

May the 2005 bring you health and happiness as always

In the 2004 Korea Responsible Care Council joined in the operation of Chemical Emergency Information Center, a round-the-clock call center for chemical emergency situation, and in the Outreach program, a community activity whereby people can broaden their knowledge about the benefits of chemistry in their everyday life and get a better image about chemical industry.

At KRCC Responsible Care code leader companies put in their efforts and came up with the basic ideas for new codes—Distribution; Product Stewardship; and Community Awareness. Performance of self-assessment and other existing management practices, sharing and exchange of information between KRCC and the concerned people, including the member companies, channeled via e-mail service, "Responsible Care Weekly", KRCC Webzine, and other internet services, have remarkably increased. All these improvements, within and without, were made possible through the effort of the member companies and people who are interested in these, for which I am deeply appreciative.

The 2005 will see a host of international pacts and regulations, including climatic change agreement, GHS, and REACH, take into effect, posing for us to act on carefully. In 2005 within the nation, we will face expectations and pressure that rise to a much greater level than ever before with the expanded and stricter regulations like Toxic Release Inventory. As the nations all over the world work hand in hand for a sustainable future, we, as a responsible member of the world community, are expected to do our best in this effort. Management initiative and participation across the company, which are the key elements of Responsible Care, will be the most eligible and viable tool that guides companies onto competitiveness.

The 2005 marks the 20th anniversary of the launching of Responsible Care by the world chemical industry, and the International Council of Chemical Associations and Responsible Care Leadership Group is working on 'Global Responsible Care Charter' in commemoration of the development Responsible Care did make in its past 20 years and will in future. The new charter will be a harmonious representation that embraces the diverse interests and needs of each country with different level and environment, with a focus on laying out measures for practical and consistent sustainable development, a strengthened product stewardship, verification procedures, and emphasis on cooperation between interested parties. The contents of this new charter will become a significant landmark that determines the direction of the participating countries and industry.

In keeping abreast with the changing environment that is happening both within and without, KRCC has set the 2005 as a year to "expand Responsible Care performance and cooperation with interested parties" and is going to pursue following businesses.

First, we will develop more management codes and see to it that they are performed more effectively. We will coordinate introduction and application of the new management codes—Product Stewardship; Community Awareness; and Distribution—, and offer programs for third party verification so as to raise the transparency and reliability of Responsible Care performance.

Second, we will upgrade community services and communication with interested parties. Outreach program will be continued so that our future generation will raise their favorable understanding about chemical industry and the gap between community and industry will be narrowed down.

Thirdly, we will put in more effort to become an efficient provider of chemical emergency information and an able respondent to emergency. We will provide an effective 24-hour response service to calls regarding chemical safety, and assist the member companies in strengthening the level of emergency response through such programs as emergency drills.

And lastly, we will coordinate more actively for mutual cooperation and publicity. We will stay in line with the world chemical industry, including the work related to new Responsible Care charter, and will faithfully facilitate for the upcoming 9th Asia Pacific Responsible Care Conference which will be held in the Philippines. We will also make sure of keeping member companies current about the important local and overseas information and Responsible Care activities as well, through access to Newsletter, webzine, Weekly service.

I sincerely ask you to give a continued positive attention to the social performance by virtue of Responsible Care. I wish you the best of luck and happiness.



Proposal on the introduction of Responsible Care® Award

Safety, corporate image, quality, and profitability are the resident subjects today's companies ought to keep in mind in their pursuit of survival and sustainable growth. For chemical companies, profitability depends on the effective management of design/production/distribution of safe and high-quality product and good public image. Therefore it is the most important for them to be aware of the fact and to have the employees fully understand and work for it.

