Malaysia’s Chemical Industry: A National and Regional Force

Improving the Environmental Performance of Chemical Products

The Life Cycle Management of Chemicals for a Safer Workplace and Environment

Interview with the Director of W.R Grace
The rapid development here has also spurred infrastructural growth across a variety of sectors—which will undoubtedly affect both market players and the people in a positive way—and ignited interest in the region’s abundance of biomass, which has been used as a selling point to attract over US$3 billion of investments.

The presence of various multinational chemical companies in the ECER underpin the integrity of the chemical industry here, and two of our feature articles will take a peek into the challenges and solutions within this interesting industry. Firstly, we will be examining how the chemical industry’s very high-energy use has prompted a re-look into the way chemical manufacturing is conducted. Several new techniques that are currently being developed to alleviate this situation will also reduce the carbon footprint of chemical manufacturers.

Secondly, we will investigate how improvements in life cycle management in chemical companies have their own unique considerations and how contemporary solutions help these companies secure their workplace and the environment.

President’s Message

Much has happened since our last issue, not the least of which was the very much-awaited 13th General Election. The economy at large and those in the corporate sector are keenly waiting to see the new direction taken by policymakers, and how quickly key changes will be implemented. For the second half of the year, positive growth estimates have been reported by various financial institutions to the delight of all and sundry.

Negotiations over the Trans-Pacific Partnership Agreement (TPPA) have recently begun, signaling an important development in Malaysia’s exposure to free trade in the region. The government has stated that it has adopted a position whereby it will not ratify the TPPA if it proves to be disadvantageous to Malaysia.

Apart from growing domestic production, Malaysia is establishing itself as a “Gateway to Asia” with several petrochemical majors now using Port Kelang as a Staging Post for export of Middle East and European products into China and Asia.

The chemical industry is a fast developing one and that is why we would like to shine the spotlight on this very important industry in Malaysia that has not only benefited us but increased the nation’s stature in the region and the world.

We hope you enjoy this issue and take this opportunity to learn about an important sector in our economy.

Simon Whitelaw
President MICCI
TPPA - A Hornet’s Nest

Over the last few weeks TPPA seems to have dominated both the Malaysian business media, the private sector generally and the minds of MITI officers from top to bottom.

The TPPA, or Trans Pacific Partnership Agreement is a “high-standard” trade agreement currently being negotiated by Malaysia with some dozen or so Pacific rim nations.

Initiated in 2005 as the Trans-Pacific Strategic Economic Partnership Agreement by Singapore, Chile and New Zealand with Brunei joining shortly thereafter, the Agreement took off with the participation of the USA in 2008 and quickly picked up additional interested parties including Malaysia.

Intended to be a “high-standard” agreement with chapters dealing with newly emerging trade issues beyond the usual tariff and access elements, the negotiations have drawn criticism and protest from the public, NGOs, and others, in part due to the expansive scope of the agreement, and a number of controversial clauses in drafts leaked to the public.

MICCI has been tracking the TPPA developments and has stated its support for the ongoing negotiations being led by MITI and other government ministries. While there are undeniably difficult elements in the agreement, this should not undermine the government’s resolve to deliver a comprehensive agreement that puts Malaysia at the forefront of liberal and competitive economic powers.

Malaysia has successfully negotiated more than 10 FTAs and can be relied on to achieve a balanced result that sustains its position as an attractive investment destination and trading partner without sacrificing its autonomy or sovereignty. It is true that any trade agreement is ultimately a compromise and it is possible that certain Malaysian “red lines” could unhinge the agreement. However, the other participating nations are equally interested in reaching a final agreement, so that they too must be prepared to compromise and seek consensus.

Ultimately, the TPPA is not about trade today or even tomorrow. It is about forging a long term alliance that will create for its partners a beneficial and sustainable trade and investment framework that is world class in concept and delivery. If Malaysia is to maintain its global position as a pre-eminent trade and investment destination it must be prepared to lead from within.

MICCI will continue to monitor TPPA and advocate a pro-active approach to FTAs generally as a vital component of economic growth as the country seeks to achieve its 21st century socio-economic goals.
Thank You

Dato’ Seri Nazir Ariff

MICCI is privileged to have the support of many foreign and local business persons who man our Councils, Task Forces and, of course, provide the administrative expertise to manage and develop our regional offices.

The leadership provided by these individuals is invaluable, although inevitably, changing business or personal circumstances means they must stand down at some time. It is rare for the Chamber to be able to draw on such support for a very long period but it does happen occasionally and we are always sad to lose such staunch supporters after years of contribution to MICCI.

Such a situation is with us now as our long time Penang Branch Chairman, Dato’ Seri Nazir Ariff, steps down from his leadership position in the North.

Dato’ Seri was appointed as the Penang & North Branch Chairman in 1992 and aside from a short hiatus in 1997/1998, has led the MICCI Branch for over 20 years until 2013, an exceptional accomplishment.

Dato’ Seri Nazir has brought his dynamic but personable approach to his leadership role along with his business acumen and strong local contacts, all of which have helped the Penang & North Branch sustain its strong presence in the Penang business community.

While Dato’ Seri remains as a valued member of the Penang Exco he has handed over the Branch Chairmanship to Brian Tan who now takes on the daunting task of filling Dato’ Seri’s shoes.

The Chamber extends its sincere thanks to Dato’ Seri Nazir for his long and exemplary service to MICCI.

Simon Whitelaw
President MICCI
Malaysia’s Chemical Industry: A National and Regional Force

Over the past two decades, chemicals manufacturing has shifted from its former stronghold in Europe and latched on the welcoming embrace of Asian nations whose impressive economic growth and competitive qualities have proven too tempting. As it stands, Asia is the world’s foremost chemicals manufacturing region today with China being the biggest producer, although it remains a net chemicals importer. Not surprisingly, Malaysia has been a destination of choice for many chemical manufacturers as our nation has progressed from a commodity-based economy to a manufacturing-based one in as many decades. Government policy in the 1980s has set us on this trajectory and invited foreign direct investment (FDI) that underpinned the growth of the secondary sector and, hence, our national economy.

Broadly speaking, the chemical industry in Malaysia can be classified into four categories, which are: petroleum products and natural gas; chemicals and chemical products; plastics products; and rubber products. Malaysia’s crude oil and natural gas reserves, which are the 24th and 14th largest in the world respectively, have proven to be a significant contributor to the manufacturing of petrochemicals, which are a major export category. These raw materials—or feedstock, as they are also known as—can be provided at competitive prices that are compelling enough to have drawn over US$9 billion in investments from petrochemical and chemical manufacturers. That Malaysia also plays host to the world’s largest liquefied natural gas (LNG) production facility—in Bintulu—only adds to its list of strengths in this area of economic activity. Much of our export in this sector will be bound for China, whose intense levels of consumption require it to tap onto the ASEAN region for its supply of chemicals. Malaysia’s advantage with regard to its neighbours is that it also manufactures chemicals and petrochemical derivatives that are used by downstream industries in China. The petroleum and petrochemical industry and its three sub-sectors—natural gas, petroleum products, and petrochemicals—in Malaysia have passed a significant milestone because of these developments. As more petrochemical plants are built in Malaysia, the national chemical industry will be increasingly capable of producing various types of petrochemical products and this has thus made us a net exporter of major petrochemical products.

In the first half of 2013, 20 projects in the Malaysian chemical industry totalling a little over RM1.5 billion were confirmed. Billions are pouring into Kerteh, Kemaman, and Iskandar where chemicals manufacture has a significant presence. For example, the CJ CHeilJedang Corporation, from South Korea, and Arkema, of France, are investing RM2 billion to develop the world’s first integrated bio-methionine and thiochemicals plant in the Kerteh Biopolymer Park. The petrochemicals industry in the Iskandar Region alone netted RM5.7 billion worth of investments in 2012. Out of these impressive figures come another piece of good news in that Malaysia has become a prime source for the chemical, petrochemical, and oil and gas industries. New and emerging technologies were heavily invested into in 2012 across various industries including the biotechnology, petroleum, and petrochemical products sectors. Oleochemicals, which are chemicals derived from animal fats or vegetable oils, are also a popular export from Malaysia, a nation blessed with significant palm oil plantations. Exports in oleochemicals increased from 24.3 to 24.6 million tonnes from 2011 to 2012. That is an increase of 300,000 tonnes of oleochemicals in a single year and, what’s more, the focus on new and emerging technologies also means that a broader range of chemicals can be developed from these oleochemicals to be used as intermediates for the polymer and rubber industries, instead of petroleum-based chemical intermediates. A key facet of chemicals is that they are much needed by other industries and the increase in local chemicals manufacturing capabilities has also spurred other industries in our economy. For one, our pharmaceutical research and development knowledge has improved to a point where Malaysia has found itself in the enviable position of pursuing generic pharmaceutical manufacturing opportunities. The transformation of this industry will involve synergies between local players and turn Malaysia into an exporter of pharmaceuticals. There is a potential for the manufacturing and export of pharmaceuticals to contribute RM1.5 billion to our gross national income as well as create over 12,000 jobs by the year 2020 besides stimulating research into new drugs. A slew of free trade agreements (FTAs) will undoubtedly catalyse the trade of many of our neighbours and create lucrative opportunities for our local chemical manufacturers. That Malaysia also plays host to the world’s largest liquefied natural gas (LNG) production facility—in Bintulu—only adds to its list of strengths in this area of economic activity. Much of our export in this sector will be bound for China, whose intense levels of consumption require it to tap onto the ASEAN region for its supply of chemicals. Malaysia’s advantage with regard to its neighbours is that it also manufactures chemicals and petrochemical derivatives that are used by downstream industries in China. The petroleum and petrochemical industry and its three sub-sectors—natural gas, petroleum products, and petrochemicals—in Malaysia have passed a significant milestone because of these developments. As more petrochemical plants are built in Malaysia, the national chemical industry will be increasingly capable of producing various types of petrochemical products and this has thus made us a net exporter of major petrochemical products.
chemical products and services. The ASEAN-China FTA, for example, has seen chemical products take third place in the top five highest exports to China in 2009. In serving as a free market access for goods going into China, the ASEAN-China FTA will position many of Malaysia’s chemical and chemical products, including chemicals and chemical products. What these bits and pieces of information indicate is a continuous growth of the chemicals industry in Malaysia. Besides becoming increasingly prominent in the landscape of the national economy, the chemicals industry is also bettering Malaysia’s position in this industry is proof of a fabulous chemistry between the two parties.

