Sustainability Report 2008



# **Report Profile**

This report is written to show the progress of business activities and any notable achievements HPC has done so far. It is also clearly organized with related information to help the stakeholders making decisions.

In August 2008, HPC published the first sustainability report and this report is the second. The purpose of this report is to diagnose weaknesses found in 2008 and we also tried to include the improved items. Moreover, in the future, we will continue to seek improvements through an active communication with varied stakeholders, and we will reflect the results in our reports.

### Principles for Report

The reported period is from January 1, 2008 to December 31, 2008. However, we have added the achievement of 2006, 2007 and 2009 achievements in this report to help readers to understand better about quantitative achievements in the activity of sustainable management. There could be a partial discrepancy between the last report and this report, since we have used the unified production standards after the affiliation of Yeosu and Daesan plants.

The sustainability report of HPC will be published every year for the domestic establishments, such as the head office (Seoul), R&D research institute (Daejeon) and plants (Yeosu, Daesan).

### **Reliability of Report**

This report is written based on GRI G3 guideline and referred to the analysis results of sample publications written by international leading enterprises. The report is also guided by a point of reference of financial sectors and various international standards. In addition, this report has been proofread and verified by the third party(KFQ) on selected items in the report to enhance reliability. Such proved items include both quantitative and qualitative data.

On the upper right hand side of this report, 2 **()** dimensional barcodes are inserted to help people who are visually impaired. It will transform the text into voice, and the voice file is available on our homepage for download.







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# Contents

oil	lity	7

- CEO Message 06
- 08 Company Profile
- 10 Sustainability Management Vision
- 12 Corporate Governance
- 14 Talent Management
- Stakeholder Communication 16



7	
Growth	

20	Management Strategy
22	Economic Performance & Distribution
24	Management Innovation

26 R&D Performance

nent	
Eco-Value	S

- Green Management 30 31 RC Activity
- Energy Control & Responding to Climate Change 32
- Environmental Management 34
- 40 Safety and Health
- 43 Responding to REACH

- 46 **Ethics Management**
- 48 Social Contribution
- 54 **Employee Satisfaction**
- 58 **Customer Satisfaction**

Appendix

- Prize & Verification Statement 62
- Verified Opinions 64
- 66 GRI Index(G3)
- 70 Glossary



HPC and Lotte Daesan affiliated together to promote green synergy. HPC's dream is to make an affluent society with harmonious interactions of human, technique and nature, pursuing high-quality lifestyle in the future.

CEO Message Company Profile Sustainability Management Vision Corporate Governance Talent Management Stakeholder Communication





# "We will be the best petrochemical enterprise in Asia with innovative vision."

We thank you for your encouragement and support in honor of the occasion of publishing the second sustainability report of HPC.

HPC has co-developed with Korean petrochemical industries since it was established in 1976. HPC became top tier firm lives up to reputation in Korea. HPC is also one of the best petrochemical enterprises coped successfully with several problems of management and hardships of business environment. It is well-known that dynamic power operated in the company was not only based on much effort of executive managers and employees, but also on confidence and encouragement of interested parties, including stockholders and customers who respects and trusts US.

Plenty of corporations have gone due to the rapidly changing business environment, including the recent global financial crisis. If we are not able to overcome the economic crisis, our corporation would drop out in the global competition. Thus, obtaining economic power as competitive global corporations became the key to our survival. HPC paved the way to operate 'economy of scale' after merging with Lotte Daesan in last January. To become the best petrochemical enterprise in Asia, HPC is wisely dealing with domestic and foreign economic changes, and making efforts to promote strong growth strategy, such as reinforcing competition power of the main businesses and developing new businesses. All the executive members are going through the process with great wisdom and passion to foster the ability of the company up to the level of global enterprises.