Responsible Care® was originated in North America, and has made considerable contribution to protecting environment, improving energy consumption and employee safety. KRCC has been involved in the activation of Responsible Care in Korea for years, and believes it is the time that we reviewed about installing Responsible Care award system as a positive tool to encourage participation, recognize efforts and performance, and to promote publicity. Following are proposed procedures for this system:

1. Management System Verification(MSV) by third party

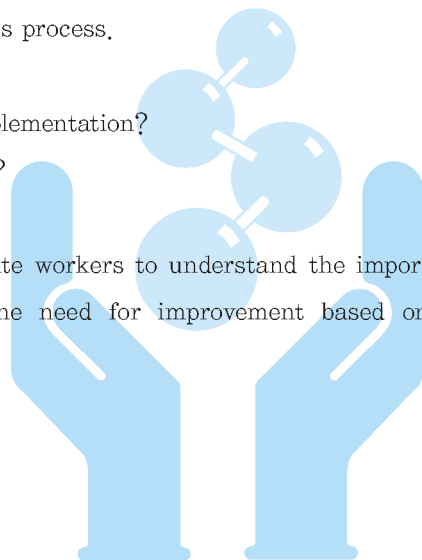
Third party verification is the basic requirement for Responsible Care implementing companies. In contrast to audit, following performances are checked in this process.

- Is Responsible Care idea in place across the company?
- Are there system and process for Responsible Care implementation?
- Does company have danger/risk management program?

MSV enables all the employees from top management to site workers to understand the importance of RC, to encourage each other, and to learn about the need for improvement based on the assessment and advice of third party.

2. Audit

Unlike Verification, audit deals with a detail checkup and grading of performance/implementation. Companies might feel their business compromised by exposure to outsiders as a result of audit. On





the other hand they can otherwise take advantage of the audit process to demonstrate their achievement and excellence, which will serve to their future growth.

3. Introduction of Responsible Care Awards

Once companies understand and accept the idea of third party MSV and audit, award system can be developed. Following points should be considered so as not to make the award system a formality.

1) Companies support and clearly understand the purpose of the system

In the absence of companies' support, participation can become passive, affecting award's recognition negatively. However, in consideration of the characteristics of Responsible Care—voluntary participation—, binding the participants to this award system with tangible advantages or benefits is not recommendable.

2) Define eligibility to the award, which is based on a set of carefully arranged criteria

Following is a summary of ACC's Responsible Care® Awards Program.

Certificate of Excellence¹⁾

Eligibility	Members
Level	Site
Criteria Considerations	No fatalities, days away from work or restricted work days for employees and contractors.
Number of Winners Selected	Unlimited
Winner Selection	Companies self select.
Venue	Certificates mailed; listing in Greenbrier Program
Timing	May

1) A prerequisite of all awards is that member/partner has fulfilled ACC reporting obligations.

Sustained Excellence Award

Award Categories	Member	Partner
Eligibility	Members and Partners	
Level	Corporate	
Criteria Considerations	<p><u>Qualifying criteria:</u> No fatalities in last 3 years; top 10% employee and contractor OIIR or top 3 companies in size category; positive trend in performance metrics, positive affirmation of product metrics, certification completed on time, SVAs and security verifications completed on time.</p> <p><u>Supplemental application:</u> Brief description of the programs that the company has implemented to achieve excellence in key EHSS areas. Example documentation and evidence to support responses will be encouraged.</p>	
Number of Winners Selected	3 members and 3 partners: One per size category for members; one for each Partner modal group	
Winner Selection	ACC identifies eligible candidates and award panel will choose winner based on eligibility criteria and supplemental application.	
Venue	Greenbrier	
Timing	June	

Responsible Care Leadership Award

Award Categories	Member	Partner
Eligibility	Members and Partners	
Level	Corporate	
Criteria Considerations	<p><u>Qualifying criteria:</u> No fatalities in the last 3 years; OIIR for employees and contractor at or above the ACC average for last 3 years; positive trend in performance metrics; SVAs and security verifications completed on time; positive affirmation of product metrics.</p> <p><u>Supplemental application:</u> To include information and evidence of the company's leadership in the following areas:</p> <ul style="list-style-type: none"> • participation in regional/national /ACC/ global Responsible Care activities • activities to promote the Responsible Care ethic including communications to stakeholders, including non-traditional audiences • leadership in product stewardship • initiatives in sustainability and continuous improvement processes • RCMS implementation and certification status <p>Example documentation and evidence to support responses will be encouraged.</p>	
Number of Winners Selected	3 members and 3 partners: One per size category for members—one overall winner designated, other two are runners-up; one for each Partner modal group—one overall winner designated, other two are runners-up	
Winner Selection	ACC identifies eligible candidates and award panel will choose winner based on eligibility criteria and supplemental application.	
Venue	Greenbrier	
Timing	June	