Located at Jalan Sultan Ismail

Commercial Office Building for Sale

Grade A Corporate Office Suites for Sale

FREEHOLD

\- Available from 775sqft to 200,000sqft
\- Average floor plate is 12,024sqft
\- Price ranges from R1,060psf to R1,363psf
\- Individually designed with provision of carpark
\- Expected to complete by 3rd Quarter 2014

Located at Bandar Sri Damansara

COMMERCIAL OFFICE BUILDING FOR SALE

FREEHOLD

\- A double storey detached commercial building with guard house and bin centre
\- Land area of approximately 24,111 sq ft
\- Total gross built up of approximately 14,000 sq ft
\- Good accessibility and connectivity to KL City and Damansara/Petaling Jaya
\- Commercial & Industrial Precinct
\- Individually designed with provision of carpark

Business Advocate
– Improving the Environmental Performance of Chemical Products

by Dr. Martin Baitz, Johannes Partl, Anna Braune, Eloïse Brauner

The common perception of the chemical industry is that it requires a tremendous amount of energy, uses it inefficiently and in the process creates significant environmental problems. Any environmental benefits of chemical products are often unknown to the public and difficult to quantify. The chemical industry has a choice of different options for quantifying and improving environmental performance, each has benefits and drawbacks, as well as limitations in use.

Many different pathways can be chosen for improving the environmental performance of chemical products and production processes.

Finding the right option is challenging and requires environmental burdens and benefits to be quantified.

The most common actions for improving environmental performance in the chemical industry are:

1. Reduction of energy demand by applying measures such as optimized catalysts, energy recovery, closed circuit technologies, by-product utilization and off-heat recovery etc.

2. Use of alternative or renewable energy sources: New technologies, contracts with renewable electricity suppliers and on-site biomass power plants.

3. Switching to feedstocks from alternative or non-fossil resources, e.g. plant based ethanol as a source to produce ethylene.

4. Improving the quality and properties of the chemical products to target their use performance enabling the products to save more energy and CO2 emissions in their respective applications.

5. Improving the end of Life routes of chemical products by identifying and applying adequate secondary uses.

The best pathway can be chosen through quantifying the product system and its processes.

REDUCTION OF ENERGY DEMAND, USE OF RENEWABLE RESOURCES AND QUANTIFICATION OF BENEFITS OF CHEMICAL PRODUCTS

ENVIRONMENTAL BENEFITS OF CHEMICAL PRODUCTS

The chemical industry plays an important role in production and product sustainability. It uses a substantial amount of resources to produce its products, however the resulting chemical products can help to save energy or materials in many of their applications.

Different approaches exist to reach the desired goal of efficient and effective environmental optimization of the individual chemical process chains.

“In the area of production and products sustainability, the chemical industry plays a big role.”

Reduction of energy demand

Reducing energy demand is the classic approach to improving environmental performance and has been widely used for decades (see illustration 1).

A switch to biomass fuel may raise the problem of fuel supply as well as introduce trade-offs between the positive effect of greenhouse gas reduction and other environmental issues such as the release of nitrifying and acidifying substances into water bodies, soil or air, contributing to acid rain and over-fertilization. The overall effect of such a technological change should be analyzed on a case-specific basis.

Another approach is switching to alternative or non-fossil resources as feedstock for the chemical products. A good example is ethanol from sugar beet as a source to produce ethylene. However, though a switch brings a positive change in Global Warming Potential (GWP), there may be negative changes in terms of Eutrophication Potential (EP) and Acidification Potential (AP). Furthermore, the final...
Improvement in product applications

Changing the quality or properties of a chemical product so that it saves energy and CO2 emissions in its application is a rather new approach in the industry (see illustration 3). An example would be a new, innovative chemical or material as a vital part of a component to be designed and used in cars whose improved properties reduce the fuel consumption. It is even possible to save more fossil energy during the use of the product than was initially consumed to produce it. Though this approach requires analysis of more complex systems to quantify the benefit of saved energy, it is a promising one.

Improving End of Life routes

Finding adequate secondary uses for chemical products can also reduce the fossil energy demand and the related carbon footprint. Material recycling reduces primary material needs in the chemical industry and energy recycling can reduce the primary energy demand even in other industries (see illustration 4).

These different approaches for environmental improvement must be chosen individually and the positive and negative effects across the life cycle should be analyzed. If a path is chosen without previous analysis of its relevance in the specific case, a lot of money and effort may end up in irrelevant measures.

Choosing the right approach

The quantification of the environmental benefits brought to society by the chemical industry is not simple if realistic and defendable figures are the objective. Most often, chemicals are entering the industrial network and being combined or used as a part of the production system.

Quantifying the environmental benefits is an art of balance between simplification and ability to address the specific case. General answers do not address the specific questions. The right approach can cope with realistic and specific cases without getting over-complex. Adequate approaches to quantify such benefits have been successfully used at PE INTERNATIONAL for many years.

A single factor to quantify the environmental benefit would be easy to communicate: For example, chemical product X has a factor 5:1 in GWP and energy (three times more CO2 and energy saved than caused and consumed.). However, a single factor will easily become ambiguous.

For example, for specific product Y we will need to communicate a factor of 1.5:1 in one case and a factor of 6:1 in another case due to different assumptions and system boundaries over the life cycle. Therefore we need careful and explicit interpretation of specific cases. If a chemical turns out to have a factor of, for example, 0.5:1 (more burden caused than saved), two approaches can be taken: (i) the producer can implement the most promising environmental optimization approach using the readily available information, or (ii) the strengths of non-environmental aspects can be checked and used to justify this factor (e.g. higher safety for a user by accepting the higher CO2 burden). Factors of environmental performance like 0.5:1 can still improve aspects of sustainability, as sustainability also includes economic and social aspects.

More environmental burden caused than saved can be still justified as improving sustainability, as sustainability also includes economic and social aspects.*

Conclusion

Society needs advanced chemicals to achieve sustainability. A general answer of which pathway fits the chemical industry the best is difficult to give and may not be appropriate. There are multiple options and the ideal pathway must be identified on a case-by-case basis. Quantifying environmental performance based on a holistic approach will save the chemical industry effort, resources and money in the long-run. This is then the basis for communicating sustainability efforts and successes. The chemical industry should not waste effort, resources and money on the wrong methodology. In order to communicate sustainability efforts and the achieved success, the improvements have to be quantified and based on reliable facts.

Sustainability awareness is the road to long-term corporate operation and a vibrant environment. PE INTERNATIONAL has been steadily guiding companies all over the world along this road since 1991. Today, PE INTERNATIONAL is the international market leader in strategic consultancy, software solutions and extensive services in the field of sustainability. Serving market leaders around the world, PE has offices in Stuttgart, Vienna, Copenhagen, London, Manchester, Tokyo, Taipei, Perth, Bilbao, Boston, Wellington, Shanghai, Johannesburg, Istanbul and Kuala Lumpur.

PE INTERNATIONAL provides conscientious companies with cutting-edge tools, in-depth knowledge and an unparalleled spectrum of experience in making both corporate operations and products more sustainable. Applied methods include implementing management systems, developing sustainability indicators, life cycle assessment (LCA), carbon footprint, design for environment (DFE) and environmental product declarations (EPD), technology benchmarking, or eco-efficiency analysis, emissions management, clean development mechanism projects and strategic CSR consulting.

www.pe-international.com

* More environmental burden caused than saved can be still justified as improving sustainability, as sustainability also includes economic and social aspects.
New Technologies to Reduce the Chemical Industry's Insatiable Thirst for Energy

Between the massive facilities full of machinery, equipment, and light, and the intense heat generation used in chemical production, it is easy to see why the chemical industry is very energy-intensive. The chemical and petrochemical sector takes the lion’s share of energy usage in this industry, using almost 10 percent of total worldwide final energy demand and producing 7 percent of global greenhouse gas emissions. In a twenty-year study done by the Canadian Office of Energy Efficiency, energy usage by the petrochemical sector in Canada alone has fluctuated between 32.1 and 62.1 petajoules. What this means is that at its peak consumption, this sector uses about 17.25 billion kilowatt hours of energy, enough to light up well over 7.8 million Malaysian homes for a year.