HPC clearly recognizes the duties of an enterprise for society and environment. We have constantly enforced to reduce the amount of greenhouse gas and put effort to cut down energy usage, so that the corporation would overcome environmental crisis caused by climatic change. We will also actively discuss the environmental issues with the government and related businesses, in order to protect our environment more successively. Besides, HPC will continue further social roles, such as involving in volunteer activities for local society and technically supporting the small businesses. In general, our company wishes to co-develop with customer and the local society simultaneously.

HPC is willing to establish for more than 100 years', with our stakeholders.

HPC is an enterprise which values customers as a top priority, pays attention and cares about the environment and safety, promotes co-development of a society and a nation through ethical management. Furthermore, we try our best to please everyone and pursue future values. We are aiming to establish 'a company sustainable for 100 years' with the interested parties. We promise you that we will do our best for further development. Thank you





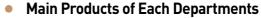
September 1st, 2008 Vice Chairman & CEO, HPC Chong, Bum Shick

B. S. Ch

# **Company Profile**

# Company Profile

Formal Name of Enterprise	Honam Petrochemical Corporation	
Date of Establishment	March 16th, 1976	
CEO	Chong, Bum Shick	
Main Business	Producing range products, Including synthetic resin, Chemicals and Foundational distillate	
Number of Employees	1579	
Headquarters	Lotte Tower 395-67 Sindaebang-dong, Dongjak-gu, Seoul	
Daedeok R&D Research Institute	24-1 Jang-dong, Yuseong-gu, Daejeon	
Yeosu Plant	172 (In the petrochemical complex ) Jungheung-dong, Yeosu, Jeollanam-do	
Daesan Plant	634, Dokgod-li, Daesan-eup, Seosan, Chungcheongnam-do	
	Jiaxing Hoseok Engineering Plastics Co., Ltd. (Jiaxing, Zhejiang, China)	
Location of Overseas Businesses	Hoseok Chemicals Trade Co., Ltd. (Shanhai, China)	
	Weifang Yaxing Letian(Lotte) Chemical Co., Ltd. (Weifang, Shandong Province, China)	
Location of Overseas Branches	Beijing, Qingdao, Guangzhou, Hong Kong, New York	



Items	
	Containers of
PE	Automotive g
PP	Material of au
FF	Hygienic non-
Functional Material	Automotive G
PET	Heat-resistar
PC	Optical disks(
FC	Medical appli
EO/G	Raw material
MMA	Medical adhe
EOA	Surface active
BD	Raw material
SM	PS resin, ABS
Benzene	Agrochemica
Toluene	Medical supp
Mixed Xylene	Phthalocyanii



Headquarters

Institute



Growth Period



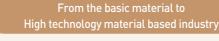


Privatization and stability of management

Establishment of HPC 1976

1975

- Establishment of Institute 1986
- Construction of HDPE 2nd plant 1988 Construction of PP 2nd plant





- Achievement in the stock exchange, Construction of MEG 2nd plant 1991
- Construction of NCC, BTX plant 1992
- 1997 Construction of MEG 3rd plant
- Construction of PET plant 1998
- Construction of HDPE 3rd plant 1999

1990





2000 Construction of EOA plant 2001 Construction of MMA plant, enlargement of BTX plant Construction of PP 3rd plant 2003 Co-acceptance Hyundai Petrochemical Corperation, Construction of complex generating plant 2004 Undertaking KP Chemical company 2005 Establishment Lotte Daesan Petrochemical Corperation

2000



- of common housewares, Fishing nets, Ropes, Insulated cables, Containers of chemicals, as tanks
- utomotive plastic, Home appliances, Throwaway syringes, Various transparent containers, -woven, Films for packing, Etc
- Glass Run Channel, Window Gasket for construction, etc
- nt containers, Containers for beverage, Etc
- (CD, DVD), Sunglasses, Lens, Automotive head-lamps, Home appliances,
- liances, Hygienic stuff, Etc
- als of antiseptics, Germicide and surface active agents
- esives, Acrylic films, Polyvinyl chloride buffers, Etc
- ve agents, Emulsifiers, Anti-electrification agents, Etc
- Is of ABS, SBR, BR, Etc.
- S resin, Paints of a piece with synthetic resin, Ion exchange resins
- als, Potographic chemicals, Explosives, Insecticides
- plies, Paints, Something of a piece with ink, Dyestuff, Perfumeries, Gunpowder, Etc
- ine, Perfumeries, Paints, Agrochemicals, Common solvents

