



## Outreach for a better community-industry relationship

Editor's note : This is a proposal presented by Kim Ok Ja, who is the chairman of 'Amenity Science Research Group' that cooperate with KRCC to prepare for the Outreach activity in Ulsan

"Yes, you might want to point fingers at chemistry for polluting the environment, but how much do you know about chemistry?"

This is what I ask back those who say negative things about chemistry. This is also what I wanted to say to Mr. Sakai, chairman of AMR(Amenity Meeting Room), a Japanese civic group. Impressed by AMR's active dedication, I had sought for his comment on my idea of creating a body of environment-concerned middle schools and of naming it 'Amenity science study society', and Mr. Sakai had said it would be awkward to use the word 'amenity' because in his view science is in nature a 'dis-amenity'.

When I met him again later at a monthly AMR meeting after Amenity science education society was formed, I argued again for naming it that way, reasoning 'science is a study of nature, and the purpose of studying the nature is nothing short of making the world of amenity'. This encounter led us to become friends now, and he was once invited to speak for our club previously called Amenity science experiment club on 'science-love-life' on the occasion of our club's first anniversary. In his impressive lecture he admitted that he had lacked the understanding about natural science and had failed to see what the scientific technology really is, and had not believed in science and scientist, and now came to realize that science is none other than love and life itself. We at Amenity Science Research Group was deeply inspired by Mr. Sakai's speech and have consistently been putting in efforts to develop scientific experiments that are friendly to the nature and life.

'Chem. Is Try!'. This is my opening for the first class of the semester. People get as much experience as they believe in. Lesson is meaningless without students' interest. I use the above expression to arouse interest of the students in chemistry by calling their attention to the idea that there is nothing in the world that is not a chemistry, and say to them, 'chemistry is science, and science is life itself'. And I add I recognize the main reason why students alienate chemistry lies in the fact that it involves 3D dirty; dangerous; and difficult-, but this 3D, like it is one side of the two sides of a coin, has the other 3D diverse; dynamic; and definitive.



It is true that because chemistry takes a plenty of tedious work, it covers a diverse area of study around which multidisciplinary studies would center. It is also true that chemistry is as much a dynamic field as it seems dangerous, and as much definitive as it is difficult. This has always been my way of luring my students into chemistry. Probably this is why a majority of my students are studying chemistry in college. The students who are members of Amenity environment circle, which is run under Amenity Science Research Group, do not alienate themselves from choosing engineering/science majors. Rather, they favor chemistry major over other studies, knowing that this is the most 3D among all engineering/science career prospects.

These days we see a growing disinterest and distrust in science and scientist, and chemistry in particular. Chemistry does not get the recognition it deserves because people have developed a wrong image of it. Part of this lack of recognition comes from the difficulties that lie in the direction the modern science has taken. Like there are two sides of a coin, freedom comes with oppression, and stability comes with confusion, and this dual character is true for science too. If we want the society to become a bright and happy one, we need to take this fact seriously and accept it.

Most of us acknowledge that we can lead a more convenient life thanks to the development of chemical industry, while at the same time some of us blame chemical industry for making our living unstable. Here we need to accept these two conflicting ideas. In other words, we should take on environmental problems as a fair price to be paid for as a trade-off of the comfort and convenience in life we get at their expense. This should be the starting point from which we begin solving the environmental problems that chemical industry face today, in the manner of settling the account of benefits and losses. If it turns out to be in a loss, we will then identify the causes and seek ways to remove them.

There is no sense in insisting on getting the benefits chemical industry provides, while crying out, 'chemistry is the primary cause of the destruction of nature and environmental contamination'. Or if we take environmental concerns more seriously, we should at least choose to live without the benefits chemical industry brings to us. On the part of the industry, it is not justifiable to produce new materials with no regard to the environmental effect just because they are useful. In other words, the problem is in the 'unilateral' way of thinking that concerns only on meeting selfish needs unilaterally take benefit and throw blame on others. This is exactly how the general public looks at chemical industry.



Power can create change and can be reciprocal. Chemistry can create change that rightly improves the society if it has the power, and it can be generated by the mutual workings of the chemical users and producers. The driving force for solving the environmental problem, which is posed as today's top priority issue, should come from the mutual workings of nature and human. This is where we can stop separating human from nature and start thinking human together with nature. By this framework of thought, we can learn from nature the way for us to get out of the present crisis, and for this reason we need to develop a new paradigm in our perception of science and chemistry.

As a first step, chemical industry should shed the capitalistic business practice of limiting the responsibility from production to sales. Products that are discarded after-use create far greater environmental problems compared to the pollutants that are created in the production process. Products, each as a life, mutually work and form parts of greater life, and only if these little ones have such capability, they will be able to support with each other in forming healthy larger one. We have to see life in all the things that come out of chemical plant, whether it is product or emission, and we should make sure that these living things are made and return to nature without any harm. This is a watchful eye of the industry that nature stays healthy after it lent itself to us for use and return afterwards.

