UN/SCEGHS/8/INF.29*

COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS AND ON THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS

Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals

Eighth session, 7-9 December 2004
Item 4 (a) of the provisional agenda

IMPLEMENTATION OF THE GHS

The Role of APEC in the implementation of GHS

Transmitted by the International Council of Chemical Associations (ICCA)

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December 2004

ASIA PACIFIC ECONOMIC COOPERATION

Asia Pacific Economic Cooperation (APEC) was established in 1989 in response to growing interdependence among Asia-Pacific economies, and to further enhance economic growth and prosperity for the region. It began as informal dialogue group, and has become a primary regional vehicle for promoting open trade and practical economic cooperation.

APEC has 21 member economies that account for more than a third of the world's population (2.6 billion people), approximately 60% of world GDP (US$19,254 billion) and about 47% of world trade. It also represents the most economically dynamic region in the world having generated nearly 70% of global economic growth in its first 10 years.

APEC Member Economies

Australia	Japan	Republic of the Philippines
Brunei Darussalam	Republic of Korea	Russian Federation
Canada	Malaysia	Singapore
Chile	Mexico	Chinese Taipei
People's Republic of China	New Zealand	Thailand
Hong Kong, China	Papua New Guinea	United States of America
Indonesia	Peru	Viet Nam

APEC is the only inter-governmental grouping in the world operating on the basis of non-binding commitments, open dialogue and equal respect for the views of all participants. Unlike the WTO or other multilateral trade bodies, APEC has no treaty obligations required of its participants. Decisions made within APEC are reached by consensus and commitments are undertaken on a voluntary basis. However, decisions frequently are adopted by individual economies and reflected in their laws and regulations.

Since its inception, APEC has worked to reduce tariffs and other trade barriers across the Asia-Pacific region, creating efficient domestic economies and dramatically increasing exports. APEC also works to create an environment for the safe and efficient movement of goods, services and people across borders in the region through policy alignment and economic and technical cooperation.

ASIA PACIFIC CHEMICAL INDUSTRY COALITION

In 1996 the American Chemistry Council initiated the APEC Chemical Industry Coalition (APCIC) comprised of trade associations mirroring the APEC membership. APCIC worked within the APEC forum to establish a public-private sector initiative where representatives from industry can meet face to face with key government officials to promote trade facilitation in the region.

Member Economy	Industry Association or Representative
Australia	Plastics and Chemicals Industries Association - PACIA
Brunei Darussalam	
Canada	Canadian Chemical Producer's Association - CCPA
Chile	Asociación Gremial De Industriales Químicos De Chile - ASIQUIM
China	China Petroleum and Chemical Industry Association - CPCIA
China Hong Kong	Association of International Chemical Manufacturers - AICM
Indonesia	Indonesia Chemical Industry Council - ICIC
Japan	Japan Chemical Industry Council - JCIA
Korea	Korea Responsible Care Council - KRCC
Malaysia	Chemical Industries Council of Malaysia
Mexico	Asociación Nacional de la Industria Quimica - ANIQ
New Zealand	New Zealand Chemical Industry Council - NZCIC
Papua New Guinea	
Peru	
Philippines	Samahan sa Pilipinas ng Industriyang Kimika - SPIK
Russia	
Singapore	Singapore Chemical Industry Council - SCIC
Chinese Taipei	Taiwanese Chemical Industry Association - TCIA
Thailand	Federation of Thai Industries, Thailand Chemical Industry Club - FTI
United States	American Chemistry Council - ACC
Vietnam	

APEC CHEMICAL DIALOGUE

The APEC Chemical Dialogue was officially established in 2000 as an APEC sub-forum. The APEC Chemical Dialogue was formally launched at a briefing and reception on October 16, 2001 in Shanghai. The launch followed a year of preparatory work by APEC officials and industry to agree on Terms of Reference for the Dialogue and develop priority areas of focus. Mexico hosted the first Chemical Dialogue in May 2002; Thailand hosted the second Chemical Dialogue in 2003; and, Chile hosted the 2004 Chemical Dialogue.