# Take-Off Stage

Top-tier Asian chemical company



- 2006 Establishment of Hoseok Chemicals Trade Co., Ltd. (Shanhai, China)
  - Establishment of Daesan MMA corporation Undertaking Jiaxing Hoseok Engineering Plastics Co., Ltd.
- 2008 Construction and enlargement of Lotte Daesan Petrochemical Corperation
  - · Enlargement of NCC, BRU, SM, BD and PE plant
  - · Construction of PP, EG and TBA plant

Investment of Weifang Yaxing corporation's stock

- 2009 Affiliation with Lotte Daesan Petrochemical Corporation





# Sustainability Management Vision

To cope with the rapid changes of business environment and to become sustainable for 100 years, HPC has established a new vision and management policy. HPC clearly recognizes the duties of enterprise as a component in society and environment and will persistently put efforts to contribute to national industry and local society as a trustworthy enterprise.

a state



# Vision

HPC aims to break new ground to become the best petrochemical corporation in Asia. Our new vision, which would lead the company into global organization, implies not only the physical growth, but also competence among global organizations.

# Company Policy

HPC is willing to establish a groundbreaking image of "Top-tier Asian chemical company". We have established five different management policies 'Strengthening Core Competencies' 'On-Site Management' 'Developing Talant' 'Caring Environment' 'Enhancing Brand Value'. The management policy of HPC is focused on main business, in order to acquire competitiveness and target fostering global talents and representative brands, which will bring improvement to our company in the future. In addition, the corporation reflects all the on-site ideas mentioned in active communication of stockholders and other parties and applies our policies to activate the green management.

# Core Value

HPC prefers consistency in Company Policy and derived five core values focusing on customers, passion, outcomes, cooperation, and creativity, to give employees definite identity and belief. To establish this goal, we share these values believing them as motivation and a standare of actions.

On-site Management

**Strengthening Core Competencies** 

Developing Talent

**Caring Environment** 

Enhancing Brand Value





### VISION

# Top-tier Asian chemical company

### **Company Policy**

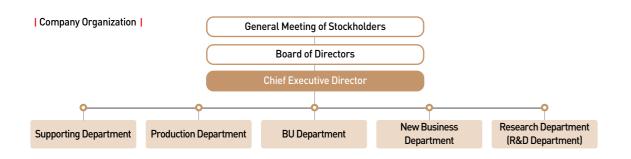
- Contribute the most competitive force in a major industry and expand business in related industries
- Concentrate capacity and ability on the best field
- Provide discriminative values exclusively with HPC and expand operations to create synergy
- Collect on-site suggestions continuously to reflect on business strategy
- Figure out the status of current situation and collect opinions by direct approaches to customers, managers, business partners
- Promptly reflect on-site ideas to the business strategy
- Employ qualified human resources to foster them to become the most competent global leaders in a business
- Seek employees who possess passion and leadership that will bring the future development
- Cultivate the best industrial, local, task-oriented experts through a great systematic education and
   experience
- As a member of society and to develop further in the future, we are responsible for the environment
- An organization of activated eco-friendly practice
- Adhere to the highest safety standards
- Strengthen the global premium brand through the best customer satisfaction and credibility.
- Excellent service and products create high standard brand value
- Bring up the representative brand to lead the global market