Though this sector produces derivatives that are used in energy-saving or renewable energy applications, the need for reduction of energy consumption of this sector is apparent. A recent landmark document co-authored by the International Energy Agency (IEA), International Council of Chemical Associations (ICCA), and Dechema e.V. examines the potential impact of international communities on the chemical industry. It states that the energy consumption of the sector is equivalent by 2050.

The Roadmap singles out four potential game-changers that will help the industry achieve its energy savings goals.

Firstly, the use of hydrogen from renewable energy sources, like the electrolysis of water, to produce ammonia. Currently, hydrogen generation is the largest energy-consuming segment for producers when they make the crucial chemical precursors, ammonia and methanol.

Secondly, methanol and biomass can be used as power generation sources (known as feedstock) instead of dirtier ones like coal or oil. The use of biomass as a feedstock for chemical products is another potential game changer because it achieves three things. Firstly, an increase in the use of biomass will reduce consumption of fossil fuels, which is the source of most of the GHG emissions associated with chemical processing. Secondly, biomass feedstocks absorb CO2 while growing, which offsets emissions produced during the manufacturing process or even when it is destroyed or wasted. Thirdly, biomass sources are renewable in contrast to fossil fuels, which are not. Moreover, fossil fuels are in limited—and decreasing—supply and will likely be affected by severe price volatility at some future date. Nonetheless, such emission reduction gains must be measured against the energy requirements of biomass-based production.

According to the Roadmap, four “among different synthetic pathways to produce propylene oxide (PO), the hydrogen peroxide (HPPO) process is an emerging technology. The HPPO process is a single-product PO process that oxidises propylene with hydrogen peroxide. Its energy consumption is about 35 percent lower than the conventional process. However, energy is required to produce the hydrogen peroxide, so accounting for that, the energy reduction of the entire process chain would be around 10 percent to 12 percent.

At present, three commercial plants are using this method: a 100 kilotonnes plant in Ulsan, Korea; a 300 kilotonnes plant in Antwerp, Belgium; and a 500 kilotonnes plant in Thailand.

There are also two potential “game changers” that will help the industry achieve its energy savings goals.

Hydrocarbons is heated in the presence of water vapour in a vacuum until the hydrocarbon molecules break apart. The simpler, distinct, hydrocarbons—after having been broken down, or “cracked” apart—are known as olefins. Steam cracking is very energy intensive as the production of steam involves a lot of heat generation. On the other hand, emerging technologies like catalytic cracking of naphtha has a lower reaction temperature.

This creates an estimated energy savings potential of 2.3 exajoules and reductions in GHG equivalent to 143 megatonnes of CO2 equivalent.

The current method of steam cracking, which converts hydrocarbon feedstocks to olefins (among other things) is an intensely energy-consuming non-catalytic process. Because of this, emerging technologies for olefin production could very well have the largest potential energy savings impact in the chemical industry.

Furthermore, the Roadmap also suggests that several other chemicals in the top 18 large-volume chemicals could benefit from further development of emerging technologies.

The document, Technology Roadmap: Energy and Greenhouse Gas Reductions in the Chemical Industry via Catalytic Processes, focuses on the role of catalysts as almost 90 percent of chemical processes utilise them to increase production. The Roadmap also offers several milestones as reference points for the international community to gauge the industry’s progress in achieving the aims discussed in the document. Amongst the goals set forth by these agencies include slashing 15 exajoules of energy consumption—the current annual primary energy use of Germany—and reducing greenhouse gas (GHG) emission rates by 1 gigatonne of CO2 equivalent by 2050.

Of particular interest is the industrial process known as steam cracking of naphtha, which is when this blend of hydrocarbons is heated in the presence of water vapour in a vacuum until the hydrocarbon molecules break apart. The simpler, distinct, hydrocarbons—after having been broken down, or “cracked” apart—are known as olefins. Steam cracking is very energy intensive as the production of steam involves a lot of heat generation. On the other hand, emerging technologies like catalytic cracking of naphtha has a lower reaction temperature.

This creates an estimated energy savings potential of 2.3 exajoules and reductions in the fossil-fuel use and GHG footprint of these processes. Catalysis could be an enabling for efficient hydrogen generation, particularly in areas such as photocatalysis or photovoltaic-assisted water electrolysis. Hence, the total energy required to produce methanol and ammonia using hydrogen from renewable energy sources would be higher, albeit with lower fossil fuel use,” claims the Roadmap.

According to the Roadmap, from “among different synthetic pathways to produce propylene oxide (PO), the hydrogen peroxide (HPPO) process is an emerging technology. The HPPO process is a single-product PO process that oxidises propylene with hydrogen peroxide. Its energy consumption is about 35 percent lower than the conventional process. However, energy is required to produce the hydrogen peroxide, so accounting for that, the energy reduction of the entire process chain would be around 10 percent to 12 percent.

At present, three commercial plants are using this method: a 100 kilotonnes plant in Ulsan, Korea; a 300 kilotonnes plant in Antwerp, Belgium; and a 500 kilotonnes plant in Thailand.

There are also two potential “game changers” that will help the industry achieve its energy savings goals.

Firstly, the use of hydrogen from renewable energy sources, like the electrolysis of water, to produce ammonia. Currently, hydrogen generation is the largest energy-consuming segment for producers when they make the crucial chemical precursors, ammonia and methanol.

“"The possibility of using hydrogen from renewable energy sources could significantly reduce the fossil-fuel use and GHG footprint of these processes. Catalysis could be an enabling for efficient hydrogen generation, particularly in areas such as photocatalysis or photovoltaic-assisted water electrolysis. Hence, the total energy required to produce methanol and ammonia using hydrogen from renewable energy sources would be higher, albeit with lower fossil fuel use,” claims the Roadmap.

Secondly, methanol and biomass can be used as power generation sources (known as feedstock) instead of dirtier ones like coal or oil. The use of biomass as a feedstock for chemical products is another potential game changer because it achieves three things. Firstly, an increase in the use of biomass will reduce consumption of fossil fuels, which is the source of most of the GHG emissions associated with chemical processing. Secondly, biomass feedstocks absorb CO2 while growing, which offsets emissions produced during the manufacturing process or even when it is destroyed or wasted. Thirdly, biomass sources are renewable in contrast to fossil fuels, which are not. Moreover, fossil fuels are in limited—and decreasing—supply and will likely be affected by severe price volatility at some future date. Nonetheless, such emission reduction gains must be measured against the energy requirements of biomass-based production.
General material management covers four general phases, which are, assessing and ultimately disposing of it. In the case of chemicals, however, a number of other considerations must be taken into account such as regulations, safety, efficiency of materials used, cost, and sustainability. On the first point, laboratories and chemical users must usually follow many sets of health and safety procedures due to the nature of the materials they are handling. This can prove to be a problem for smaller teams. Furthermore, process optimisation encourages users to reuse or recycle chemicals whenever possible.

Nonetheless, the law requires compliance regardless of organisational size, and there is an added contemporary requirement to use chemicals efficiently so that the sustainability of our environment can be secured. One approach to achieve this goal is through the implementation of ‘green chemistry’ which, among other things, offers ideas in reducing wastage, lessening or eliminating the generation of hazardous materials, and using alternative chemicals in production.

**Pre-use: Acquisition and storage**

Proper chemical management begins from the get go, and smart laboratory personnel would do well in conducting a thorough assessment on his or her supply needs before ordering. The laboratory personnel must cover several bases even before the chemicals arrive; besides having a thorough understanding of the chemicals in question, the user must examine supply needs, transportation of the chemicals, storage, expiration of chemicals, and potential hazards, to name a few. Once the chemicals are sent over through the appropriate channels, the chemicals must be stored according to proper company policy and local laws, and all labels and containers should be inspected on arrival.

**Using and maintaining chemicals**

As chemicals move around in the lab for use, the potential for mishaps increases especially when complex mixtures of chemicals are involved. Depending on the user of the chemicals, even though he or she may know how to use the chemicals safely, the user may not be as efficient at keeping track of the movement of many chemicals, proper storage or re-storage procedures, and the removal of used chemicals. Inventories can get jumbled up, containers may be half-open or improperly resealed, chemicals can be unnecessarily exposed to air—the possibilities are plentiful. Although chemical mishaps can be very dangerous, they can be prevented through strict adherence to a well-developed set of guidelines or procedures, effective maintenance practice, and frequent training in the use of chemicals for laboratory or industrial use.

A direct solution to minimise human error is through the usage of a chemical inventory management system, which is a specialised software that manages the user’s chemicals across its life cycle. Amongst the many things that these systems do, they also track chemical movements, build chemical profiles, monitor storage limits, and report expiration dates. The more sophisticated versions of these systems can manage every aspect discussed in this article, and more. It is worth noting that after this system has been implemented, access to this system should be facilitated through the use of networked computers, easy terminal access, and frequent backups of the data in the system.