Leader of the Year Award

Eligibility	Members and Partners
Level	Individual
Criteria Considerations	Given to an individual (at any level) that provided exceptional leadership during the past year to improve company and industry-wide performance, and/or obtain external credibility and reputation benefits.
Number of Winners Selected	1 member and 1 partner
Winner Selection	Regional Coordinator groups nominate individuals. Awards panel selects winner from nominations.
Venue	Responsible Care Conference
Timing	May

In April of each year, an award panel will be convened to select winners for the Sustained Excellent, Leadership, and Leader of the Year Awards. The award panel will be comprised of five credible individuals that could include members of other trade associations, regulatory agencies, academia, labor unions, attorneys, and non-Responsible Care ACC staff. The panel's membership will change each year.

KRCC's Responsible Care award system should emulate ACC's system to a great degree, however final details will be developed after review by member companies.

KRCC considers it advisable to follow a process in which KRCC issues recognition for RC code implementation for a limited time period that can be extended through audit, and KRCC gives the RC Award to companies who received and maintain these recognitions. The recommended process can be fulfilled through followings.

- Positive participation of member companies
- Active utilization of 3rd party MSV
- Development of personnel for Verification/Audit
- Promotion of advantages of RC management & Acceptance of Audit as a binding process

It seems to take considerable amount of time before Audit on all of the RC management codes would be commenced. Therefore it is recommendable that member companies review and choose among following alternatives.

- MSV → Audit → Award program
- Adopt Award program for some of Responsible Care codes, which is subject to MSV and Audit (In this case KRCC recommends Employee Health and Safety code, for the purpose of encouraging participation and quantitative evaluation.)

This concludes the proposal for promoting RC activity. We hope we have a system which serves to make RC really work and in which every one in the industry, including top management of member companies and employees of suppliers of member companies, will be active players. 🤖

■ The 3rd & 4th KRCC Academy held

The 3rd and 4th KRCC Academy were held for the Responsible Care coordinators and environment/safety representatives of the member companies, respectively on November 16 and December 1 thru 3, 2004. KRCC is hosting this academy on different topics of interest to help member companies share current information and trend and discuss measures to deal with the changing industry environment.

The 3rd academy was held at Seoul FKI building. The topic was 'Introduction to Chemical Emergency Information Center and response to transportation accident', and actual accidents and response to these accidents was reported and participants discussed ways to take advantage of the chemical emergency information that is soon to be available with the start-up of the Center. Jin-ju Je, Superintendent of National Fire Service Academy introduced accidents local and overseas, and stressed that the first thing before containment of fire is to know the right measure for the dangerous material in question, and therefore it is important that the handling person has the correct knowledge and makes safety consciousness a way of life. Sang-tae Chung, Director of Chemical Emergency Information Center, explained how the center is operated, the procedure of receiving calls, services that is provided by the center, and how the center can be reached. In Park, Distribution code leader of the Implementation committee & Team leader of LG Chem., introduced the audience to 'Distribution' code(draft) that is under development, and to the distribution emergency response system LG is practicing.

The 4th KRCC academy was held at Jeju Hanwha resort. KRCC chairman Won-joon Hur greeted the audience with the words of encouragement that highlighted the role of coordinators in RC's expansion and performance. The event was conducted in 4 sessions-In search of effective Responsible Care application; Emergency response & approach to risk management communication; Future projects & information sharing; and group discussion on new Responsible Care codes.