The work of the Chemical Dialogue is conducted inter-sessionally through the Steering Group. The Chemical Dialogue identified specific non-tariff barriers, primarily product regulatory requirements, for APEC to address to further facilitate the flow of goods and services within the region. The Dialogue is co-chaired by government and industry: Ms. Meredith Broadbent, Assistant United States Trade Representative USTR, and Datuk Al-Amin B. Hj. Abdul Majid of the Chemical Industry Council of Malaysia, respectively. The Steering Group is Chaired by Ms Barbara Norton of USTR and supported by the APCIC Secretariat.

The goal of the Chemical Dialogue is to discuss the competitive challenges facing the industry and develop recommendations for enhancing the competitiveness of the industry. Reducing the cost of doing business, including the cost of compliance, and enhancing worker and end-user safety are key objectives. It is in this context that the Chemical Dialogue chose to endorse adoption of GHS by the APEC member economies.

GLOBALLY HARMONIZED SYSTEM

The Globally Harmonized System (GHS) is a consistent and coherent approach to evaluating the hazards of chemicals. In 1992, the United Nations Conference on Environment and Development (UNCED) adopted an international mandate to develop the GHS: "A globally harmonized hazard classification and compatible labeling system, including material safety data sheets and easily understandable symbols, should be available, if feasible, by the year 2000." The technical work on the GHS was completed in 2002, and sent to the United Nations Subcommittee of Experts to adopt and implement. This completes nearly 10 years of work by dozens of experts from around the world.

The Chemical Dialogue endorsed the GHS language as proposed by the Chemical Dialogue Steering Group and recommended that it be forwarded to the Committee on Trade and Investment for consideration by Senior Officials to report to Ministers:

To support and contribute to the Shanghai Accord objectives of trade facilitation, economic and technical cooperation, and a reduction in business transaction costs by a target of 5 percent by 2006; and to provide for a common basis for management of chemical products in the APEC region, the Chemical Dialogue recommends that APEC economies:

- *Recognize that they should begin the process to implement the Globally Harmonized System (GHS) on hazard classification and labeling of chemicals and safety data sheets as soon as feasible after its adoption by the United Nations in 2002, with the intention to have, on a voluntary basis, as many APEC economies as possible implement the GHS by the end of 2006, taking into account the particular circumstances of each economy.*
- *Provide APEC-wide education and training activities in conjunction with the private sector and interested international organizations to facilitate implementation of the GHS;*
- *Explore the feasibility and scope of a pilot project in 2003 on the implementation of the GHS in one or more APEC economies in conjunction with the private sector and relevant international organizations; and,*
- *Exchange information on a regular basis on progress with implementing the GHS.*

Since gaining approval for the work, the Chemical Dialogue has undertaken APEC-funded training on GHS and established a structure to facilitate information sharing and reports of progress to implement GHS in each member economy.

September 22-24, 2003 Chinese Taipei held a seminar on the Globally Harmonized System (GHS), which was attended by 252 participants from 13 APEC economies. The seminar provided the chance for government and industry representatives to participate in state-of-the-art technical training and discussions. APEC members and stakeholders were encouraged to continue to sponsor appropriate activities to exchange views and experiences to facilitate GHS implementation. After productive discussions in three days, sound conclusions were made. Efforts may be considered to fall into five categories of activities: Networking, Information, Cooperation, Harmonization, and Education (NICHE). A full report of the Chinese Taipei GHS seminar may be found on the APEC website - http://www.apec.org/apec/documents_reports/chemical_dialogue_steering_group/2004.html

September 7-8, 2004 Malaysia hosted a follow-up GHS workshop with a total of 153 participants representing 11 APEC member economies in attendance. The seminar participants comprised mainly of government officials, public sector regulators of chemicals and private sector including chemical manufacturers and users. The workshop objectives were to:

- Enhance awareness among chemical industries and SMEs on assessing costs, benefits and the potential impacts on GHS in facilitating international trade.
- Encourage APEC member economies to expedite review of their regulatory pertaining to chemical hazards communication by complying with GHS.