If industry shifts its thinking from 'production to sales' now to 'production up until returning safely back to nature', or to bear the funeral cost of products, the products so produced by this principle will no longer be artificial, anti-natural products. They will be natural products that run along the circle of nature, and consumers' image of chemical industry will naturally be an amenity. This should be the true feature of chemistry, and chemistry's role in the human society.

We at Amenity society are putting in efforts to broaden the audience, primarily by way of Outreach activity. Through past scientific events, we offered scientific experiments whereby people learn about the beauty of nature and its theory. KRCC has proposed a chemistry festival for children in the Ulsan city, which we welcomed, for we trust it will be an excellent opportunity for us to share our idea: Love, though small in power, can be the greatest energy, just like the fact that it is the small energy that collapses the atomic nucleus that is bound by the nuclear energy; 3F (From I, From Now, From Small)





# Outreach and the image uplift of industry

Editor's note : This is a proposal presented by Ihm Hyuk, who is the chairman of 'Teacher for Exciting Science' that cooperate with KRCC to prepare for the Outreach activity in Daesan

## Community Response to Corporate Social Service

Social services refer to services to the society performed for the purpose of developing and improving the society we belong to. It could also mean volunteering activity in a broader sense, but can be different from volunteering in the influence and effect they have to the society.

Companies put in as much fund as they deem suitable for their expanded management vision, the security of management transparency, and for the benefit of brand image innovation, with the expectations that such services of theirs should allow the society to grow, and ultimately reward them in the form of corporate growth. Currently some large business groups run in their organization social services team with which they are actually involved in social services activities. Community response to the corporate social services activities has been fairly weak in view of the magnitude of the energy and money companies have been putting in, probably partly because most of the companies have regarded social services as an extra business outside the major management activities, and therefore something optional that is exercised with surplus fund.

Since 1997, with the unprecedented outbreak of the nationwide financial crisis, the corporate social services, which had been steadily on the rise, began to shrink down. People came to realize that corporate social services is a volunteering activity of people with wealth, and accordingly people regarded companies as the rich people who begrudge giving away for the society in return for the profits they make through business activities.

## Expectations and major issues of social service

Corporate social services today is a promise companies make to the society as its member that they will at their own will be of service to the society using the valuable resources they have created through the efforts of their workers. Slow economy can not be the justification for companies to stop their social services. Difficult times should on the other hand stand a definitive chance for companies to demonstrate their commitment to the cause. In this aspect, it is companies' investment for the future and surest means for image augmentation, rather than expenditure.

By participating in volunteering activity, employee can raise self-esteem, find time for finding the meaning of life, and foster rightful work ethics as a positive feedback. Volunteering activity is helpful to the development of sensitivity, fellowship, leadership, and employee satisfaction.



In the U.S., many companies have early recognized the positive influence of volunteering upon the leadership development, and most of them are actively involved in volunteering. Also, in Japan, since back in the 1990s companies have shown keen interests in employee volunteering. Companies encourage employee volunteering through such supports as information sharing, program for volunteer experience, leave or leave of absence for volunteering and volunteering gift.

Corporate social services contribute to the prosperity and soundness of the community. IBM has a long tradition of volunteering. The company allows leave of absence by up to one year to employees for volunteering at non-profit organization. The company believes corporate services for the public good brings back benefits to company, for problematic community is unable to supply company with quality employees and good customers.

### What could chemical companies do

Chemical industry is the foundation for the entire industry, as was mentioned by KRCC chairman Won-Joon Hur (Pres., Hanwha Chemical Corp.), "Without chemical products, the comfortable modern living could not be imaginable. All of the recent high-tech industry, IT, BT, NT, and ET, have chemical industry as its foundation." Highlighted by hazards, accidents, and other negative impacts involved in chemical products, chemical industry has been regarded relatively low. It is time that companies found ways to raise benefits both for company and community and continued on with the social services as part of the long-term corporate vision and management strategy. Social services program can be developed and executed to ultimately be of service to the overall management performance, including vitalization of the organization and development of human resources. Social services for the strategic benefit consider followings.

First, internalization of the win-win principle, to ensure benefits to company and society. Second, Circumstance-responsive. It is desirable to identify the need of society, and to choose need that is big enough while fitting company's characteristic. Kellogg, by giving away its cereal products to the needy during the Great Depression in the 1930s, the company not only contributed to solving national famine of the time, it also helped make cereal a major breakfast food for Americans. Third, promotion of volunteering and of employee participation in social services by means of delegation of decision making authority. Fourth, contribution can be in various forms, including money, technology, facility, product, other company resources. Corporate project management expertise can be a valuable input in the community development, or company can help the community with works related to prevention or inspection of environment pollution.

KRCC and its member companies have been involved in significant social services. The services include supplying protective gears, conducting emergency drills, organizing community/company joint advisory body Community Advisory Panel, or CAP charged with opening the corporate improvement performance to community, communicating with community to identify community needs, and hosting community programs: 'Chemical study frontier festival', 'Come! Fun world of chemistry', 'Exhibitions & company tours, and 'Environment/safety seminar', all to help teachers and students feel comfortable with chemical industry.