The audience showed a strong interest in the OECD model for Integrated SHE&Q management that is being developed by the Korea Occupational Safety & Health Agency, which was presented by Executive Engineer, Hyuck-myun Kwon, lectures presented by Sung-in Um, president of ASP Company, and Kyong-hae Kim, president of Communications Korea, and topical reports made by member companies. Hanwha(Senior manager Jong-kwan Woo) reported on comprehensive RC inspection, LG petrochemical(Manager Chae-hoon Chung) on emergency measures of his company, and as a case for Peer Review Daelim(Team manager Seung-won Kim) and Samnam petrochemical(Senior manager Soo-heon Lee) outlined their Responsible Care activities. In group discussion on institution of new codes, code leaders presided each group-Hyung-sik Lee, EQS Leader, on Community Awareness and Emergency Response; In Park, Team leader of LG chem, on Distribution; and Jeong-hyun Park, Manager of Hanwha chemical, on Product Stewardship.

Through KRCC annual 'Environment/Safety/RC coordinator Workshop', KRCC hopes to promote information exchange and sharing among Responsible Care coordinators and environment/safety representatives of member companies.

■ Industry & academia alliance on chemical emergency information service signed

KRCC signed industry/academia alliance on chemical emergency information service with Inje University. The signing was held on November 19, 2004 at Hanwha chemical and attended by 10, including KRCC chairman Won-joon Hur, Chang-mo Sung, president of Inje University, Chang-soo Lee, KRCC Public Activities committee chairman, Sang-tae Chung, Director of Chemical Emergency Information Center. A call service (080-090-3456) for emergency response in case of chemical transportation & accident, this service is expected to improve the initial stage response to the outbreak of chemical accident, accordingly greatly responsible for keeping damage smaller or from becoming big, once the system runs well on its way. Some leading chemical companies* share the center's operating expense, thanks to which small/medium companies and other chemical companies are able to take part in service supply without having to pay the subscription, thus making the center private in a sense.

*Hanwha Chemical, Tongsuh Petrochemical, Samsung Total Petrochemical, LG Petrochemical, LG Chem., Yeochun NCC, Hyundai Petrochemical, Honam Petrochemical

■ 2004 RCLG General Meeting held

RCLG general meeting was held November 16 to 19, 2004 in Rome, Italy. RCLG is responsible for the worldwide expansion and activation of Responsible Care and the meeting was attended by 50 delegates of the participating countries. Delegates discussed Global Responsible Care Charter that was adopted at the October ICCA board meeting, particularly about the issues of product stewardship and capability development, mutual support and performance improvement/survey, communication with community and social services, and other areas to be focused by each country and RCLG. It was decided that a ceremony in commemoration of Responsible Care's 20th anniversary and for the declaration of the global Responsible Care charter will be jointly prepared, aside from local or country ceremonies. Signing up of Estonia, Latvia, Lithuania, Bulgaria, and Slovenia as the new members of RCLG was approved. With these new members, the RCLG membership has increased to 52.

■ Voluntary agreement on chemical discharge reduction

KRCC attended as a sponsor the signing of 'voluntary agreement on chemical discharge reduction(30/50 program)' on December 21, 2004 at the Ministry of Environment, which was joined by the government, industry, and civic group. '30/50 stands for industry's representation to reduce 30% within 3 years (2007) after the signing of the agreement, and 50% within 5 years (2009), in an effort to reduce the discharge that is generated in the process of production and consumption as much as possible. 9 companies, including Hanwha, or 17 plants signed the agreement in the presence of KRCC, KPIA, Korea chemicals management association, one civic group? People who study consumer issues. With this model agreement as a starting point, beginning 2005 new membership will be recruited and regional agreements will be promoted until we have a full-scale campaign.

Honam Petrochemical Co., Ltd.

Chemical producers generally adopt and operate different systems of management relating to environment, safety, and health. Some companies regard Responsible Care as independent management system that overlaps the existing environment/safety/health management system, while others regard Responsible Care as an integrated system of environment/safety/health, quite different from the existing environment management system that is for environment, and safety/health management system that is for safety and health. Either way, application of Responsible Care can be a problem for them.