Recommendations from the workshop to be taken forward to the Steering Group include:

- APEC economies to appoint national coordinating agency or form committees to oversee the implementation of GHS in their respective economies.
- APEC to conduct more technical training programs to raise awareness of GHS among government and private sectors
- Develop reporting mechanism to monitor progress and enhance the APEC website
- APEC to monitor progress of alignment of other agencies with GHS, e.g. FAO, ILO, ISO, WHO
- APEC Chemical Dialogue provide links to international efforts in implementing GHS
- Detailed analysis on the costs and benefits of the GHS implementation
- APEC economies initiate situational or gap-analysis on degree of competency to adopt GHS

The full report of the 2004 Malaysia GHS workshop may be found on the APEC website - http://www.apec.org/apec/documents_reports/chemical_dialogue_steering_group/2004.html

At the September 2004 Steering Group meeting in Santiago, Chile, Datuk Al-Amin, the industry Co-chair, welcomed the Chemical Dialogue's continued efforts to promote implementation of the Globally Harmonized System (GHS) by the APEC target of 2006. He noted that this issue remains a priority for the chemical industry.

The APCIC Secretariat reported on efforts by a "Friends of the Chair" group to develop a mechanism using the APEC Chemical Dialogue website to share information on GHS implementation. The Chemical Dialogue approved a format (see Annex I) for reports that would be posted on the website.

COMMUNICATION AND SUPPORT OF GHS IMPLEMENTATION

In order to continue to support implementation of GHS, the APEC Chemical Dialogue Steering Group agreed to form an informal group known as "Friends of the Chair" to undertake communication about and identification of tools to smooth the progress of the work. The following areas will be addressed:

Address issues to move forward implementation of GHS in APEC economies

- Collaborate to make available resources that will support GHS implementation - presentations and information resources: GHS awareness; history of GHS; scope - "Business of Chemistry is Everywhere;" comparison of GHS to economy regulations; GHS Safety Data Sheet, Labelling; GHS impact. Other information may include translation of GHS phrases contributed by member economies
- As countries implement GHS, obtain their legislation and/or standards that are aligned to GHS requirements for reference
- Alignment of ISO, WHO and FAO et al with GHS
- Responsibility of the ECONOMY
- Undertake "situational analysis" involving all affected industries, laws and policies, as appropriate to the current structure in each economy
- Identify and involve all stakeholders in public and private sectors
- Review regulations regarding chemical hazard classification and communication
- Harmonize internal regulatory requirements to the greatest extent possible across sectors

APEC CD reporting mechanism to monitor progress on GHS implementation

- Follow when major economies - the EU, Japan, Australia, USA - implement GHS
- How to establish focal points to coordinate adoption and implementation of GHS
- Approaches taken in other countries, in particular classification and marking of Dangerous Goods for transportation
- Adopt and implement the whole or in phases of the GHS; Malaysia willing to share their analysis and template; they will start with industrial chemicals

APEC website to be enhanced to share experiences and Best Practices

- Investigate process and progress of alignment of other agencies with GHS, e.g. FAO, ILO, ISO
- Look for ways to raise awareness of GHS within associations – e.g., PH SPIK annual report contained article on GHS; within industries and companies

Identify transition costs and benefits – from level of compliance programs and training to printing and distribution issues

- Identify major problems, impact and transition costs associated with implementation GHS and Orange book
- Investigate ways to utilize technology to minimize cost to industry – possibilities…
- Each APEC economy may contribute translation of precautionary phrases to user-friendly website
- Downloadable symbols and statements
- Create chart of APEC economies regulated hazard endpoints
- Locate and share information on classification of chemicals consistent with GHS that will promote cost-effective implementation

APEC CD contribute/link to international efforts

- With UNITAR, develop and maintain a calendar of events related to GHS (see Annex II for APEC related activities)
- Understand UNITAR is to set up on-line experts; collaborate to develop structure for FAQs:

- Alignment with other standards
- Scope of GHS
- Classification
- Labelling
- Safety Data Sheets
- Impact on industry, government
- Implementation plans
- Training plans