## Community event for popularizing chemistry

Editor's note : This is a proposal presented by Ryu Wang Sun, who is the chairman of 'Teachers Bonding over Chemistry' that cooperate with KRCC to prepare for the Outreach activity in Yeosu

Created in 1995 by the middle school chemistry teachers in Cholla Kwangju region for the promotion of science among the general public, People who Love Chemistry, Whasamo in short, is the first autonomous association to come into being in Korea, for the unique purpose of popularizing chemistry and of promoting science education. 100 plus members of Whasamo regularly meet twice a month, hold two-day vacation seminars, and have so far published a total of 23 data collections. The Whasamo homepage (<http://whasamo.com>), since its start-up, is a well-structured on-line information access that offers up-to-date multimedia data, pictures from Whasamo events, and moving images of experiment data.

Whasamo has also held science events of different formats to help the students develop their resources in science. Between May and July of 2004, it held 'Let's play with science' in the Miracle library in the city of Soonchun, a street event at which some 500 students attended. On 21 of July, it hosted in the Bosung city gymnasium 'Scientific play for the fun of everybody' for some 500 students. Again in August it hosted, in Chosun University, its 3rd 'Family science camp touch & think' where another 300 plus students and parents were present. In October 'Come! Fun world of chemistry' was held which some 500 elementary students enjoyed science activities.

These Whasamo activities are in line with its primary objective of being an active player in this era of science and of building up a scientific mindset. To motivate the students and to get them familiarized, Whasamo teachers go beyond the classroom education by involving their students in a variety of science events and by developing matching teaching materials as well. Five Whasamo members were rewarded with the Education Minister's Award on behalf of Whasamo in official recognition of its outstanding performance at the 2004 national competition on teachers' research activities. Whasamo was also awarded at a contest hosted by the National Science Education Association.

The '2004, Come! Fun World of Chemistry', which was hosted by KRCC and sponsored by Whasamo, has been a noteworthy affair in the aspect that the event focused solely on chemistry unlike other Whasamo events that offered programs for broader areas of science, and that the venue was the city of Yeosu, home to the nation's chemical industry. This event, where the teachers put in their special





Professional interest, was supported by the city's education authority and the venue school Ssangbong elementary. KRCC gave away co-host's gifts and snacks to all the participants.

Though only about 500 students were allowed out of some 1,500 applicants due to difficulty in the arrangement of the program, the event was a great opportunity for the students to get to know about the significance of chemistry, directly or indirectly, for our everyday living. It was a singular



불꽃 반응

event in the sense that the program offered safety education by which to raise the safety awareness for the students whose place of living is close to the plants and therefore exposed to potential explosions or accidents.



알록달록 올챙이

The programs of the event were conducted in the individual booths in a well-organized manner with the help of the teachers to get the students to apply their classroom knowledge to hands-on experiences, experiments, and quiz, which consisted of balloon art where the community people took part, face-painting by the volunteer high school girls, experimenting on silver mirror, straw-pipe of singing birds, key-chain, facial cream, soap, firework reaction, flower blooming out of egg, dry-ice gun, coin battery, paper-cup flying, packet battery. The quiz program was taken part in by everybody at the event, was conducted in a format that emulated a popular TV show.



은거울 만들기

The 2005 event will be arranged for an extensive coverage whereby the students would learn about the broad spectrum of the field of chemistry and get familiarized with the idea that chemistry is an important part of our lives. To meet this purpose, programs will be developed to deal with theories and applications of chemistry, along with the need and prospect



무공해 비누 만들기



열쇠고리 만들기

for green chemical industry as a solution to the environmental problems that should be addressed in the course of the development of this industry.

# "Sustainable Growth" at Hanwha Chemical Corp.

– "Sustainability Report 2005",  
a first in the nation's petrochemical industry –

A major petrochemical company with plants in Yeosu and Ulsan for the production of PVC, LDPE, LLDPE, and CA, and R&D center in Daejeon Research complex, Hanwha Chemical has since the mid-1960s played a central role in nurturing the Korean chemical industry to be among the world chemical leaders. Hanwha will continue its focus on CA, polyethylene, and PVC businesses that would ensure the company comparative advantage. Hanwha will expand its interest in the future growth businesses, including new material and bio-engineering, to reinvent itself as one of the 21st century's premier companies and to place itself among the world key players in the global marketing.

To Hanwha Chemical, environment/safety has been the key management task since 1990. In 1995 Hanwha pronounced "policy on environment/safety/health" in its commitment to the sustainable corporate growth and the fulfillment of social responsibility, and in 2000 proclaimed "ECO-YHES" to implement the management strategy on environment/safety/health. The company adopted ISO-14001 in 1996, and OHSAS-18001 in 2002.

The company took part in RC programs, a voluntary activity to improve environment /safety/health, in order to facilitate an autonomous management of environment/safety/health, and to positively involve itself in the achievement of its corporate responsibility to the society.

