms Veronica Chow, Senior Assistant Director (Occupational Hygiene) provided an update regarding Singapore's implementation of GHS. In 2005, Singapore began a gap analysis through a GHS Task Force composed of the Ministry of Manpower, Industry and the Singapore Chemical Industry Council ("SCIC"). The strategy was to analyze the regulatory

framework, promote implementation of GHS, build capacity, engage stakeholders, and develop partnerships.

- Some of the challenges Singapore identified included identifying the custodian for the GHS Task Force, aligning its legislation, undertaking an impact analysis, meeting implementation timelines, conducting outreach to SMEs, training workers, and practical administrative issues in developing the new system. To address these challenges, Singapore adopted a holistic whole of government approach, identified a lead agency to champion, implemented compliance assistance, consultation and engagement, and capability building, and has undertaken targeted intervention/enforcement.

- Singapore indicated its willingness to put a link to the G.R.E.A.T. resource on Singapore's GHS website.

1.3 Status of G.R.E.A.T Project

Chinese Taipei summarized its report regarding the ongoing development of the G.R.E.A.T. project. Chinese Taipei noted that it welcomed any suggestions to improve the site, particularly those that helped to meet the CTI priorities discussed earlier.

Shared Goal 2: VWG on Marine Debris

The United States industry introduced this item. In July 2014, the CD formally established a VWG on Marine Debris, building on the presentations that had been made to the CDSG and the Oceans and Fisheries Working Group ("OFWG"). This is a first for the CD insofar as it is the first time it has created a VWG with another APEC forum. The VWG will look at innovative solutions to marine debris.

Shared Goal 3: Emergency Response

ACC provided a brief update regarding its ongoing work on an emergency response website. The website (www.global.chemtrec.com) has been reported several times and is a global emergency response website for first responders. It is a public resource and has been welcomed by both the Emergency Response Working Group and Trade Ministers, but the website can only be as good as the information it contains. ACC therefore requested that all participants review the website and verify that the information related to their economy is correct.



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*Care for the Health,
Safety and Environment.
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PEOPLE

Welcoming New Committee Members

SCIC would like to extend a warm welcome to the following members and companies into the:

PROCESS & ENGINEERING COMMITTEE

Mr Jonathan Ng

Process Safety Manager
Shell Chemicals Seraya Pte Ltd

Appreciation to Committee Members

SCIC would like to express its thanks to the following committee member for their outstanding contributions to SCIC during their tenure as a member of the following committee:

REGULATORY AFFAIRS COMMITTEE

Mr Au Wing Kuen

ExxonMobil Chemical Operations Pte Ltd

PROCESS AND ENGINEERING COMMITTEE

Mr Vincent Koh Meng Xuan

Shell Chemicals Seraya Pte Ltd

RESPONSIBLE CARE & REGULATORY AFFAIRS COMMITTEE

Mr Varian Han

Borouge Pte Ltd

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 www.asahi-kasei.co.jp/asahi/en/

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For more information on SCIC membership, please send in your enquiries to secretariat@scic.sg

SCIC Responsible Care Good Practices Sharing Workshop

Following the first series of the Responsible Care good practices sharing workshop on 30 May 2014 which covered Distribution and Product Stewardship codes, the SCIC Responsible Care committee organised the next two Responsible Care good practices sharing workshops on:

- Community Awareness & Emergency Response and Employee Health & Safety on 17 July 2014
- Pollution Prevention and Process Safety on 22 July 2014

SCIC would like to thank the SCIC Responsible Care code leaders and the speakers for their time and support in sharing with the participants at the workshop:

Responsible Care workshop (Community Awareness & Emergency Response Code)

SCIC Responsible Care Committee – Community Awareness & Emergency Response (CAER) Code Leaders:

Ms Hannah Yu - Shell Chemicals Seraya Pte Ltd
Mr Tay Cheng Pheng - Chevron Phillips Chemicals Asia Pte Ltd
Mr Ooi Tiat Jin - Absotech Pte Ltd

Good practices sharing by:

Ms Dahliyah Hamid - Bayer (South East Asia) Pte Ltd
Ms Tee Ling Li - The Polyolefin Company (S) Pte Ltd

Responsible Care workshop (Employee Health & Safety Code)

SCIC Responsible Care Committee – Employee Health & Safety (EHS) Code Leaders:

Mr Vinay Narshimha Nayak - DuPont Company (Singapore) Pte Ltd
Mr Yeo Soo Hock - Infineum Singapore Pte Ltd
Mr Tay Khoon Eng - The Polyolefin Company (S) Pte Ltd

Good practices & regulatory updates sharing by:

Mr Yeo Soo Hock - Infineum Singapore Pte Ltd
Mr George Ong - Lucite International Singapore Pte Ltd
Mdm Jaime Lim - Ministry of Manpower