Capacity Building

- GHS awareness for government and industry
- Government training for industry when regulations change
- "Business of Chemistry is Everywhere" as a tool to demonstrate impact of chemicals on manufacturing sectors
- Technical training and support on physical properties, toxicology, environmental science
- Sector specific training, e.g. industrial, agricultural, consumer and transport
- Migration of pesticide labelling needs more discussion
- Training for SMEs is needed
- APEC-wide Train-the-Trainers program will be helpful
- To improve project, more practical examples are needed
- Identify where further clarification and guidance would be useful, for possible consideration by UN SCEGHS, UNITAR, and/or other appropriate bodies
- Identify legal instruments that may be used to implement GHS
- Concern was expressed by some economies about their ability to meet the 2006 APEC target implementation without significant capacity building.

Investigate funding opportunities: in APEC; outside APEC; UNITAR; and others

- International organizations
- Government programs
- Role of industry to provide technical assistance and training

GHS ACTIVITIES IN APEC ECONOMIES: An informal report from industry view

AUSTRALIA

- Federal Government supports implementation of GHS and proposals from Chemical Dialogue; adopting GHS SDS at a national level
- NOSHC kicked off awareness of GHS at 2003 conferences in Sydney and Melbourne; all States must align with this
- PACIA represented on workgroup
- New labelling and Safety Data Sheet regulations align with GHS

CANADA

- Goal – GHS fully implemented by December 2008
- Four key sectors affected by GHS: Consumer chemical products; Pest control products; Transportation of Dangerous Goods; Workplace Hazardous Materials Information System
- Objective – harmonize between sectors and between NAFTA countries
- Changes include classification criteria, changes to labels (symbols, signal words, hazard statements, border) and MSDS format, review period and disclosure list
- Reported on outreach efforts by the Canadian Government to stakeholders on GHS implementation issues.

CHILE

- At least 10 different government agencies will be involved in the implementation of GHS and therefore,
- The government has agreen to allow ASIQUIM (the principle chemical industry trade association for Chile) to coordinate the implementation.

CHINA

- State Administration of Work Safety coordinated GHS briefing for 22 agencies and 8 chemical companies
- Requested membership on GHS sub-committee

- AICM planning GHS seminar for government

CHINA HONG KONG
- Briefing for Fire Services Department, Government Laboratories
- Analyzed current legislation
- Put draft revision on hold to include GHS

INDONESIA
- Early stages
- Participated in capacity building seminar with Japan

JAPAN
- Engaged in establishing GHS with joint agency committee, including JCIA
- Internal and external awareness seminars and workshops in ASEAN economies supported by the Government of Japan.

KOREA
- Domestic consultation process started; Ministry of Commerce, Industry and Energy is focal point; Ministries of Environment and Labor ahead in implementation plans
- Classification and labelling of industrial chemical products regulated by Ministries of: 1) Commerce, Industry and Energy; 2) Environment; 3) Labor; 4) Government Administration and HA; and Agriculture and Forestry; some laws have almost identical classification standards and warning labels; others need substantive amendments in order to align with GHS
- Ministry of Commerce, Industry and Energy working on adoption of Korean Standards in areas possible so business sector can start to adjust to new standards on a voluntary basis and on a step-by-step approach
- Korean Agency for Technology and Standards in process of reviewing the results of GHS related studies and is planning to notify the draft of the Korean Standards within this year. Ministries are working on a GHS implementation guidebook, drafted and edited by GHS Task Force

MALAYSIA
- Multi-agency committee under Ministry of Trade
- Leadership role in OSHNet, drafting template for GHS
- CICM actively involved

MEXICO
- Mexico to host a GHS workshop in Mexico City for Latin America
    - Seeking non-APEC funding to allow inclusion of non-APEC countries; Chile and Peru members of APEC
- ANIQ analyzing each regulation impacted by GHS; working with related agency

NEW ZEALAND
- Adopted GHS criteria for classification of hazardous substances
- Labelling and Safety Data Sheets are performance based; GHS accepted, but not mandatory