In 2003 the company published "The Sustainability Report 2003" as a first among the Korean petrochemical companies, and recently published "The Sustainability Report 2005". Hanwha hopes companies will find "sustainability report 2005" helpful in the preparation of their own report.

## 1. Hanwha's sustainable vision

Hanwha has as its sustainable vision to become Asia's top general chemical company as the leader in sustainable management, by

- Economically, rank among the global companies based on steady profitable performance by being creative
- Hand down resources to the future and improve welfare of mankind by staying environmentally sound and
- Maintain socially responsible by sharing with society and keeping up the virtuous management practice.



## 2. Hanwha's Sustainable management 2003 & 2004

### 1) Economic performance (growth & global)

- Strengthening of core businesses
  - For the purpose of focusing on core businesses and strengthening of businesses of high added value, expansion of sodium hydroxide plant with a capacity of 66,000 tons and OXY-EDC plant with a capacity of 220,000 tons were complete in 2003, and expansion of EVA facility capable of producing 40,000 tons and PVC capacity increase in 32,000 tons were complete in 2004, which enables the company to have a sustainable scale of economy.
- Selected as 2004 world first-class product
  - Hanwha's "compound for electric cable insulation" was among the government Ministry of Commerce, Industry & Energy-designated 2004 world first-class products, a recognition for its world competitiveness and growth potential.

### 2) Environmental performance (Nature & Environment)

- Proclamation of globalization in sustainable management
  - By adopting "Declaration of global standard sustainable management" in June 2004 jointly with Environment Ministry, Sustainable growth company association, and National environment-friendly company association, the company pronounced its commitment to the establishment of world class sustainable management system.
- 2nd phase Energy saving (SAVE: Systematic Approach for Valuable Energy) activity
  - The company's energy saving plan set forth in 1999 was completed ahead of schedule in 2002 (planned reduction: 15% down from 1999 result), and the 2nd plan was set in 2003 for a cut-down of total 9.6 billion Won by 2005. In 2004 the company was awarded for the outstanding performance.
- Awarded grand prize for environment-friendly management
  - In June 2004 the company was recognized by the Commerce/Industry/Energy ministry for its outstanding environment management. The company was also awarded for outstanding Tele-metering System(TMS) management consecutively in 2003 and 2004.

### 3) Social performance (Sharing & Virtuous)

- Promotion of being together & happy
  - The company involves the entire employees in systematic and sustaining social services activities, in order to faithfully perform its social responsibility as corporate citizen. In 2004 aggregate 3,879 persons took part in 536 social service activities.

## 3. Creative (growth & global) for your tomorrow

Hanwha Chemical has been making its utmost efforts as the nation's leading chemical producer in the enhancement of the quality of life and in the development of the industry, set forth three

management tasks innovation of business structure, management, and financial structure so that it will become a top notch chemical company with undisputed competitiveness and profitability.

- Other activities

- Hanwha R&D center, established in 1979, is charged with technological development and research with which the company looks forward to its future growth.
- Hanwha is committed to a sound corporate governance structure, and in its efforts to maximize its shareholder interest, the company continuously strives to improve the financial structure and to maintain management transparency.
- Hanwha pursues maximized management efficiency and better corporate constitution by adopting Absolute Competitive Edge, a substantive and practical innovation tool applicable to every segment of corporate management. Hanwha is aiming to be a company of futuristic business structure by concentrating on the investments in core and future businesses.

#### 4. Sound (Nature & Environment) for the next generation

Hanwha is striving to preserve the life and environment so that the next generation will take over a sound place to live. The company has, to guarantee soundness in the management of environment/safety/health(ESH), 6 core values.

1) 6 Core values for environment/safety/health management

- Value 1(Integrated management system)

- Integrated management system to enhance ESH management

시스템모듈 구성

환경분야(12)	안전분야(16)	보건분야(6)
대기관리	변경관리	검진관리
수질관리	설비관리	상담관리
폐기물관리	안전작업허가서	예방접종
토양해양오염	비상 및 재난대책	유소견자관리
방지시설관리	위험성평가관리	작업환경측정
교육관리	(PSM/SMS)	의약품관리
환경보전활동	보호구관리	건강증진프로그램(예정)
설비관리	안전인사관리	
인허가	산업재해	
포상 및 인증	교육관리	
위원회	화학물질관리(MSDS)	
협력업체	사고관리	
환경회계(예정)	안전비용관리	
	인허가	
	포상 및 인증	
	위원회	
	협력업체관리	

통합 ESH IT solution



〈그림 2〉 통합 ESH 전산정보시스템

- Value 2 (Effective resource utilization)
  - Expansion of clean production technology
    - : Originally adopted in 2001 for cost effectiveness and for resolving technological difficulties in the operation of pollutant treatment facility, the clean production technology is now applied to the entire production facility.
  - Creating Eco complex
    - : In concert with the government project, 'creation of eco-industrial complex', Hanwha is putting in efforts to improve resource efficiency and to lower environmental impact, through such inter-company activities as bartering by-products, waste heat, or waste material for use as main/secondary raw material or energy source.
- Value 3 (Preservation of global environment)
  - Climatic change convention, its countermeasure
    - : Hanwha, for a positive involvement in the global effort toward environmental protection, is working on measures to prudently deal with the movement.