**Post-use: Reuse, recycle, or dispose**

After being used in a variety of applications, handling chemicals may prove difficult as they are no longer in their original containers and are often combined with other substances. However, some of these mixed chemicals can be reused in other processes as a result of the development of our understanding in chemistry. Where we once just threw away or incinerated byproducts of chemical processes, we now have several methods of reusing them. In some cases, like solvents, these chemicals can be repurified or changed into a different physical state and reused. Lab equipment can also be recycled or reused, provided that they satisfy the restrictions involved with used lab equipment.

As with many things, recycling and reuse also have their benefits and drawbacks. One obvious benefit is the cost reduction that can be enjoyed by the user because of reduced consumption of new chemical supplies and wastage of chemicals on stock. Furthermore, they are a boon to the environment as they do not seep into waste streams and reduce the possibility of exposing toxic chemicals into our surroundings at dump sites. Also, reused chemicals can become feedstock for other processes in the user’s organisation.

However, reusing and recycling chemicals also adds complexity to the removal-and-disposal process. **Rather than a one-way transaction where the disposal company removes and disposes of the material, reuse and recycling may now include waste removal discounts for materials sold on the secondary market. Tolling, where reprocessed materials are returned to the generator, also results in more complex price negotiations based on fluctuating rates for virgin materials,** says Victor Belenchia, in writing for Clean Harbors.
Environmentally Hazardous Substances Notification and Registration Scheme in Malaysia

Chemicals are an integral part of modern life today that form the basis and building blocks from which we make our products. While chemicals are important to sustain our global economy, they also carry high potential risk that can cause significant harm to human health and the environment, if not properly managed. There are growing research findings that relate various risks and negative impacts of harmful chemicals to the environment and human health.

A knowledge-based, preventive approach to chemicals risks management throughout their lifecycle would be the way forward in avoiding significant risks to human health and ecosystems, and associated economic costs for individuals, firms and society as a whole.

In Malaysia, whilst some types of chemicals and their effects are already managed to a certain extent through several Acts and Regulations, there are still many Environmentally Hazardous Substances (EHS) that are not. Therefore, measures need to be undertaken to develop data base on information of such substances. Environmental Hazardous Substances Notification and Registration (EHSNR) Scheme was developed by the Department of Environment Malaysia in 2008 to address the gaps in the knowledge of EHS and provide the necessary information to manage EHS effectively.

The registration scheme covers all hazardous substances. The registration covers all hazardous substances, that are not covered by other notification/registration schemes in Malaysia.

The following is a list of substances exempted from the notification scheme:

- Naturally-occurring minerals, ores and ore concentrates as well as cement clinker;
- Incidental/end-use reaction products;
- Mixtures (but not mixture components);
- Impurities;
- By-products;
- Non-isolated intermediates i.e., chemical substances used to manufacture other chemical substances that are never separated from the mixture of other chemicals inside a closed system;
- Contained site-limited intermediates;
- Substances manufactured solely for export;
- Substances used in research and developments;
- Substances produced for test marketing;
- Substances produced in low volumes (>1 tonnes per annum); and
- Polymers

Who Shall Notify?
The Scheme is aimed at manufacturers and importers of EHS and importers of chemical mixtures or finished products that contain EHS as their constituents.

The Scheme is also aimed at companies importing individual EHS and/or chemical mixtures or finished products containing EHS as constituent above specified cut-off limit.

Substances in the EHS Notification

The following is a list of substances included in the notification scheme:

- Petrochemicals including plastic and resins;
- Chemicals in fertilizers;
- Soaps and detergents;
- Organic chemicals;
- Oleo-chemicals;
- Industrial gases;
- Paints and paint products;
- Basic industrial chemicals; and
- Rubber industry chemicals

The registration list has been translated based on the proposal for a Harmonised European List of Classification and Labelling of substances according to GHS. This list has been translated from the harmonized classification and labelling in the European Classification, Packaging and Labelling Regulations.

External Notification

If the EHS is NOT on the EHS Reference List, with an initial process for this notification however, need only notification directly to the DOE. Information required under detailed notification includes: identification of the substance, its physical and chemical properties; hazards to human health and aquatic environment and overall GHS classification that must be completed. Detailed notification however, if required, need only be carried out once, unless new information is available and which will change the hazard classification.

EHSNR can be done online through the DOE’s official website – www.doe.gov.my. A guidance document is also provided in the website.
---

**Responsible Care – Flagship of Chemical Industries in its Health, Safety and Environmental Performance**

by Ir Harinder Singh

What is Responsible Care?

It is a well-known fact that chemicals are used as building blocks in various manufacturing processes and industry, as well as in our daily lives to enhance our health, longevity and quality of life. Sometimes, however, these substances can turn dangerous; hazardous to human life and the environment when handled improperly as was evident in the Bhopal disaster in India.

With the rise of environmental problems on the global scale, it is becoming difficult to ensure the ecological soundness of chemical operations and product safety simply by imposing restrictive laws and regulations. Thus, companies that deal with chemical substances are expected more than ever to voluntarily adopt management systems that focus on environmental problems, human health and product safety.

Reflecting this trend, the Chemical Industries Council of Malaysia (CICM) had voluntarily adopted Responsible Care in 1994. Chemicals companies who are members of CICM support Responsible Care and pledge to protect the environment, safety and health of workers, the public, and ensure that their products pose no threat to health, safety and environment at any stage from initial research to ultimate safe disposal. Responsible Care started in Canada in 1985 and has been adopted by 57 countries worldwide.

Responsible Care Programme Structure

Responsible Care, unlike regulatory approaches to environment, health and safety, relies on the voluntary adoption of new culture or ethics across the entire chemical industry sector. It defines the "state-of-the-art" of responsible chemical management through 10 Guiding Principles and 6 Codes of Management Practices.

a. Assessment during development

Before any product is manufactured or marketed, it is assessed for hazards and risks to man and the environment, and classified accordingly. Users and those that might be exposed to the product risks are made aware of the results of the assessment by a label and a chemical safety data sheet.

b. Accidents during manufacture

Fires, explosions and toxic releases can occur during chemicals manufacture. Following some serious incidents such as Flixborough in the UK and Bhopal in India, the chemical industry quickly responded with the Process Safety Code that requires the company to assess the risk of their installation and to take engineering and organisational measures to reduce any risk to an acceptable level.

The 6 Codes of Management Practices and guidelines provide the management practices essential for the ongoing and continuously improving management of chemicals to protect people’s health, safety and environment. These Codes cover the entire life-cycle of products from its inception, through development, manufacturing, transportation, distribution, pollution control, end-user and ultimate disposal.

How these Codes Help to Improve the HSE of Chemical Companies?

These Codes cover all the steps in the life-cycle of chemical products. Below are some of the salient points of these Codes.

Emision Limitations

The Pollution Prevention Codes require stringent measures which go beyond legislation limit emission of unwanted products and unavoidable waste. The Codes encourage ‘cleaner production’ and best available technologies that generate less waste or emission.

Transport of Chemicals

The Distribution Code aims to reduce the risk of harm to carriers, distributors, contractors, employees, the general public and the environment posed by the distribution of chemicals. The chemicals are classified according to their hazardous properties and appropriate labeling and packaging in case an accident occurs.

Product Stewardship and Trade in Chemicals

The Product Stewardship Code promotes the responsible and ethical management of chemical products during their progress from inception to its ultimate use and beyond. It is also the reduction of product related risks and exposures to protect the company, third parties, the environment and the chemical industries. Full Product Stewardship relates to a full risk assessment by the producer together with inputs on the application from suppliers and distributors.

A detailed product dossier is developed and communicated which helps in the sale of the product for export especially to developed countries that demand strict product safety requirements.

Conclusion

Responsible Care is one of the best things that has happened to the chemicals industry because it ensures that the chemicals industry will continue to provide beneficial products to society, continually reducing its negative impacts, while maximizing its positive contributions to human health, the environment, the economy and society.

Responsible Care is not merely a forward-looking management concept promoted by chemical companies, it is now an internationally recognised set of standards by the UN and many national governments.

---

**Ir Harinder Singh**

Ir Harinder Singh retired as Director General of the Department of Occupational Safety and Health (DOSHH) in 1992 and joined CICM in 1994 as Responsible Care Technical Advisor. He drafted the Responsible Care 6 Codes of Management Practices covering the life-cycles of chemical processes and held seminars and workshops with members to help them to implement the Codes. Later, he developed the Responsible Care Management System (RCMS) to verify performance of members along consistent lines. Since its inception in 1992, he has been the Chairman of the Technical Committee for the Responsible Care Awards in the Ministry of Human Resources.

**CICM**

The “state-of-the-art” of responsible chemical management through 10 Guiding Principles and 6 Codes of Management Practices.

---
### MICCI Welcomes its New Members...