PERU
- Participated in Chinese Taipei workshop

PHILIPPINES
- GHS briefings with Dept of Environment, Natural Resources; Bureau of Food and Drug; Board of Investment; AmCham
- Industry trade association (SPIK), Chemical Interest Group participated in Japanese government sponsored training for ASEAN

RUSSIA
- In the process of revising all technical regulations; will include adoption of GHS
- Establishing Risk Assessment Institute to include international cooperation, government and industry cooperation

- Work will cover all business sectors; initial focus on medical and pharmaceuticals

SINGAPORE
- National Environment Association taking lead on multi-agency committee
- Singapore Chemical Industry Council involved

CHINESE TAIPEI
- GHS Briefing held for Ministry of Economic Affairs
- Council of Labor Affairs studying GHS
- Hosted September 2003 GHS workshop
- September 2004 Industrial Technology and Research Institute conducted training for government and industry

THAILAND
- Committee on Hazardous Substances will adopt national action plan for GHS implementation; committee comprised of Director-Generals of 12 relevant Departments and 7 scholars who are experts in related fields
- Department of Industrial Works of the Ministry of Industry as secretariat and focal point
- Thailand requested that future GHS workshops build on previous basic workshops and offer more advanced workshops to help economies achieve GHS implementation.

UNITED STATES
- Coordinating body is likely to be the Council on Environmental Quality - an office of the White House
- Inter-agency meetings – to date government only, but will include both industry and NGOs
- Appears 4 US agencies impacted by GHS: OSHA, EPA, DOT and Consumer Product Safety Commission
    - OSHA has posted all pertinent regulations that will be effected by GHS on their web site
    - EPA has outlined their plans for the implementation of GHS within the Office of Pesticide Programs in a "White Paper" which has been published in the U.S. Federal Register. The comment was open until early December
    - DOT in process of aligning all related regulations with GHS; plan to complete 2007
    - CPSC has taken no steps to start the change over to GHS
- American Chemistry Council active in further development of GHS and drafting of ANSI standards

ORANGE BOOK STATUS

At the February 2002 meeting of the APCIC in Mexico City, priority issues for the APEC Chemical Dialogue work program were discussed. One priority identified was the implementation of the Recommendations on the Transport of Dangerous Goods by APEC economies. The UN Committee of Experts on the Transport of Dangerous Goods (UNCETDG) develops recommendations that serve as the basis for international regulations regarding the transportation of dangerous goods, published as the United Nations Recommendations on the Transport of Dangerous Goods ("Model Regulations," also called the "Orange Book"). The UNCETDG provides a uniform basis for developing harmonized regulations to facilitate trade and safe transport of dangerous goods.

The UNCETDG agenda deals with a variety of issues, including transport packaging, marking, labeling, classification of materials, etc. The UN Recommendations are incorporated into national, regional and modal regulations. This plays a large role in regulating how chemicals are moved around the world and deals with international transportation issues (for additional background see Annex III). The recommendations are also an integral part of GHS.

Industry representatives noted that there are inconsistencies between and within economies that often impact the smooth and safe flow of goods. The APEC Steering Group undertook a survey of implementation of the "Orange Book" in member economies. The results indicated that:

- While most had adopted the Orange Book for international trade, implementation varied from the 9th Edition to the 12th Edition; the most current is the 13th Edition

- Differences between international standards and domestic requirements may lead to reclassification, relabelling and even repackaging upon arrival at a port
- A number of APEC economies have no or minimal regulations governing domestic transportation of dangerous goods

The Steering Group recommended the following as part of an initial work plan:

- For economies without domestic transport regulations, suggest using Orange Book as basis for establishing domestic regulation
- For economies that already have domestic regulations, incorporate approval by reference, to allow for use of ICAO and IMDG (IMO rules on transport of dangerous goods) for exporting from origin to port/airport and importing from port/airport to first destination
- Suggest economies align domestic regulations with UN to eliminate need to relabel and mark packages for reshipment from first destination

The work of the APEC Chemical Dialogue on promoting and supporting the implementation of GHS as a means of trade facilitation is on going. There has been significant sharing of information and approaches that has created the possibility to allow many of the APEC economies to meet the accelerated goals for adoption of GHS.