Honam Petrochemical has been a key Responsible Care member in Korea since 2001. As representative for Emergency Response code, we developed management practice, and attended meetings to share difficulties and improvements. However, it was not until 2004 we were off to a full-scale Responsible Care activity, because finding how to practice Responsible Care took us time. As Ichimura Kiyoshi, founder of Ricoh, mentioned, "it takes 1 in time and effort to bring up an idea, it takes two times as much to put in into a plan, and it takes 100 times as much to put that idea into practice.", it was nearly as hard for us, too.

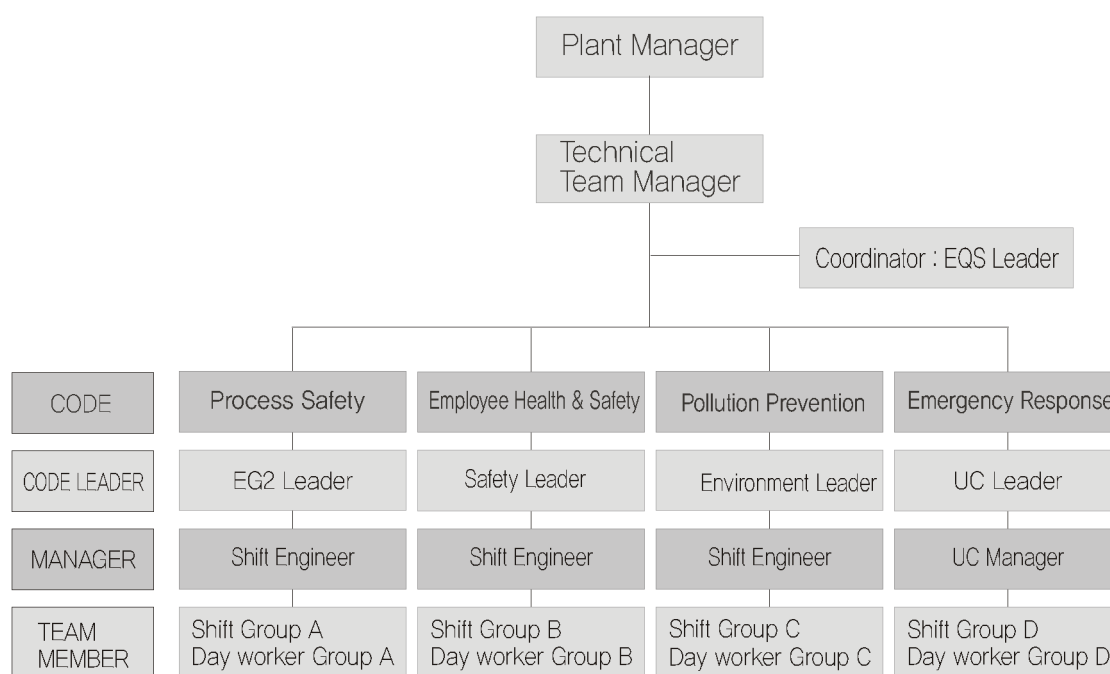
There are issues to be considered before grasping a detailed method to get it practiced. First, re-review Responsible Care and approach it from your company's standpoint. Responsible Care is a foreign product, and as such if we follow it simply as it is, somewhere it does not fit well, and that wrong part can affect a lot other parts, and we are likely to be left with form that is empty inside, or no practice originally anticipated. I encourage other companies take time to rereview the basic idea of Responsible Care, decide where you are weak and what improvements are needed for your company, and redesign the whole plan.

Second, set a workable and quantifiable goal of environment/safety/health. Responsible Care sets and quantifies short/medium/long term goals, distributes them across company, and the low-level departments set, quantify, and put into action detailed objectives to achieve these goals.