<table>
<thead>
<tr>
<th>Company:</th>
<th>ACQUEMINI SDN BHD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Tino Bentleigh</td>
</tr>
<tr>
<td>Designation:</td>
<td>Regional Director</td>
</tr>
<tr>
<td>Address:</td>
<td>19A-15-3A Business Suites USA Centre, Jalan Pinang 50450 Kuala Lumpur</td>
</tr>
<tr>
<td>Tel / Fax:</td>
<td>03-2181 6885 / 03-2181 5866</td>
</tr>
<tr>
<td>Business Sector:</td>
<td>ICT / Communications</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company:</th>
<th>BEKAERT SOUTHERN WIRE SDN BHD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Algemiro De Almeida Neto</td>
</tr>
<tr>
<td>Designation:</td>
<td>Plant Manager</td>
</tr>
<tr>
<td>Address:</td>
<td>Plot No.2 Taman Meru Industrial Estate 30020 Jelapang, Ipoh</td>
</tr>
<tr>
<td>Tel / Fax:</td>
<td>05-526 4242 / 05-526 0504</td>
</tr>
<tr>
<td>Business Sector:</td>
<td>Metal Manufactures</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company:</th>
<th>BIFORST LOGISTICS SDN BHD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Hamir Appala Nakkiah</td>
</tr>
<tr>
<td>Designation:</td>
<td>Group Managing Director</td>
</tr>
<tr>
<td>Address:</td>
<td>No. 81-1-10A Jalan Pinggiran 1/3 Taman Pinggiran Putra, Seksyen 1 43500 Seri Kembangan, Selangor DE</td>
</tr>
<tr>
<td>Tel / Fax:</td>
<td>03-8943 1200 / 03-8945 1539</td>
</tr>
<tr>
<td>Business Sector:</td>
<td>Transport</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company:</th>
<th>CRESCENDO CORPORATION BERHAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Gooi Seong Lim</td>
</tr>
<tr>
<td>Designation:</td>
<td>Managing Director</td>
</tr>
<tr>
<td>Address:</td>
<td>Lot 18, 18th Floor Public Bank Tower No. 13 Jalan Wong Ah Fook 80000 Kuala Lumpur</td>
</tr>
<tr>
<td>Tel / Fax:</td>
<td>07-224 816 / 07-225 2163</td>
</tr>
<tr>
<td>Business Sector:</td>
<td>Property / Real Estate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company:</th>
<th>EXECUTIVE JETS ASIA SDN BHD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Prithpal Singh</td>
</tr>
<tr>
<td>Designation:</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>Address:</td>
<td>Lot A0 23, Airline Offices Senai Cargo Centre Senai International Airport 81250 Johor Bahru</td>
</tr>
<tr>
<td>Tel / Fax:</td>
<td>07-598 4360 / 07-598 5050</td>
</tr>
<tr>
<td>Business Sector:</td>
<td>Transport</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company:</th>
<th>HANG TUAH FURNITURE SDN BHD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Ng Room Heng</td>
</tr>
<tr>
<td>Designation:</td>
<td>Director</td>
</tr>
<tr>
<td>Address:</td>
<td>Batu 7-13 Jalan Air Hitam Bandar Seri Jempol 71210 Negeri Sembilan</td>
</tr>
<tr>
<td>Tel / Fax:</td>
<td>06-458 1760 / 06-458 1859</td>
</tr>
<tr>
<td>Business Sector:</td>
<td>Rubber / Wood Products</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company:</th>
<th>KEMAMAN BITUMEN COMPANY SDN BHD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Sanjay Grover</td>
</tr>
<tr>
<td>Designation:</td>
<td>Chief Executive</td>
</tr>
<tr>
<td>Address:</td>
<td>A-06-3A Empire Tower, Empire Subang Jalan SS16/1, SS16 47500 Subang Jaya, Selangor DE</td>
</tr>
<tr>
<td>Tel / Fax:</td>
<td>03-5855 0998 / 03-5855 0993</td>
</tr>
<tr>
<td>Business Sector:</td>
<td>Oil / Gas / Petrochemicals</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company:</th>
<th>PERUSAHAAN SAUDEE SDN BHD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Louis Tan</td>
</tr>
<tr>
<td>Designation:</td>
<td>Chief Operating Officer</td>
</tr>
<tr>
<td>Address:</td>
<td>Plot 331 Taman Perindustrian Sungai Petani Fasa III, Sungai Petani 08000 Kedah</td>
</tr>
<tr>
<td>Tel / Fax:</td>
<td>04-442 6800 / 04-442 6801</td>
</tr>
<tr>
<td>Business Sector:</td>
<td>Food / Beverages</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company:</th>
<th>QBE INSURANCE (MALAYSIA) BHD - PENANG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Karl Hamann</td>
</tr>
<tr>
<td>Designation:</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>Address:</td>
<td>No. 53-4-8, MBF Tower Jalan Sultan Ahmad Shah 10000 Penang</td>
</tr>
<tr>
<td>Tel / Fax:</td>
<td>04-227 3488 / 04-226 2498</td>
</tr>
<tr>
<td>Business Sector:</td>
<td>Banking / Insurance</td>
</tr>
</tbody>
</table>
Nottingham Academic Propose Paradigm Shift of CSR in Asia

“The mindset on CSR (Corporate Social Responsibility) in emerging Asia should be transformed from philanthropy to strategic and human-focused CSR. If that happen, CSR could be a competitive advantage of Asia,” said Dr. Rebecca Chung-hee Kim, Assistant Professor of CSR and International Management of The University of Nottingham Malaysia Campus (UNMC) at the Korea-Vietnam CSR Forum which was held at InterContinental Asiana Saigon, Ho Chi Minh City, Vietnam on the 25th June 2013.

One of the discussion-loving scholars in UNMC, Rebecca has delivered speeches on Asian CSR in various nations including Malaysia, Korea, Japan, Indonesia and Mongolia. Recently, she was invited by KOTRA (Korea Trade-Investment Promotion Agency) and KAIB (Korean Academy of International Business) to head a discussion on Asian CSR with 190 Korean businessmen and scholars who gathered in Vietnam.

Rebecca has strongly proposed the genuine responsibility of multinational companies (MNCs) in Asia including Korean businesses, and CSR should be beyond donation, PR, compliance and management fad. “Asia shows a different approach towards human beings, business and profit-making. Many MNCs in Asia are suffering from troubles owing to the limited understanding of the above factor. Therefore CSR in Asia should be approached differently in comparison to the Western style of approach. Businesses’ smart CSR strategy is essential to get the ‘driving license’ for performing in the Asian market,” Rebecca asserted.

Many businessmen in the Forum have shown criticism towards CSR ideas in the global market and lively debated on the necessity and measurement of it. Rebecca suggested that we should clarify the reasons for the necessity of unique Asian CSR – whether to make distinction or to reconcile with other regions. The key direction should not only be on how Asian CSR would turn out to be but how the emerging Asian economic power can contribute to the world’s economy with the ideas of CSR. If then, CSR could be used as the competitive advantage of Asia!

Rebecca is an Assistant Professor at the Nottingham University Business School and member of staff of International Centre for Corporate Social Responsibility at The University of Nottingham.
PMHA Launches Excellence in Environmental Journalism Award

The Prime Minister’s Hibiscus Award (PMHA) has launched a new award called “Excellence in Environmental Journalism”. This accolade will be awarded to the print media organisation that has demonstrated outstanding journalism on environmental sustainability.

In launching this, PMHA seeks to enhance the quality and integrity of media coverage of environmental issues to a level that would encourage more organisations to take affirmative actions towards sustainability while publicly recognising these organisations for their accomplishments and leadership.

PMHA Organising Committee Chairman, Tan Sri Mustafa Mansur said the inaugural award would be presented to the print media organisation that had made major contributions towards the understanding of environmental sustainability and made a significant impact on public and policy sentiments.

The award is open only to registered print media organisations, and each interested organisation is required to submit three (3) news articles or features per entry, published between July 1, 2012 and July 15, this year.

The entry form, regulations and further details on this award is available at www.hibiscusaward.com.

Addressing Security Concerns at Ports

MICCI’s Joint Action Security Council (JASCO) met with representatives of Northport (Malaysia) Berhad on May 14, 2013 as a result of concerns raised by Members over the safety of cargoes within and outside of ports. The MICCI delegation was led by Rajan Mittal, Chairman of JASCO while Northport representatives were led by N. Sankunny, Advisor (Logistic Services) and Ravindran Raman Kutty, Advisor (Communications).

Northport provided MICCI with an overview of its facilities and operations before sharing some relevant information as follows:

- Presently, port authorities work closely with the police when investigating criminal incidents.
- However, Northport intends to seek full authority from the police to carry out the investigations.
MICCI Collaborates with the Malaysian Judiciary

The Chamber’s Legal & IP Council Chair, Linda Wang and Council Member, Michelle Lee met up with Federal Court judge, Datuk Zainun Ali and Court of Appeal judge, Datuk Lim Yee Lan on 5 September 2013. The purpose of the meeting was to update both judges on the council’s objectives and initiatives, as well as to extend MICCI’s cooperation towards improving the judiciary system. Among the topics raised during the meeting were the need for further training for judges on intellectual property, expanding the research department for judges and the crucial need for judges to understand the corporate environment in order to deliver quality judgements.