ANNEX I

Status Report on Implementation of GHS in APEC Economies
Guidance for completion

At the APEC Chemical Dialogue convened in Pucon, Chile in May 2004, it was agreed to establish a reporting mechanism for progress on implementation of GHS in each of the APEC economies. It is suggested that economies report twice per year – in March in time to collate for the Chemical Dialogue usually scheduled for May, and in September so as to allow additional planning and resources for the following year.

Attached are suggested topics that might be addressed in reporting status of implementation of GHS in each APEC economy.

It is not necessary to answer all questions. Please provide feedback if the topics are not clear or additional topics should be added. It will be helpful to others to include information that might not be addressed in the questions.

- APEC economies government should send reports to Barbara Norton, chair of the APEC CD Steering Group (BNORTON@ustr.gov)

- APCIC representatives to the APEC CD should send reports to Jim O'Connor, chair Secretariat for APCIC (Jim_O'Connor@americanchemistry.com)

The proposal from the CDSG held in Santiago, Chile in February 2002 was to form an informal, voluntary group that would work inter-sessionally, primarily via e-mail, to follow and promote the implementation of GHS. After discussion at the CDSG, the suggestion was to work as "Friends of the Chair" to minimize creation of additional bureaucracy. At the Chemical Dialogue held in May 2004, Karon Armstrong of 3M volunteered to lead this group. To make suggestions, recommendations or to participate, please contact Karon. She may be contacted at (kearmstrong@mmm.com). The above reporting mechanism will be one of the deliverables of the "Friends of the Chair."

Status Report on Implementation of GHS in APEC Economies

1. Which government authorities have an interest in GHS? How were they identified?

2. How have you raised the awareness about GHS in the government?

3. Who are the other stakeholders? How did you identify them?

4. What laws and regulations are affected? What is the process to revise these? What difficulties are involved? How have you addressed the issues?

5. Are policy changes necessary in any agency in order to adopt GHS?

6. What are the opportunities for adopting GHS?

7. What are the future training needs to adopt GHS in your economy?

8. Costs involved in adopting GHS?

9. What questions about GHS are unanswered?

10. Any additional comments.

ANNEX II

APEC Chemical Dialogue: Calendar of Capacity Building and Training Activities for GHS

March 11-15, 2002	Tokyo, Japan: Program on Industry and Environmental Protection for ASEAN
March 13, 2002	Global Chemical Regulatory Conference, Baltimore, Maryland. Co-hosted by American Chemistry Council and SOCMA. "Hazard Communication in Asia Pacific and the Opportunity for GHS" by KE Armstrong, 3M
April 19, 2002	Taipei: GHS briefing for industry and government hosted by Ministry of Economic Affairs
April 22, 2002	Hong Kong, China: GHS briefing for Hong Kong Fire Services Department and Government laboratories
April 24, 2002	Beijing, China: GHS seminar for State Administration of Work Safety and 22 other agencies and industries. Hosted by AICM; speakers Dr. Kiyotaka Oyama, Karon Armstrong, Chris van Lint
April 29, 2002	Manila, Philippines: GHS briefing for Philippines Bureau of Food and Drugs
April 30, 2002	Manila, Philippines: GHS briefing for Board of Investment; American Chamber of Commerce Environment Committee
May 22-23, 2002	First APEC Chemical Dialogue, Merida, Mexico
June 11-12, 2002	Sydney, Australia: Two-day workshop on the GHS and its implementation in Australian and overseas
July 16-18, 2002	Kuala Lumpur, Malaysia: ASEAN OSHNet International Workshop on hazard classification and labeling. GHS presentation by Datuk Al-Amin
Aug 26 – Sept 4, 2002	World Summit on Sustainable Development, Johannesburg, South Africa. One of the proposed commitments for the WSSD is that as many countries as possible should implement the GHS by 2008.
October 7, 2002	Meeting of the Technical Experts Subgroup of the U.S. – Mexico Bilateral Occupational Safety and Health Working Group regarding handling of hazardous substances, including the GHS.
October 8-10, 2002	Meeting of the Asia-Pacific Occupational Safety and Health Organization, Hanoi, Vietnam.
October 15-17, 2002	ASEAN Chemical Industry Club annual meeting, Manila Philippines. "Update on the APEC Chemical Dialogue" by K. James O'Connor Jr., American Chemistry Council; "The Business Case for the APEC Chemical Dialogue" by Karon Armstrong, 3M
December 11-13, 2002	Meeting of the United Nations Committee of Experts on Transportation of Dangerous Goods and the GHS. The GHS adopted during this meeting and made available to countries in the first half of 2003.