#### 기후변화협약 대응 활동 계획

현 황	계 획		
	Phase 1 (역량 축적) ~2005년	Phase 2 (자발적 목표수립) 2006년~2007년	Phase 3 (신규사업 기회 창출) 2007년~
에너지 절감 활동 수행 (2000년~2004년)	온실가스 배출량 Inventory 구축	자발적 감축목표 수립 교토메커니즘 학습 및 활용방안 수립	신규사업 기회 창출 (ET*/CDM* 등)
절감사례 DB화(200건)	지속적 에너지 절감 활동 추진 및 실적 전환 인증	전사 중장기 경영계획 영향 평가 실시	
기후변화협약 대책팀 구성	중장기 Road map 작성 및 대응 논리 개발	에너지 절감 활동계획 수립 (2006년 이후)	

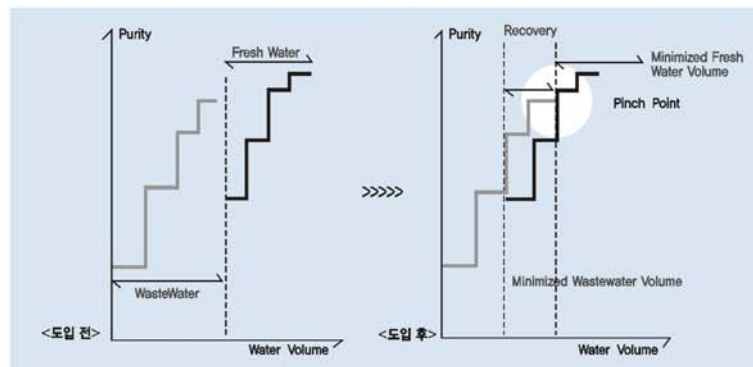
〈그림 4〉 기후변화협약 대응 활동 계획

- Hanwha is using, for process cooler, coolant of low ozone depletion potential as a replacement of CFC type, and is replacing with non-halon fire-extinguisher, so as to prevent ozone layer depletion that damages nature and human.
- Value 4(RC activity)
  - RC programs and plan
  - Real-time monitoring and long-distance control of air pollutant emission
    - : Hanwha installed TMS at major process emission outlets for real-time monitoring. The company was chosen as model TMS facility by the Environment Ministry in 2003 and 2004. Real time monitoring is also in place at major process emission outlets and environment facilities by Process Information System(PI)



- Expansion of waste water recycling using waste water reduction technology
  - : Water Pinch technology, by which waste water and industrial water is put to quantitative analysis and other fitness tests and then recycled for other process, enabled cost cutdown by as much as 240 million Won.

#### Water Pinch를 이용한 재이용 방법



〈그림 6〉 Water Pinch를 이용한 재이용 방법

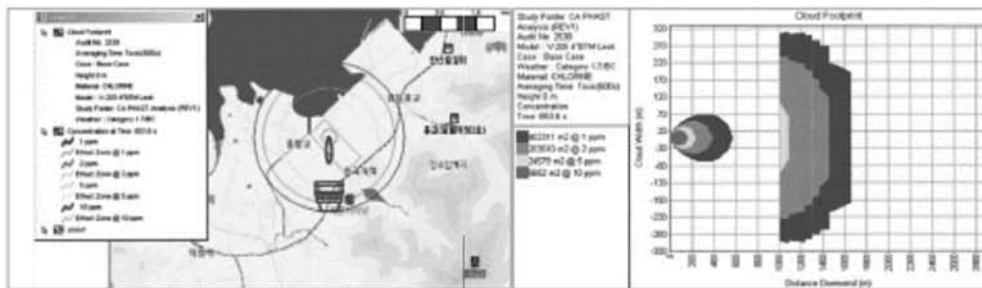
- Waste recycling using waste reduction technology
  - : Hanwha makes it a policy to reduce waste generation at the point of its source. For this purpose, waste generator real-name system, process improvement, raw/sub material opening, and product packaging are constantly checked for improvements to the effect of waste reduction. Waste recycling was improved: in 2004 a 65% increase from 1999.
- Initiative to reduce chemical emission(30/50 program)
  - : Hanwha was cosigner to the agreement together with the environment ministry, civic groups, and related associations. The company plans to reduce vinyl chloride emission in the production of PVC, and to expand LDAR system, to reduce 62% by 2007 and 76% by 2009 compared to 2001.
- Preventive activities to achieve accident-free goal
  - : Hanwha has adopted Loss Prevention Principles(LPP) in the entire stages of plant design, construction, test operation, and process modification, for the purpose of detecting potential risks. The company has also adopted DuPont's New Safety Training Observation Program(STOP), a program for watching out for safe/unsafe activity. Hanwha realized accident-free operation consecutively in 2003 and 2004.
- Systematic health management for prevention and early detection
  - : Hanwha is performing tendency management using in-house program, and conducting physical examination that can effectively detect at an earlier stage work-related or general diseases. Hanwha operates on-line data control on the entire health related business,

including health planning, vaccination, potential patient monitoring and working environment evaluation proven to be very effective both for company and workers.