Third, present companywide concrete action items and get the whole company interested. Concrete action items complete the environment/safety/health goals and detailed objectives. Once a goal is set,

Each personnel develops one's own action item to achieve the given goal and objective, plans the action, and confirms and keeps record of its performance as part of one's job performance.

Fourth, involve the whole company, from top down to the bottom. Let everyone involved in any of the Responsible Care codes. If plant manager is assigned to Process Safety, involve the assistant plant manager with Employee Health and Safety, other officers to Emergency Response or Pollution Prevention. If there are 4 shifts, spread the 4 codes among the workers of each shift. Day workers are grouped into any of the 4 codes.



With the above as the ground rule, we at Honam petrochemical run Responsible Care as follows:

● Responsible Care Task Force

We have Responsible Care task force that is made of 24-6 for each of the 4 codes. Persons in charge of the concerned job are named as leaders of each of the 4 codes, shift engineers are put on the task force. Task force members are expected to perform their original jobs together with jobs related to Responsible Care, like workshop and self-assessment.(Code leader: 4 including Emergency Response/Process Safety-Production manager, Employee Health/Safety leader, and Pollution Prevention-Environment leader; Team member: 20 engineers, 5 from each of 4 shifts).

Regular Responsible Care Workshop

Responsible Care Task Force coordinates and presents workshop so as to widespread Responsible Care knowledge. Responsible Care task force members play the Responsible Care promoter's part. Through workshop employees familiarize themselves with the method, content, schedule of self-assessment, and self-assessment conducted in this manner can have quality and reliability.

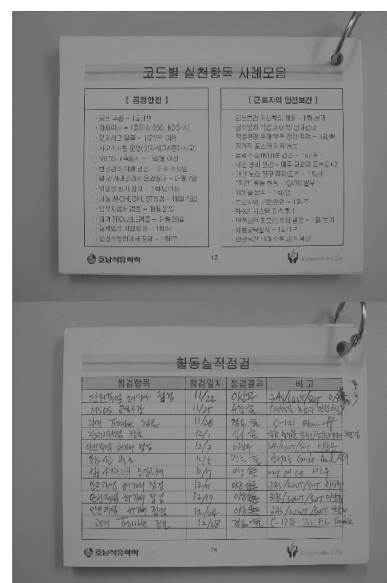
Self-assessment targeted for shift work

Unlike general assessment or evaluation that focuses on office work performance, Honam targeted shift workers who have the firsthand job responsibility of production. Almost all of the risk factors related to chemical company's environment/safety/health first come into contact with people who work at the production site. In this aspect we think we were right in having decided to start with these production workers, whose job is to handle and inspect the production facilities, by stimulating on their commitment to environment/safety/health, to further introduce them to Responsible Care as a new work culture on environment/safety/health. Responsible Care took off at the hands of production workers in Honam and spread wide and fast across the company.

Responsible Care activity handbook

We distributed a pocket-sized handbook to every worker so that they can carry in their work clothes to use anytime anywhere. This handbook enables them to disseminate Responsible Care, not just to help them practice it. The handbook contains following:

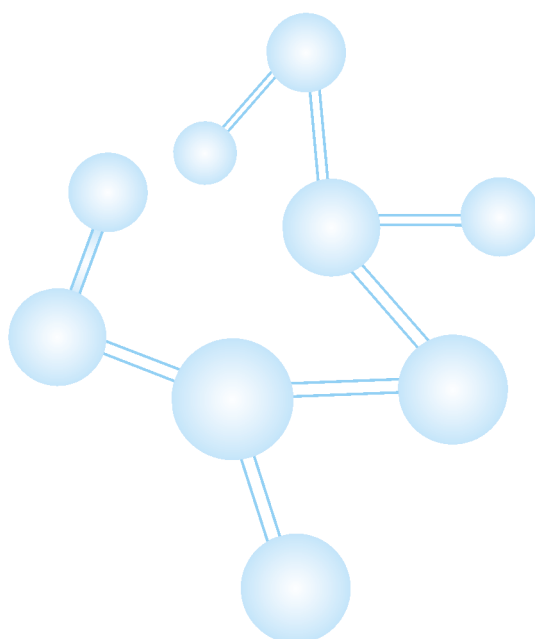
1. Management objective
2. Environment/safety/health objective
3. Corporate vision & management principle
4. Environment/Safety/Health principle
5. Responsible Care basic principle
6. Management practice for codes
7. Action items for codes
8. Organization of Responsible Care task force
9. Responsible Care schedule
10. Performance checklist
11. Self-assessment checklist
12. Space for notes