February 5, 2003	**"**Business Case for the APEC Chemical Dialogue" for AmCham Environment and Quality Management Committee and Management Association of the Philippines Environment Committee
March 3, 2003	GHS Briefing for Department of Environment and Natural Resources, Manila, Philippines
March 11, 2003	GHS Status report to Hong Kong Fire Services Department
May 20, 2003	GHS Briefing for Chemical Industries Council of Malaysia, DOSH, NEA and Ministry of Manpower
May 20-21, 2003	8th AMEICC Meeting on the Chemical Dialogue, Bangkok Thailand. GHS presentation by Datuk Mohamed Al-Amin B. Hj. Abdul Majid, Chemical Industries Council of Malaysia
May 22-23, 2003	Second APEC Chemical Dialogue, Kohn Kaen, Thailand
May 26, 2003	GHS Seminar for DOSH, Kuala Lumpur, Malaysia. Hosted by 3M Malaysia; speaker KE Armstrong on: GHS Background, Classification, Labelling, SDS-CSDS, MSDS, GHS Benefits to Government, Industry, SMEs, GHS Implementation and Discussion
August 14, 2003	Workshop on "Globally Harmonized System on Classification, Labelling of Chemicals and Safety Data Sheets: A Benefit to Government and Industry?" Hosted by Singapore Chemical Industry Council; speakers KE Armstrong and Edlin Maskor
September 18, 2003	AICM Regulatory Compliance Workshop, Jianguo Hotel, Beijing, China. GHS Promotion by Karon Armstrong
September 22-24, 2003	APEC GHS Seminar, Taipei.
October 27-31, 2003	ChemCon ASIA 2003 Singapore. GHS: for Classification, Labelling and Safety Data Sheets
November 1-7, 2003	Meeting of Intergovernmental Forum on Chemical Safety, Bangkok, Thailand. UNITAR and Canadian Government workshop on GHS
December 24, 2003	GHS training for key customers, 3M Taiwan
May 3-7, 2004	ChemCon 2004 Berlin, Germany. "The APEC Chemical Dialogue: a Driving Force for Trade and Harmonization"
July 1, 2 2004	Chemical Registration Legislation seminar, organized by Ciba Specialty Chemicals China Ltd, Ciba Expert Services, Beijing China
July 13, 2004	"GHS for Korea: Classification, Labelling and SDS with a Global Perspective" hosted by ATS for multiple agencies; speaker KE Armstrong, 3M
September 1, 2 2004	2nd China International Forum on Work Safety "APEC Chemical Dialogue and GHS: Key Initiatives" presented by KE Armstrong
September 7, 8 2004	APEC GHS Seminar, Kuala Lumpur, Malaysia
September 26, 2004	3rd Chemical Dialogue, Santiago, Chile
October 6-8, 2004	GHS Workshop for government and industry. Hosted by Industrial Technology and Research Institute

ANNEX III

UN COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS

At the 22 February 2002 meeting of the APCIC in Mexico City a number of priority issues for 2003 APEC Chemical Dialogue work program were discussed. One priority identified was the implementation of The Recommendations on the Transport of Dangerous Goods by APEC economies. Under the auspices of the United Nations Economic and Social Council (ECOSOC), the United Nations Committee of Experts on the Transport of Dangerous Goods (UNCETDG) develops recommendations that serve as the basis for international regulations regarding the transportation of dangerous goods, published as the United Nations Recommendations on the Transport of Dangerous Goods ("Model Regulations," also called the "Orange Book"). The UNCETDG develops recommendations for use by competent authorities and international bodies (e.g., for international/regional regulations, agreements or conventions) governing the transport of dangerous goods by sea, air, road, rail and inland waterways. The UNCETDG provides a uniform basis for developing harmonized regulations to facilitate trade and safe transport of dangerous goods. This plays a large role in regulating how chemicals are moved around the world and deals with international transportation issues.