Datuk Zainun and Datuk Lim also took the opportunity to enlighten the Council on their experiences as members of the editorial committee for the journal “The Malaysian Judiciary - A Perspective” which was initially published in 2010 under the helm of former Chief Justice, Tun Zaki Tun Azmi. The journal acts as a quick reference on the Malaysian Judiciary while brandishing the importance of the justice institution and all that it stands for. The inaugural success of the first edition has since led to its annual publishing.

Both judges and the Council concluded that it was imperative for the journal to be made available to the public to which end the Chamber agreed that it would work together with the Malaysian Judiciary in promoting the journal to its Members and the industry.

Annual Consultative Panel Meeting with MDTCC on Intellectual Property

MICCI participated in the Annual Consultative Panel Meeting on Intellectual Property which was organised by the Ministry of Domestic Trade, Cooperative and Consumerism (MDTCC) on 5 September 2013 at the Istana Hotel. Close to 60 representatives from various associations and agencies were in attendance.

The meeting was chaired by Y.B. Dato’ Hassan bin Malek, Minister of MDTCC, accompanied by Deputy Minister Y.B. Senator Dato’ Paduka Ahmad Bashah Md Hanipah, Secretary General, Dato’ Sharipuddin Kasim, Deputy Secretary General (Domestic Affairs), Dato’ Mohd Arif Abd Rahman and Deputy Secretary General (Consumerism), Dato’ Basaruddin Sadali.

The aim of the meeting was to deliberate on intellectual property issues raised by the industry of which the following updates were reported.

- To have an adequate tracking system to monitor the movement of cargoes.
- Northport currently imposes a RM100 fee for online accessibility whereas Westport does not impose any fee.
- To identify a method that verifies and confirms the cargo load before leaving the port.
- Weigh-bridges need to be calibrated at least twice a year.
- To extend MICCI’s council’s objectives.
- The need for CCTVs installed at all entry and exit points.

Northport assured the Chamber that all suggestions would be taken into consideration and agreed that cooperation is needed from both parties to curb the issues on security.

Latchis Lamber

In addition, some of the concerns highlighted during the meeting included:

- To have an adequate tracking system to monitor the movement of cargoes.
- The need for CCTVs in the area to have recording abilities.
- The need for further training for judges on intellectual property.
- Northport currently imposes a RM100 fee for online accessibility whereas Westport does not impose any fee.
- To identify a method that verifies and confirms the cargo load before leaving the port.
- Weigh-bridges need to be calibrated at least twice a year.

Northport assured the Chamber that all suggestions will be taken into consideration and agreed that cooperation is needed from both parties to curb the issues on security.
MICCI Fellowship Networking & Business Briefing

August 29, 2013 was an extensive yet productive day for many business leaders and professionals with the National Conference on Services Sector organised by MIDA spanning the entire day while several noteworthy networking events were to take place simultaneously that very same evening. Guilty as charged, MICCI was indeed one of those who welcomed close to 90 members and guests to its Fellowship Networking Evening & Business Briefing at the Sime Darby Convention Centre.

The evening was a desired sight after the hustle and bustle of getting through the conventional traffic congestion. Just about half-past six, the guests started to arrive to a more laid-back atmosphere and soon after, familiar melodies of laughter begun filling the air. MICCI President, Simon Whitelaw greeted all guests and thanked them for taking the time to attend the evening. He urged Members who were present to continue engaging with the Chamber on matters of concern to them while invited those who were yet to be a part of MICCI’s fraternity to get in touch with the Secretariat and find out more about the many benefits the Chamber has to offer.

Though the evening was a casual get-together to meet new business contacts and for old acquaintances to catch up, the Chamber had the pleasure of inviting Abdul Latif bin Haji Abu Seman, Deputy Director General II of the Malaysian Productivity Corporation (MPC) to present a brief introduction on the recent national policy on the “Development and Implementation of Regulations”.

Abdul Latif stated that the policy would reduce unnecessary regulatory burden on certain sectors particularly in the healthcare, education, oil and gas, logistics and retail industries. He further expressed MPC’s desire to work closely with MICCI in strengthening the quality of regulations and to encourage Members’ participation in public consultations.

At the conclusion of the briefing, everyone present had an ideal opportunity to exchange business contacts over a simple yet satisfying spread. Overall, the evening was favourable as inquiries on when the next networking event would take place were received from both Members and guests.

MICCI extends its gratitude to all who were present and we urge you to keep tabs on our activities and initiatives via our website at www.micci.com.
The MICCI Corporate Golf Day teed off on 7 September 2013 at the Kelab Golf Perkhidmatan Awam (KGPA). What started off as a cloudy morning with fears of showers to follow surprisingly turned into a sunny day. After a quick group photo, each team comprising of four golfers and branding tournament attire, took to the greens to battle it out. Many players were heard citing that the classic par-72 golf course measuring 5,989 metres, was one of the most challenging courses in the Klang Valley. However, that merely spurred them on to confront the lush fairways and hazards that included 45 deep bunkers. As the game got away, one golfer was even heard quoting the familiar phrase “Its not how you drive, its how you arrive” to the amusement and acknowledgement of his counterparts. At close 2pm, the tournament came to an end with the players convening for lunch while conversing and reminiscing on their performance for the day. Datuk Mike Krishnan, Chair of MICCI Golf Committee then took the stage and thanked everyone who participated before entertaining the crowd with a humorous “golf” joke. Soon after, the winners were presented with their prizes before lucky draw items were given away bringing the event to a close. Overall, the tournament was an enjoyable event where friends and colleagues had an opportunity to come together for a day of fun. MICCI extends its heartfelt thanks to all the sponsors for the event and special thanks to Datuk Mike Krishnan, Tay Beng Chai (MICCI Vice-President), Wolfgang Laabs (MICCI Board) and Hunter Farris (MICCI Board) for their support during the event.

WINNERS

A. President’s Trophy – Gross (Best Pair)

Winner: Ee Beng Guan
Tay & Partners
Abdul Aziz Jaafar
HSBC Bank Malaysia Berhad

B. Champion’s Trophy – Stableford (Best Pair)

Winner: David Lee
Tay & Partners
Alex E. Guscardo
ExxonMobil Exploration & Prod. Malaysia Inc

C. Individual Prize – Best Gross

Champion: Jeromy Yap Wei Kwok
Modern Icons Sdn Bhd
Runner-up: Lim Seok Hua
Northport (M) Bhd
1st Runner-up: Brendan Sta Maria
Tesco Stores (Malaysia) Sdn Bhd
4th Place: Muhammad Rizani Bahari
YTL Corporation Sdn Bhd
5th Place: Foo Chok Tee
Modern Icons Sdn Bhd

D. Individual Prize – Best Stableford

Champion: Dillion Singh
Schenker Logistics (Malaysia) Sdn Bhd
Runner-up: Zainuddin Ishak
HSBC Bank Malaysia Berhad
1st Runner-up: Steven Pang
Schenker Logistics (Malaysia) Sdn Bhd
4th Place: Leong Sau Wah
HSBC Bank Malaysia Berhad
5th Place: Wolfgang Laabs
Schenker Logistics (Malaysia) Sdn Bhd

E. Individual Prize – Best Net

Champion: Kee Ming Yu
Ferucci Worldwide Sdn Bhd
Runner-up: Ku Man Fong
Tay & Partners
1st Runner-up: Kelvin Kee
Ferucci Worldwide Sdn Bhd
4th Place: Claire Bouderville
Schenker Logistics (Malaysia) Sdn Bhd
5th Place: Jason Chong
Tesco Stores (Malaysia) Sdn Bhd
ACKNOWLEDGEMENT
The MICCI Golf Committee would like to record their sincere appreciation to the following sponsors for their invaluable support and contribution to the success of the tournament.

**F. Novelty Prizes**
- **Nearest the Pin (Hole No: 4)**
  - **Winner:** Tay Beng Chai
  - **Tay & Partners**
- **Nearest the Pin (Hole No: 11)**
  - **Winner:** Norman Tee
  - **Tesco Stores (Malaysia) Sdn Bhd**
- **Nearest the Line (Hole No: 9)**
  - **Winner:** Leong Sau Wah
  - **HSBC Bank Malaysia Berhad**
- **Nearest the Line (Hole No: 18)**
  - **Winner:** Dillion Singh
  - **Schenker Logistics (Malaysia) Sdn Bhd**
- **Longest Drive (Hole No: 9)**
  - **Winner:** Lim Seok Hua
  - **Northport (M) Bhd**
- **Longest Drive (Hole No: 18)**
  - **Winner:** Jeremy Yap Wei Kwok
  - **Modern Icons Sdn Bhd**

---

**—Members Networking Evening & Branch Chair Farewell**

MICCI Penang hosted a Networking Evening on 20 June 2013 at the Farquhar Bar of the Eastern & Oriental Hotel, Penang. Although it was in the midst of the Georgetown Festival and with the evening further colliding with the “Kumar Comedy” show, there was a good turnout of over 60 Members and guests.

The evening also served as a farewell to the outgoing branch Chairman, Dato’ Seri Nazir Ariff who had stepped down after more than 20 years at the helm. The Chamber was to be transferred to Korea.