### **Core Values**

- Based on in-depth understanding of customers, we take action on customer's perspective
- Commit to the promise made with customers and be honest at all times
- Provide the exclusive and outstanding service and products with innovative perspectives
- By converting creative ideas and views, we pursue innovative tasks continuously
- Promote business by challenges, turning an impossibility into a possibility
- To become the best based on the firm's principle, we make persistent efforts
- Propel close cooperation to create synergy
- Pursue mutual benefit (Win-Win) with the business partners and customers
- Make decisions based on expected outcomes and value of stockholders
- Perfect outcome management based on fair result assessment
- Put efforts to improve productivity and efficiency

# **Corporate Governance**

HPC is divided into Seoul HQ, new business department, planning department, production department and Daedeok R&D research institute. HPC also operates overseas offices and corporate entities. Each department is organized by maximum capacity and ability, and there are harmonious communications and prompt actions attained between departments.



# Shareholders and Capital Structure

HPC is an affiliate of Lotte Group, and it holds a share of related independent chemical company as well as the share of Lotte Group. The largest shareholder is Lotte Mulsan, which holds 34% of share, and each subsidiary company and other affiliates, such as Hotel Lotte and Lotte Japan hold 14% and 10% of our firm's share respectively.

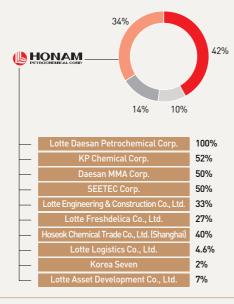
# Administration of the Board of Directors

The board of directors consists of seven directors, and four external directors. Through the executive board, we make an effort to improve confidence in decision-making and strengthen the administration practice ability, as well as to maximize profits with shareholders. We compensate our directors, including the chief executive director, with fair remuneration depending on their ability of management and individual outcome.

The chief director is appointed by the board of directors and once admitted as a chairman of the firm, he or she is qualified to administer the whole operations and automatically becomes a chief executive director of the board of directors and of an audit committee. Employees are able to make requests for any considerations to be changed by the board of directors and the board makes a decision about the relevant regulations, basic policies for management and any other substantial matter based on the execution of duty. The decision made by the board of directors should be approved by a majority in the presence of the greater part of directors. Even if the member of the board of directors does not attend the meeting, he can still participate in decision making through online and using

voice transmitters. In addition, when dealing with particular bills, it is necessary to give no voting rights to directors who are related with shareholders, thus preventing any conflicts that may occur during the process.

### Share status of Affiliates Share Status of Affiliates



S	tocks in a circulation market : 42%
L	otte Mulsan : 34%
III L	otte Hotel(Korea) : 14%
L	OTTE HOLDINGS CO.,LTD(日本): 10%

Since Jan.1st, 2009, Lotte Daesan Petrochemical Corperation has been affiliated to Honam Petrochemical Corperation, thus indicating Lotte Daesan to Daesan plant.

# Committee of Audit

HPC has an audit committee as an inspection organization. This committee is focused on subsequent inspection for council's management of business, as well as the role of preventive and preliminary inspection from the step of decision making, so that the bright and sound culture of organization is settled by preventing corruption and conflict in advance. The committee also consists of three outside directors. They are assigned by a general meeting of stockholders and their terms of office are decided by our company's articles of association in order to guarantee independence of the committee of inspection. As a result of regular, occasional, and special inspection by the committee in 2008, corruption case was not reported at all and the committee made sure that internal control system for the prevention of corruption has been working properly.

Protection of Shareholders' Right

# Risk Management

We check changes in business environment at ordinary times through the emergency measures commission in order to cope with drastic changes of market conditions. Also, we periodically discuss economical issues which might potentially affect our company which are reflected in the establishment of medium- and long-term business strategy. On top of that, we examine administration in a prompt manner and deal with intrinsic potential risks so that similar risks are prevented in the future. HPC stipulates and operates inside accounting management system to win domestic and foreign competitiveness. And we put great effort into information security by running information security commission which consists of experts who are in charge of information, computation security, and external experts, preventing infringements at the same time.