The UNCETDG agenda deals with a wide variety of issues, including transport packaging, marking, labeling, classification of materials, etc. Many of the UN Recommendations are incorporated into national, regional and modal regulations, and facilitate international trade and the safe transport of dangerous goods (hazardous materials). The UNCETDG is comprised of experts from 22 (currently) voting countries who recommend consistent and uniform standards for the international transportation of dangerous goods. Other countries participate in the process as observers and advisors to the committee; specialized agencies (such as the International Maritime Organization and International Civil Aviation Organization); inter-governmental organizations (IGOs) and non-governmental organizations (NGOs) also participate.

Harmonizing regulatory systems related to the transport of chemicals benefits all stakeholders:

- Chemical industry shipments for APEC economies totaled approximately $1 trillion in 2000.
- Almost one-third of chemicals shipped occurred across borders.
- We expect to see APEC chemical shipments across borders to increase above one-third over the next decade.
- Given the amount of chemicals shipped within the region APEC economies should adopt the Model Regulations to facilitate trade and to improve the safe management of chemicals within the region.
- Adoption of the Model Regulations supports and contributes to the Shanghai Accord objectives of trade facilitation, economic and technical cooperation, and a reduction in business transaction costs; and provides for a common basis for management of chemical products in the region.

The Orange Book is a set of *recommendations* promulgated by the United Nations, and is as such, non-binding to any country. There is no enforcement mechanism within the UN; nations apply rules for dangerous cargo that are found in agreements governed by organizations like the International Civil Aviation Organization (ICAO) or the International Maritime Organization's Dangerous Goods protocol.

Most countries include TDG in some form. While an explicit adherence cannot be claimed in every trading country, most incorporate the spirit of TDG. For instance, at least 150 countries whose combined merchant fleets account for more than 98% of the world's gross tonnage use the IMDG Code as a basis for regulating sea transport of hazardous materials.[1] The IMDG code is based on the UN Recommendations on the Transport of Dangerous Goods but also includes additional requirements applicable to the transport of hazardous materials by sea (e.g. requirements for marine pollutants, freight containers, stowage and segregation as well other requirements applicable to shipboard safety and preservation of the marine environment) that are not covered by the UN Recommendations.

[1] International Maritime Organization website: http://hazmat.dot.gov/imdg.htm

The case of IMDG well illustrates the broader picture of Orange Book application, in that TDG recommendations are included in most international contexts to some degree. IMDG applies TDG recommendations, verbatim in many cases, simply under the IMDG heading rather than calling them TDG. While national variances do exist, the broad inclusion of TDG into international maritime standards, coupled with the large user base for such standards, suggests that most of the world's ocean going hazardous materials subscribes to TDG protocol. The case of air transport is slightly different, in that there are some variations between ICAO hazard transport standards and those prescribed under TDG. Still, the spirit of TDG is incorporated in much international transport.

The national variations are noteworthy, in that some nations who subscribe to TDG influenced practices in international transport do not have regulations for domestic transport (Singapore for instance). For example, Canada has the TDG and Europe has the ADR for road, the RID for rail, and there is still an ADN for inner waterways. Southeast Asian countries, while many are compliant to ICAO/IATA and IMDG, do not appear to have local road and rail regulations. Where legislation does exist, there is a lack in the infrastructure for enforcement.

The concept of international hazard standardization was first introduced in 1956, with subsequent growth occurring in 1957, 1996, 1998, 2000 and 2002. Thus, there are some 'participants' to TDG who comply less fully than others, i.e., China regulations are based on 1996 UN guidelines.