Responsible Care workshop (Pollution Prevention Code)

SCIC Responsible Care Committee – Pollution Prevention (PP) Code Leaders:

Mr Andrew Ong - Dow Chemical Pacific (S) Pte Ltd
Mr Lim Choon Meng - Singapore Oxygen Air Liquide Pte Ltd

Good practices & regulatory updates sharing by:

Ms Ng Chai Ling - Petrochemical Corporation of Singapore (Pte) Ltd

Responsible Care Workshop (Process Safety Code)

SCIC Responsible Care Committee – Process Safety (PS) Code Leaders:

Mr Ng Chee Wai - Petrochemical Corporation of Singapore (Pte) Ltd
Mr Kew Jin Woon - Eastman Chemical Asia Pacific Pte Ltd

Good practices & regulatory updates sharing by:

Ms Shum Wei Ling - Dupont Company (Singapore) Pte Ltd
Mr Viren Pandya - ExxonMobil Chemical Asia Pacific
Mr Jonathan Ng - Shell Chemicals Seraya Pte Ltd



Such Responsible Care good practices sharing workshops are organised annually by the



committee which served as excellent platforms for fellow practitioners of Responsible Care member companies to gather, network, share and exchange of valuable information. These industry sharing on experiences and good practices by award winners with the participants could ultimately benefit the chemical industry and improve the health, safety and environment performances.

Responsible Care Co-ordinators Get-Together Session



On 12 September 2014 afternoon, more than 40 company's Responsible Care Co-ordinators gathered together. It was a fruitful networking session among the fellow colleagues from the Responsible Care member companies and the SCIC Responsible Care committee members.

In the welcome remarks by Mr Mani, Vice-Chairman of SCIC and Director of the SCIC Responsible Care committee, he emphasized the importance of a company's Responsible Care co-ordinator role towards the successful implementation of the Responsible Care programme. With the support from the company's management, Responsible Care co-ordinators oversee the overall implementation of the initiative effectively within the company and act as the main focal point between the company and the SCIC.

The highlights of the session included the presentation a token of appreciation to all Responsible Care co-ordinators as industry recognition for their commitment and support towards the implementation of the Responsible Care programme in Singapore.



The networking session also provided an excellent opportunity to gather feedback on concerns faced by companies in their implementation journey and sharing of ideas on types of Responsible Care programmes/events that could be organised and be value-add to companies.



🔍 Forthcoming Events

2014 < >

15 October

Logistics & Distribution Conference 2014

17 October

Workshop on Process Safety Performance Indicators (PSPI)

24 October

Water and Energy Savings using Low Temperature Thermal Desalination Technology for the Chemical Industry

30 October

SCIC-Annual General Meeting 2014

31 October

14th National GHS Seminar

October

Training Workshop on Globally Harmonised System (GHS) for Chemical users

October

Workshop Management of Hazardous Chemicals Programme

7 November

SCIC Year End Cocktail 2014

12 November

SCIC-NEA Dialogue

November

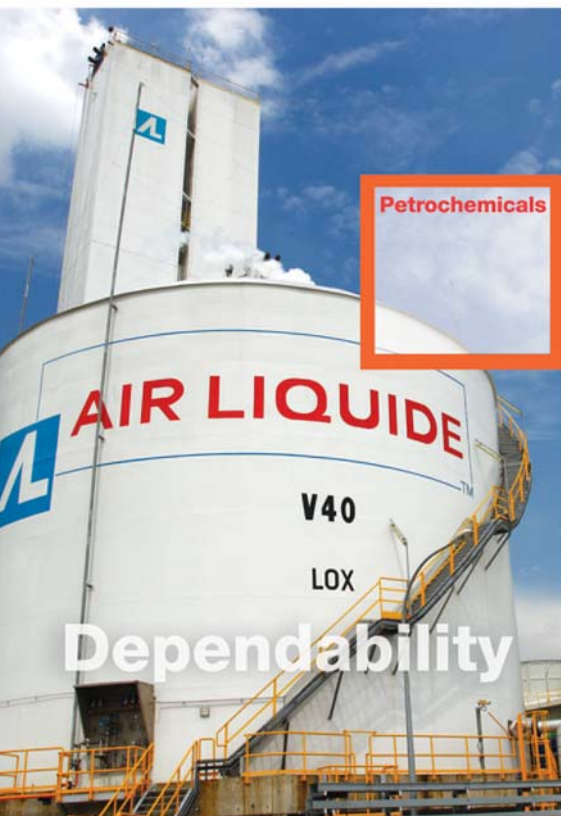
Training Workshop on Globally Harmonised System (GHS) for Chemical users

November

Workshop Management of Hazardous Chemicals Programme

For more information on the dates of these training courses, you may visit our website at www.scic.sg or contact SCIC at secretariat@scic.sg

Note: SCIC may change/amend the events listed above without any prior notice.



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