- Value 5(Emergency Response system)

- Identification of potential risk based on process risk assessment
- Hanwha has in place emergency scenarios covering processes and facilities with high risk potential in terms of severity and occurrence using such tools as Fire & Explosive(F&EI) and Process Hazard Analysis Software Tool(PHAST), which mandates repetitive practice drills,

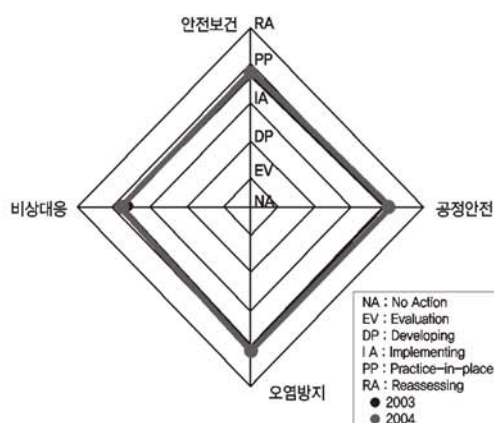
정량적위험성 평가 S/W



〈그림 7〉 PHAST 적용 사례

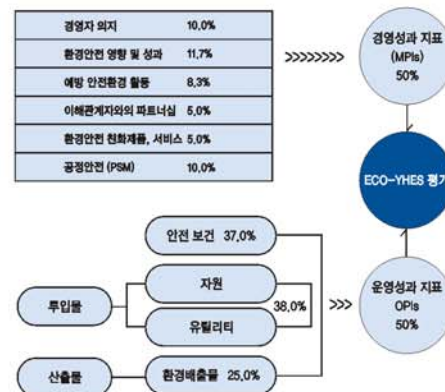
- Delivery safety manual
- Hanwha has delivery safety manual for driver education. The manual describes safety rule in product loading/unloading, areas where chemical transportation are prohibited, safety rule on the road, emergency measures, emergency network, and product handling guideline. Drivers are required to carry this manual in their cars.

- Value 6(ESH performance evaluation)



〈그림 9〉 RC평가 결과

ECO-YHES 평가 지표의 구성도



〈그림 10〉 ECO-YHES 평가

The text of the above "Sustainability Report 2005" is available at Hanwha's homepage (<http://hcc.hanwha.co.kr>). Hanwha hopes the report will help readers understand more thoroughly about Hanwha's commitment to the sustainable corporate development.

# CIA UK Responsible Care Cell Network

## 1. Background

As part of the development of Responsible Care within the UK, groups of neighbouring chemical companies gain benefit from meeting on a regular basis to share experiences of Responsible Care implementation and discuss local regulatory & community issues. The initial groups or cells (as they have become known) were formed in early 1991 and currently there are a total of 21 cells across the mainland UK and involving participation from over 186 sites.

Membership of cells has always been open to both CIA and non CIA members, as a fundamental feature of the RC programme is for signatories to aim to improve the performance of the industry as a whole through best practice sharing.

## 2. Cell Network Objectives

- The principal objectives of cell network is to provide a framework for :  
Communication and experience sharing between all CIA member sites
- Identification of common Responsible Care issues which need to be addressed on a regional and/or national basis, and
- Engagement with local regulatory enforcement agencies

This is implemented by bringing member company sites together at the local level on a regular basis to discuss Responsible Care (environmental, process & occupational safety, occupational health & hygiene, product stewardship, emergency response, community liaison, industry reputation) issues and the CIA office acting as a central 'clearing house' for information provided by each local cell.

## 3. Purpose of Individual Cells.

The principal purpose of an individual cell is to :

- share experiences/concerns/ideas on Responsible Care management, technical issues and regulatory compliance;
- benchmark individual site performance on selected Responsible performance measures;
- exchange information on the management and implementation of Responsible Care including the cascading of messages, providing training, promoting participation and encouraging information disclosure;
- discuss appropriate local industry reputation and community issues and support/become involved with local projects to improve the reputation of the industry at the local level.
- highlight and discuss examples of local enforcement inconsistencies with the relevant local regulatory enforcement agency representatives





- Provide an effective forum for guests, such as HSE/Environmental Agency personnel and representatives of local environmental organisations to consult/brief/discuss proposed and existing guidance/regulations/enforcement policies.

## 4. Network Operation and Management

The overall management and effectiveness of the cell network comes under the remit of the CIA's Operations and Assurance Group. The Head of Responsible Care Implementation (Ian James) is the focal point for the maintenance of the cell network within the CIA staff.