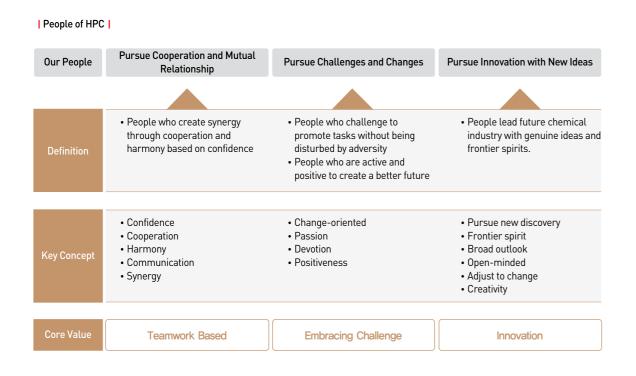


Our company operates 'Public announcement based-control system' that is reflected by the laws related to commercial market, financial investment business, monopoly regulation and fair trade. We also manage to operate the official stipulation of Financial Supervisory Commission and Korean Stock Exchange Market. Through this system, we value stockholders' right to know by officially announcing information on main management matters, as well as on regular reports such as business report, quarterly report and a half term report in exact and fast manner. Also, minority stockholders who possess certain amount of stocks can suggest a particular subject as a chief aim of the general meeting of stockholders according to the related laws and the articles of our incorporation. In addition, they can exercise their rights to inspect company's financial documents, to convene the extraordinary general meeting of stockholders and to claim for release of director from office



# **Talent Management**

HPC believes that man power is a source of company's sustainable competitive power in drastically changing management environment and severe global competition. According to this belief, we are continuously developing education program, in which each staff can maximize his or her abilities required for company's strategy from entrance to retirement. Especially, we ensure satisfaction of employees and future competitiveness by training capable employees and experts who are specialized in domestic and foreign business.



# Training Capable Employees

HPC trains potential core employees by providing different office school courses and MBA course. We reinforce specificity by providing basic knowledge and recent trends in each school such as HR school, strategy school, production management school, and financial school. Also, we invest a lot in raising potential core talents who will be a basic stepping-stone for company's sustainable development. For example, in order to train the next term CEO, we allow directors to take MBA course, so that they can develop strategic thinking power and systematize the know-how of management.

 Upbringing of International Experts We have been continuously operating global language course to train foreign experts with global capability. They are educated in domestic colleges for three months and we have selected excellent staffs followed by two month-education course overseas. Through this course, we train employees with potentials, who possess foreign language skills and understanding of foreign culture. This global language course has been operated for 6 terms, and about 10 people per year complete the course; 40 outstanding employees have finished the global language course. They are playing a central role in their fields, including new business and foreign sales. In 2008, special global language course was provided for three months, and 22 have finished campbased education in domestic college.

### Training for Global Competitiveness

Training Procedure	Selection of Standards & Candidates	Purpose	Training Contents
Global Language Course	Out of department employees, people who are able to work overseas are hired in the first place	After integration department is rearranged	A program to enhance basic conversation skills
Global Language Course	Core human resources in 3 oil corps	Foster employees with global communication capacity	Business language ability enhancing program
Professional Training in Region of China	Consider overall business performance ability along with experience with Chinese language course within the company	Acquire culture from overseas and foster experts throughout language programs	1 year dispatch of employees to Weifang Yaxing Lotte Corp.
Overseas Business Dispatch Procedures	Empoyees who are expected to be sent to Catarrh	Enhance the language ability before going to Catarrh	Consignment with Hankook University of Foreign Studies. (Specialized english education)

Employees' Capacity Development HPC entrusts off-site education to professional organization to allow staff to gain technical knowledge of each field. We are continuously increasing work efficiency and developing our competitive power by training experts and by sharing obtained technical knowledge in every department, including financial affairs, taxation business, personnel management, affairs between labor and management, sales, bonds, physical distribution, petrochemistry, and process control. Also, we try to develop the capacity of employees by providing them with about 360 cyber education programs on language, leadership, marketing, financial affairs, accounting, and computation as well as by allowing executive staffs to complete custom education.