Aside from being a promotional tool, this handbook can be used in putting worker's routine job under each Responsible Care code, and in scheduling his daily duties by writing down his jobs under the 'schedule' column. Writing down on the 'Performance checklist' column will encourage a comfortable involvement in Responsible Care. In sum, this handbook significantly helped (1) Responsible Care widespread within the company from top management down to the entry level workers, and (2) site workers get used to Responsible Care firsthand rather than treating it simply as another textbook term.

We sought to apply Responsible Care effectively in our company by developing action plans, encouraging one another, and paved the way by proceeding with the plans. However, we faced difficulties and failures in this process, including difficulty in running Task Force, lack of expert skills in conducting self-assessment, and too often self-assessment.

Responsible Care is not a kind of activity as can be done within a day or so. It should take time, for trial and error in the course of having it adjusted into our own culture, before it gets solidly rooted into our soil. In the process of performing Responsible Care, or in other words putting Responsible Care in our existing management system, we can raise questions or possibly spot problems that we haven't realized until now, and in the course of correcting such problems, we will reinvent ourselves in the management of environment/safety/health that best suits our corporate culture.





■ **Tongsuh Petrochemical held '1st Workshop for the promotion of RC activities'**

Tongsuh petrochemical(President Kyun-chul Lee) held 'The 1st Workshop for the promotion of Responsible Care activities' on November 22 and 24, 2004. Attended by 32 site workers, the workshop provided an opportunity for the site workers, who have first-hand involvement in Responsible Care activity as supervisors or union executives, to communicate and discuss Responsible Care applications and future directions. Participants were reported on 2004 activity results, discussed adoption of total management system and other new systems, and through group discussion presented problems and proposals to improve these problems posed in the process of implementing Responsible Care. Based on the review of the results of the workshop, the company plans to develop proposals, and reflect them in the 2005 Responsible Care activity plans.

■ **Samsung Petrochemical recognized as Environment-friendly company & Excellent company for voluntary agreement**

Samsung Petrochemical(President Tae-hak Hur) was recognized as environment-friendly company-Seosan plant—for the period between November 8, 2004 and November 7, 2007, and was awarded by Korea Energy Management Corporation with the authorization as excellent company-Ulsan plant—for Voluntary Agreement for energy saving(VA). A system installed by the Ministry of Environment in 1995 to motivate industry's voluntary participation as an alternative to the existing regulation-oriented policy, recognition as environment-friendly company is awarded to companies who pass ministry's tests—ratio of green zone; gas discharge; and water quality. The company's Seosan plant has green zone by over 40% of its total land, and adopts anaerobic waste treatment system that generates biogas that is used as alternative energy. This enables the company to reduce waste generation down to as much as one third of the previous waste generation.

■ **'ATOFINA Korea' changes company name to 'Arkema'**

ATOFINA Korea(President: Yves Dubois) changes its name to 'Arkema', as a member of Arkema Group following the recent restructuring in chemical division of Total Group. The company's headquarters is relocated to Oriental Chemical Building(11th floor) in Sogong-dong, Seoul. Arkema Group has more than 100 production facilities in EU, North America, and Asia, and 6 research operations.

■ **Hyundai Petrochemical divides into 3 companies**

Effective January 1, 2005, Hyundai Petrochemical is run as three separate companies. The company's first Daesan unit becomes LG Daesan Petrochemical, the second Daesan unit becomes Lotte Daesan Petrochemical, and its power plant and port facility becomes Seetec.