The network has been set up with the aim that all member sites have non-chargeable access to a local cell which they can attend within normal working day, balanced with the need to maintain a 'critical mass' of members in the cell to maintain its effectiveness. Cells of wider coverage can and do provide a useful forum, an example of this is the cell which covers the whole of Scotland.

Changes to the geographical coverage of an existing cell within the network must be agreed with the CIA Responsible Care staff in order to prevent cells overlapping, thereby potentially leading to conflict between cells on maintaining members. However, following a review of the network and/or individual cells, the CIA Responsible Care staff may recommend re-organisation of cells to maintain effectiveness. When this is the case, the CIA staff facilitate the changes in co-operation with the relevant cell chairpersons.

## 5. Local Cell Operation

The CIA is responsible for :

- Development, provision, and maintenance of core terms of reference.
- Providing communication and co-operation to facilitate information and experience sharing across the network.

Whereas within the overall framework, CIA members are responsible for :

- the management and operation of the individual cell in which they participate
- operating in a manner which fulfills the requirements of the core terms of reference. The cell may, if desired, produce their own local terms of reference which builds on and enhances the core terms of reference.

### 5.1 Membership

An ideal cell consists of members who can identify themselves with local issues and the local community. Typically this will involve site managers, departmental managers and specialist staff, with Responsible Care responsibilities or involvement in Responsible Care activities. Attendees should be sufficiently senior to "make things happen" as a result of their involvement.



Participation in a Responsible Care cell is open not only to CIA members but non-CIA members. The CIA office encourages members to actively seek to involve representatives from their :

- upstream and downstream supply chain
- contract companies providing on site services, e.g. maintenance, CHP
- Distribution and logistics service providers

## 5.2 Meetings

Cells aim to meet between 2 and 4 times per year, with individual meetings lasting between 3 hours to a whole day depending on the content of the meeting.

A wide range of topics are discussed by cells, for example for the last 18 months the following topics have arisen :

- |                                                               |                                                |
|---------------------------------------------------------------|------------------------------------------------|
| ■ Control of major hazards                                    | ■ Land Use Planning                            |
| ■ Pollution prevention and control                            | ■ Control of explosive & flammable atmospheres |
| ■ Enforcement consistency                                     |                                                |
| ■ Briefing on implications of upcoming legislation & guidance |                                                |
| ■ Waste and waste disposal                                    | ■ Carbon/Emissions trading                     |
| ■ Working at heights                                          | ■ Product Stewardship                          |
| ■ How do you know what the current best practise is.          |                                                |
| ■ Developing leading indicators                               | ■ Process safety                               |
| ■ Work in confined spaces                                     | ■ Permit to work systems (electronic)          |

## 5.3 Cell Chairperson

Cells are chaired by a CIA member. Members may elect a fixed Chairman although some cells rotate the chairmanship. However, individual meetings can be chaired by any member of the cell and/or when a rotating chairmanship is operated, an individual CIA member within the cell acts as a central contact point for the CIA staff/communications.

## 5.4 Records

Cells operate with the minimum of bureaucracy. Notes of the meetings are typically limited to brief records and, most importantly, action points; mainly to ensure Competition Law requirements are not breached.

The CIA office is copied on cell communications, i.e. agenda, meeting notes, presentations used, in order to identify information which may be of interest to other cells and/or highlight emerging issues in the wider membership for upward communication.



## 6. What makes an effective viable cell

In discussions with cell members over the last couple of years, a number of 'hints & tips' have been identified to aid the vitality of a cell, some key ones being :

- An enthusiastic champion for the cell,
- Forward planning—circulate programmes 12 months in advance,
- Having an agreed list of topics for meetings in advance with an 'expert' speaker leading the discussion on that chosen topic, Focus on one specific topic each meeting,
- Framework agenda in which to organise meetings but with flexibility to address emerging issue
- Central list of potential speakers & topics together with their contact details which can be viewed by all cells. Support from CIA office in locating external speakers
- Peer support in getting a solution or action "resolution on way ahead" with a problem,
- Need a knowledge of everyone else in cell network and easy way to contact them,
- Needs focal point for co-ordination and act as a clearing house to identify and spread best practices (CIA office)
- Capture/provide information of emerging or key issues,

## 7. Future Developments

### 7.1 Enhanced Communication

We are currently looking to implement a 'newsgroup' forum system to enhance the our existing members extranet facilities, Cell members would become members of the forum (or sub-forums) by requesting to be added to the 'subscribers list'. They would then be able to post to the forums web facility. Access to the forum would be made through the Internet to a password controlled web page where all forum messages and correspondence could be viewed and replied to online. As well as a general forum the system would have the capability of hosting 'specialist topic' one,

### 7.2 Regional Meeting of local cells

During recent discussions at the cell meetings, the idea of having an annual regional meeting to which all cell members in the region would be invited to participate and would be built around maximising information sharing and networking opportunities between the cell members,

The broad format of the regional meeting would be :

- Morning cell presentations & discussions on their past & future agendas
- Afternoon—external speakers and roundtable discussions on specific issues of common interest to the cells,

## 8. Summary

All cell members agree that the cells provide a good forum for discussing issues, The cells provide a 'no/low cost' source of help with not only day to day problems but also as a means for identifying and sharing best practice,





### ● KRCC held 5th KRCC Academy

KRCC held its 5th Academy on June 2, 2005 (10:30 a.m.) at FKI conference room. Attended by KRCC Chairman Won-Joon Hur and 40 from member companies, the academy had presentations on different topics, such as the direction of the government policy on Climatic Change convention, the status and plan for climatic change convention of global companies, the prospect and plan for Climatic Change convention, the experience in the progress of CDM and the proposed measure for petrochemical companies against Climatic Change convention.