Dato’ Seri Nazir Ariff handed over the reins of MICCI Penang Chair to Brian Tan, Chief Executive Officer of Texchem Resources Sdn Bhd. Brian has been the Vice-Chairman of the branch for the last 4 years and will be assisted by newly appointed Vice-Chairman Erik Lund, General Manager of Barkath Coro Manufacturing Sdn Bhd.

Brian informed Members and guests that the branch would strive to improve its communication to Members and to have more interaction with the State government. He urged Members to engage with the branch on matters that are of concern to them and their business.
— Briefing on Trade Credit Insurance and Directors & Officers Liability Insurance

MICCI Penang organised a half-day briefing session titled ‘Trade Credit Insurance and Directors & Officers Liability Insurance’ on 30 July 2013 at the Penang Skills Development Centre, which was sponsored by QBE Insurance (M) Bhd. The aim of the briefing was to create awareness of the risks when one takes up his/her managerial position and how to be protected in the event of an untoward incident.

The briefing was conducted by Justin Ng, Manager New Business & Product Development and Andrew Ho, Regional Underwriting Manager for Credit & Surety, S.E. Asia, India & Japan of QBE insurance. The briefing was divided into two sessions with the first identifying the various exposures present and risks solutions for the well-being of directors and officers. As corporate governance becomes a main consideration in business operations worldwide, more responsibilities are imposed upon directors and officers of corporations. They are now exposed to larger risks of lawsuits brought on by the corporation or other parties for negligence or omission to act in conjunction with the performance of their duties. Participants were briefed on how performance of directors and officers are increasingly under scrutiny and that many do not realize the many risks exposures, and that protection against such risks are available.

The second session covered “Combining Risks Mitigation of a Business with Bottom Line: Credit Insurance At Work”. In today’s trading environment, companies are operating with thinner profitability margins. In order to compensate for the decreasing profits, companies are required to expand their horizons to new buyers and markets, increase trading volumes or asked to be more competitive by their existing buyers to convert letters of credit into open credit terms.

The briefing provided alternative and complementary solutions to support companies’ working capital and significantly share in the credit risk mitigation of a substantial part of their unprotected assets in open account receivables.

— Briefing on Minimum Retirement Age & Due Compliance of the Minimum Wage

MICCI Perak organised a half-day briefing session on the “Minimum Retirement Age & Due Compliance of the Minimum Wage” on 11 June 2013 at the Tropicana Grand Ballroom.

The speaker for the briefing was Zakiah bt Abdul Wahab, Senior State Assistant Director of Labour who is solely responsible in overseeing the implementation of labour-related Acts and regulations in the State.

In her presentation, Zakiah highlighted the various factors that needed to be taken into account for the minimum wage computation, in particular, the number of working days, the agreed normal working hours as per the contract of services, and those who were paid on commission. Subject to the negotiation between the employer and employee, the method of restructuring of wages was based on some conditions, one of which lays down that the said restructuring only involves payments in cash as defined in the definition of “wages” under section 2 of the Employment Act 1955.

However, non-wages payments were excluded in the definition of ‘wages’ under the said section. The non-wages payments were the value of any house accommodation or the supply of any food, fuel, light, water, medical

— Visit to the Gaharu Tea Valley Gopeng

On 12 July 2013, Dato’ Hew Choy Kon, the MICCI Perak branch Vice-Chairman, and a few committee members visited the Gaharu Tea Valley in Gopeng. The gaharu, also known as ‘Agarwood’, is considered one of nature’s most valuable wood and popularly regarded as the “Wood of Gods”.

The trip was made possible with the kind assistance of Nicklaus Ho, CEO of Gaharu Technologies Sdn. Bhd. who facilitated the necessary arrangements. Members were taken on a guided tour on the 120ha plantation which included a ride up to the top of the hill.

The committee was given an interesting overview on the plantation as well as the latest developments taking shape to make the place an icon of Gopeng town. An interesting feature at the entrance to the gaharu plantation stands a miniature model of the Great Wall of China, and nicknamed “The Great Wall of Gopeng”. The company intends to build the wall around the entire plantation in the near future which could most likely develop into a tourist attraction. Moreover, the commercialisation of the gaharu trees contributes significantly towards the industrial and tourism sectors.

The visit also provided an opportunity for the committee to introduce MICCI to Gaharu Technologies, who are an export-based company, particularly to the Middle East. The committee urged the company to further leverage on the Chamber’s international linkages and initiatives that would inevitably bring many benefits to their business.
MICCI News

Business Advocate

MICCI News

Business Advocate

– Business Visit from ARA-CWT Management

MICCI Johor welcomed a delegation from ARA-CWT Management (Cache) Limited on 13 May 2013 in which the branch facilitated a number of business visits for the company in the State. Led by its Chief Executive Officer, Daniel Cerf, the aim of the visit was to explore the developments and opportunities in Iskandar Malaysia particularly in the industrial and logistic sectors. Among the visits organised were to the Port of Tanjung Pelepas and to AME Construction Sdn Bhd who provided an overview on their i-Park developments. ARA-CWT is an Asian real estate fund management company focused on the management of public-listed real estate investment trusts (“REITs”) and private real estate funds. The company is listed on the main board of the Singapore Exchange Securities Trading Limited (“SGX-ST”) and manages REITs listed in Singapore, Hong Kong and Malaysia. ARA-CWT has a diversified portfolio spanning the retail, industrial, office and logistics sectors including providing real estate management services, property management services, convention & exhibition services and corporate finance advisory services.

– Networking Evening & Health Talk

Close to 50 Members and guests attended a Networking Evening & Health Talk organised by MICCI Johor and hosted by Regency Specialist Hospital at the Thistle Johor Bahru on 26 June 2013. Themed ‘A Healthier Lifestyle for Top Executives’, the evening featured a few medical professionals who presented on some useful health tips including hands on training on Cardiopulmonary Resuscitation (CPR).

MICCI Johor Chairperson, Nora Lam and the CEO of Regency Specialist Hospital, Chin Wei Jia, welcomed all who were present and thanked them for taking the time to show up.

The medical professionals that presented on the evening included Dr. Nachiappan Subramaniam (Orthopaedic & Trauma Surgeon) who spoke on the do’s and don’ts for a healthy lifestyle, Dr. Law Teik Yeong (Health Screening Clinician & Occupational Health) on the importance of health screening and how early prevention and detection can save lives, and Dr. Patrick Cheah Way Chen (Consultant Emergency Medicine) who demonstrated the method for performing CPR.

The evening proved to be both informative and enjoyable as Members and guests not only had an avenue to exchange business contacts but to take away with them an essential skill in saving a life.

attendance, or of any approved amenity, or approved service.

Furthermore, also excluded were any contribution paid by the employer on his own account to any pension fund, provident fund, superannuation scheme, retrenchment, termination, lay-off or retirement scheme or any other fund or scheme established for the benefit or welfare of the employee. Travelling allowance and any annual bonuses were also defined as non-wages.

Zakiah further stated that certain sectors, namely hotels, plantations and securities, could convert all or part of their service charges, special gratuitous payments and security incentives respectively to form part of the minimum wages.

Participants were also provided with practical examples of situations that gave them a better understanding on both subjects before raising various questions that affected their respective industries.

Prior to concluding, Zakiah stated that her department welcomed any queries or further clarification with reference to either subject matters.
Celebrating Sabah’s 50th Anniversary

MICCI Sabah participated in a parade in conjunction with the State’s 50th Anniversary Celebration in achieving independence on 30 August 2013. Datuk Seri Panglima Musa Haji Aman, Chief Minister of Sabah officiated the event which was also attended by the Tuan Yang Terutama Yang di-Pertua Negeri Sabah, Tun Datuk Seri Panglima Haji Juhar bin Datuk Haji Mahiruddin.

The parade took place at the Coastal Highway Waterfront stretching from Sutera Harbour Resort to Le Meridien, Kota Kinabalu with an overwhelming crowd of more than 20,000 spectators. The celebration included entertainment by local artistes and the cultural board, followed by the Chinese Lantern Competition and Parade Car Float. The Sabah International Expo (SIE2014) car float was one of the highlights during the parade before the grand fireworks lit up the night sky.

MICCI Sabah Training Workshop on the Buzan Technique—Effective Thinking for Higher Performance

More than 20 participants attended the two-day MICCI Sabah Training Workshop on “The Buzan Technique—Effective Thinking for Higher Performance” formally known as “Mind Mapping for Quick Action” from 17-18 April 2013 at the Hyatt Regency Kinabalu.

Participants had the opportunity to acquire in-depth knowledge on Mind Mapping techniques as a revolutionary method of assessing intelligence developed through 40 years of research by TONY BOZAN.

Participants were shown the longest Mind-Map developed by Boeing Aircraft which resulted in the company netting an estimated saving of $11 million. The 25-foot long Mind Map enabled a team of 100 senior aeronautical engineers to learn in a few weeks, what took a few years initially.
Interview with the Director of W.R Grace

MICC speaks with Dato’ Lahuree Sudiran on the developments of the chemical industry in the East Coast region.