### ● KRCC held Implementation committee meeting

KRCC held 2005 1st KRCC Implementation committee meeting on July 15, 2005 (2:00 p.m.) at Kyongju Hilton (Pine room). Attended by Chairman Mr. Hwang Moo-Young of Dow Chemical Korea Ltd. and 20 members, the meeting reviewed and approved the first agenda item, 'Review and Decision on the final draft of new code', with some minor changes. On the 2nd agenda, 'Review on the adoption of Third Party Audit' and the 3rd agenda item, 'Review on getting outside service to accommodate comprehensive, integrated code implementation' were agreed by the committee and they agreed to have it included in the 2006 budget.

### ● KRCC held its 6th Academy, "Academy for future strategy in chemical industry, 2005"

KRCC held its 6th Academy on July 12, 2005 (8:30 a.m.) at Hotel Shilla(Ruby room, Yeung bin Gwan). The academy supported by Dow Chemical Korea Ltd was attended by KRCC Chairman Won-Joon Hur and 110 from member companies, the academy had presentations on different topics, such as the system and trend of chemicals management in Korea and overseas, the recent movement and the status of the government policy, the major points of industrial health system and the policy direction for chemicals management, the structure and future direction of Atmospheric policy and the latest movement in the major environmental regulations and cases of violation by overseas companies.



- Responsible Care In Akzo Nobel (Anders Brostrom, Akzo Nobel Asia)
- Responsible Care Implementation Experience in Korea and LG Chem (박인, LG화학)
- Importance of Dialogue(Yukio Sasaki, 일본화학공업협회(JCIA))

### ○ 세션별 주제

#### ■ Session I (Management System)

- Responsible Care and Management system approach (Dow China)
- Taiwan Responsible Care Experience Sharing (Bayer Taiwan)
- Experience Sharing of Responsible Care Implementation (Formosa)

#### ■ Session II (Implementation)

- How to implement Responsible Care? (BASF China)
- All around Promotion of QHSE Management System Setting-up of a long-term Mechanism (Petro China)

#### ■ Session III (Safety and Health)

- Safety at Degussa : Organization, Strategy, Performance (Degussa China)
- Health and Safety in the Chemical Industry (Wacker Chemicals)

#### ■ Session IV (Community Awareness)

- Stakeholders Communication of Taiwan Responsible Care Association (Bayer Taiwan)
- Openness and communication (JRCC)





### ● Jinchon plant of Dow Corning Korea Ltd. held 2nd Dow Corning Science class



Dow Corning Korea Ltd.(President : Chun Yeong Wook, [www.dowcorning.co.kr](http://www.dowcorning.co.kr)) held its 2nd science class on May 19, 2005 to which students of Manseung elementary school were invited.

The class invited the students of this neighboring school to new experiences of learning science through experiments that could be done in everyday life. The

students were excited and showed a great deal of enthusiasm as they were working with the program leaders in activities that took place outside classroom. In "Safety class for children", which Safety Management Team offered, students learned about the dangers in everyday living and about how to respond to such dangers.

Dow Corning is committed to continuous social services. Dow Corning science class for children that takes place every year, along with various community activities like helping out the needy neighbors and garbage collection/cleaning of neighboring creeks, are all part of the social services activities

### ● LG Petrochemical Co. Ltd. dedicated BPA & Phenol plant

LG Petrochemical Co. Ltd.(President : Park Jin Soo) held dedication ceremony on June 9, 2005 of Bisphenol-A(BPA) and Phenol plant. BPA and Phenol are high value added products of high sustainability and grow potential.

With the completion of the plant, LG Petrochemical has an integrated system of production from Naphtha to BPA, enabling the company to emerge into high-profit intermediate business, and putting the company on a solid foundation for future growth.

### ● Mr. Kim Doo Soo was named as President of Ciba Specialty Chemicals Korea Ltd.

Effective July 1, 2005, Ciba Specialty Chemicals Korea appointed Mr. Kim Doo Soo as its President.

Mr. Kim Doo Soo, 57, was born in Busan, and graduated from Kyoungnam high school and majored in agro-economics at Seoul National University. Currently President of Daehan Swiss Chemicals from 1994, Mr. Kim will concurrently assume his new assignment as President of Ciba Specialty Chemicals Korea.