1. Can you briefly introduce Grace and what are the types of products the company is involved in?

Grace operates in more than 40 countries and is a leading global supplier of catalysts, engineered and packaging materials, specialty construction chemicals and building materials. Grace’s business comprises three industry-leading business segments; Grace Catalysts Technologies, Grace Materials Technologies and Grace Construction Products. Though most people don’t know Grace, our products are likely around them.

The Company is founded on innovation. Grace developed the first fluid catalytic cracking (FCC) catalysts and additives that enable petroleum refiners to improve yields and product quality of transportation fuels and other petrochemical products. Grace also pioneered the use of silica gel for military, industrial and consumer application since 1939. Our silica is used as processing aids and additive for the paint, toothpaste, edible oil, food, pharmaceutical and cosmetic industries. Grace is also a leader in developing chemicals admixture to enhance the quality of concrete used in the construction of residential, commercial and industrial buildings.

2. What were the factors that made Grace decide to locate its businesses in Malaysia?

In early 1973, Grace started its business in Malaysia with marketing and selling chemical additives for the construction and container industries, as well as building materials. In 1992, Grace established its first manufacturing facility in Cheras, Kuala Lumpur producing chemical additives for the construction and container industries. Grace’s chemical additives have been used in many famous Malaysian structures including the Petronas Twin Towers.

In 1995, Grace constructed state-of-the-art micronized amorphous silica plant in Gebeng Industrial Park, Kuantan. This plant manufactures silica for customers throughout the Asia Pacific region mainly China, Korea, Japan and India. Our plant in Gebeng started commercial production in 1996. From our location in the Gebeng Industrial Park near the Kuantan Port, we can easily export our products to other Asia Pacific countries such as China, Japan, Korea, India, Vietnam, Singapore, Australia and New Zealand.

3. How do you view the future development of the chemical industry in Malaysia and how would this impact Grace?

The Malaysian government and PETRONAS has played pivotal roles in developing petrochemicals and oil and gas industry in this country. The Malaysian chemical industry’s rapid growth can be attributed to effective management of its oil and gas feedstock. Recent development projects such as the Receiving Gas Terminal, Floating LNG facility and development of Refinery and Petrochemical Integrated Development (RAPID) will help ensure a reliable supply of energy at competitive prices—key requirements for the continued growth of manufacturing companies like Grace.

4. What is your comment on availability of talents (skilled workforce) in the east coast region where your plant is located?

Gebeng is one of three major chemicals hubs in Peninsular Malaysia. The others are Kerteh located about 100km north of Gebeng and Pasir Gudang/Tanjung Langsat located in Johor. Companies from France, Korea, China, and others recently established operations in the east coast chemical belt between Gebeng and Kerteh. With the rapid growth of the chemical industry, demand for skilled workers is high and supply is tight. Most companies operating in the east coast region are challenged to recruit and to retain experienced talent. Chemical industries in this area are not only competing for talent with companies located in the west coast of Peninsular Malaysia but also with companies in Singapore and the Middle East.

A recent study for the East Coast Chemicals Industry (ECCI) Group showed that during the last 12 months, 16 ECCI member companies recruited 614 employees but 479 employees left during the same period. Annual attrition for this group averages 8.8 percent. However, the top priority for ECCI member companies is recruiting top talent in the fields of engineering, processes and instrumentation, and supply chain.

5. Since your products manufactured here are geared for export markets, do you think Malaysia can still be competitive in attracting Foreign Direct Investment into its manufacturing sector?

The Malaysian domestic market is relatively small compared to the Asia Pacific region as a whole, yet many international companies locate manufacturing operations here to serve customers throughout the AP region. To be competitive, Malaysia needs to continue to develop clear policies and reliable, cost-effective energy supplies. Investment incentives, infrastructure such as roads, port facilities, quality of water supply, high speed internet connectivity, air and land transportation connections to the east coast region all are important to manufacturers and additional foreign investment.

6. Tell us a little about what Grace has been doing recently, and what is in the pipeline for the near future?

Since we started our operation in Gebeng in 1996, our Kuantan plant has been running smoothly. Over the years we have tripled our capital investment here to more than RM200 million. Now Grace’s Gebeng facility is fully managed by Malaysians. It is not only a manufacturing site, but also contains a Technical Customer Service facility serving our coating and plastic customers in the Asia Pacific region.

Late last year, Grace completed another expansion of the plant in Gebeng at the cost of RM45million. With this expansion, Grace is now able to manufacture special grades of silica used as filtering agents for the beverage, bio-fuel and edible oil industries. Currently our plant in Gebeng manufactures more than 50 grades of micronized amorphous silica mainly for the coatings and plastics industries. We are an ISO9001 certified company, with HALAL certification from JAKIM for all our silica products.
-- Snapshot of the Trajectory of the Chemical Industry in the ECER over the Past Decade

The East Coast Economic Region (ECER) was envisioned to boost the profile of the states of Kelantan, Terengganu, Pahang, and the district of Mersing, in Johor, so that they can catch up to their siblings on the west coast. One of the key clusters of economic activity in this region is the chemical industry, especially chemical production related to the oil and gas sector. Advances over the past ten years has not only been steadily increasing the prominence of this industry within Malaysia—part of the reason Malaysia is still a net exporter of plastics—but has also spawned a host of support infrastructure and services to aid in the growth of this cluster.

About 12 years ago, then Prime Minister Datuk Seri Dr Mahathir Mohamad officiated the opening of the BASF-PETRONAS Chemicals integrated plant complex in Gebeng, Pahang. The complex was another milestone in the succession of large-scale petrochemical projects in the ECER that also saw the transfer of capital investment as well as state-of-the-art technologies and technical skills to local partners and employees. During a time when the global economy was still waking up from the disaster that was the Asian financial crisis, this project was a boost to the Malaysian economy and knowledge capital of its people. Additionally, the complex’s launch coincided with the creation of infrastructure such as the East Coast Expressway that provided better land route access into this region.

However, the groundwork for such successes were laid a decade ago. At the time of the BASF-PETRONAS complex launch, the administration had also mooted two important developments, which are the expansion of Kuantan Port and the incentivisation of petrochemical companies to develop their own infrastructure to access the Port, as well as catalysing the production of adequate feedstock to form a strong base of support for established multinationals to invest in petrochemical projects in the ECER.

The move to continuously develop Kuantan Port was made to better the inflow and outflow of raw, semi-finished, and finished products in the petrochemical industry. As such, it played a significant role in making this region succeed as a petrochemical hub. Access to the Port was made easier through a network of highways and railways that linked up Kuala Lumpur (through the East Coast Expressway and the Gebeng Bypass), Kuantan, Kerteh, and Kemaman. Products bound for shipment through seaways faced no problems either as many lines called at the Kuantan Port and berthing facilities were always prime to be expanded if need be. Furthermore, the Port had centralised tankage facilities, pipeline and piperack systems, and various other facilities to accommodate the needs of the chemical industry.

In the latter area, various joint ventures and partnerships laid the foundation for the adequate production of feedstock. During the time the complex was launched, PETRONAS, Dow Chemicals, Optimal Group, and Polifin Ltd and DSM Polyethylenes were developing new production capabilities that significantly increased their feedstock production to cater for the potential demand from incoming multinationals.

This was an excellent move as big names like BP Chemicals, Cryovac, Eastman Chemicals, Kaneka, and W. R. Grace, amongst many others, now call the ECER home. PETRONAS also benefited greatly from the development of these feedstock producers. In the case of Optimal Group’s ethylene steam cracker plant in Kerteh, besides massive investments to the tune of billions of Ringgit, the plant also brought together various major players in the international chemical industry to build the plant. PETRONAS, on the other hand, became the key supplier for feedstock needed by the plant, thus increasing its exposure to international players and improving the domestic petrochemical industry simultaneously.

The growth spurts in Kerteh heralded the unsurprising—though wholly-welcomed—proposal to build the Kerteh Plastic Industry Cluster to tap onto the strengths and advantages of the region. As it stands, 140 hectares of land next to existing petrochemical plants will be developed to increase the synergies between them and attract further investment into Kerteh.

The nearby Universiti Malaysia Pahang (UMP) then responded to the developments in this region and placed itself a prime position to support the expansion of the petrochemical industry in the region. UMP founded its Centre for Advanced Research in Fluid Flow in 2011 and the Centre has a direct impact on the ECER. Research done at the Centre involves subjects like crude oil and liquefied gas transportation and liquid mixing in chemical engineering, amongst many others, and such technical knowledge is, demonstrably, a part of the prerequisite skills needed in various employment opportunities in the region.

Being such a large region, a comprehensive review of the development of the ECER over the past decade would be laboriously long. However, this snapshot of the region over the past ten years has shown how vision has been translated into action, and action into success. Besides building upon a major industry in Malaysia, infrastructure and services in the ECER has also improved in ways that can only benefit the communities in the East Coast and the nation at large and urge us on ever closer to a developed nation status.
DB Schenker new logistics facility at Nusajaya SILC, represents its strategy of expanding warehousing footprint in Southern Malaysia serving consumable, furniture, food industries, heavy industries, solar and semi-con market.