HPC and Sustainability



# Stakeholder Communication

We have a variety of communication channels open to receive opinions and requests of shareholders. In the future, we will systematize and activate the communication with shareholders to get a footing in a sustainable management.

# Stakeholders of HPC & Communication Channels

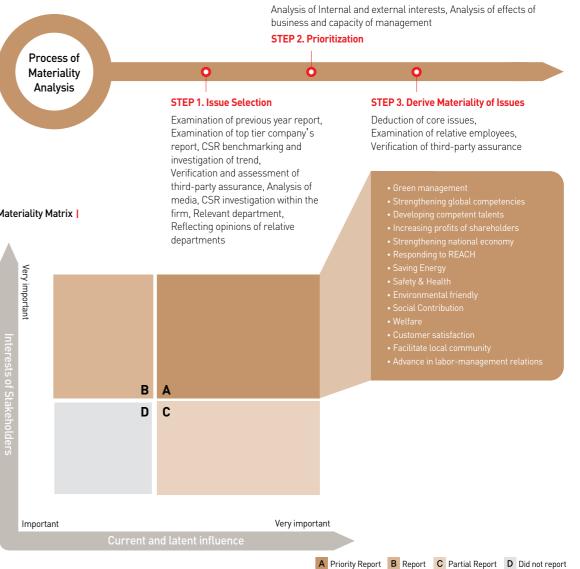
jİ	Customers	Visit in person(as needed basis), Satisfaction survey (annual), Invitation program (annual), Etc.	Through regular customer satisfaction survey, Invitation seminars and other services, we try our best to maximize the customers' satisfaction.
	Share holders	General meetings of shareholders, IR, Public Announcement, Homepage, Etc.	With positive IR activities, we put efforts to improve efficiency and transparency of management.
Ť	Employees	Satisfaction survey, Annual collective wage bargaining, Grievance committee, Joint labor- Management conference, Ethics hotline, Joint labor-management committee on industrial safety, Notice (Homepage, Intranet), Suggestion system, Etc.	We do our level best to improve satisfaction of employees, build capacity for E&S and try to understand their demands. We also work hard on community-type labor management relations based on confidence.
	Affiliates	Affiliates conference (Routine), Processing industry survey(Once/Half year) Affiliates survey, Etc. Overseas joint venture, Overseas institute activity and analysis of market trend, Conference (OPEC, APEC), Supplier field visit, Joint research, Domestic and foreign institute activity, Technique seminar, Etc. Relevant organization institute and participation in meetings, Petrochemical Safety management committee, Environment management, Regular meeting, KRCC, Etc.	We are currently in the cooperative relations with the suppliers and the companies in the same line of business throughout various channels.
	Government	Conference, Forum, Public announcement, Public hearing, Visits in person, Etc	HPC always observe law and regulations, we put efforts to become a trustworthy industry.
)	Local communities and NGO	Conference and participation in meetings, Visiting plants program, Informal meetings with local residents, Etc.	We are here to make a way of institutional communication and exert to maintain a developing relationship with organizations via social and environmental activities.

# Materiality Analysis

HPC went through all the process of materiality analysis while working on the 2008 sustainability report, so that we can sufficiently reflect any matter of concern from internal and external stakeholder. Materiality Analysis is divided into 3 stages. During the first step, we have selected important issues regarding internal and external HPC and organized 32 categories of issue. In the second step, we have classified the priority order with business effectiveness and capacity of management with a scale of 10 points. In the third step, HPC derived core issues in order to report to the executive directors, and they were reviewed by other professionals in a third-party assurance. When all the steps were completed, we drew up this report focused on the main issues. After conducting materiality analysis, we have found 12 issues in A section that are highly important than other issues. Such issues are shown below. While we were framing this report, we described concisely about any matters that are overlapping with last year report and anything that are less important relatively. In the future, we will constantly systematize and manage the process of selecting main issues.







HPC and Sustainabilit



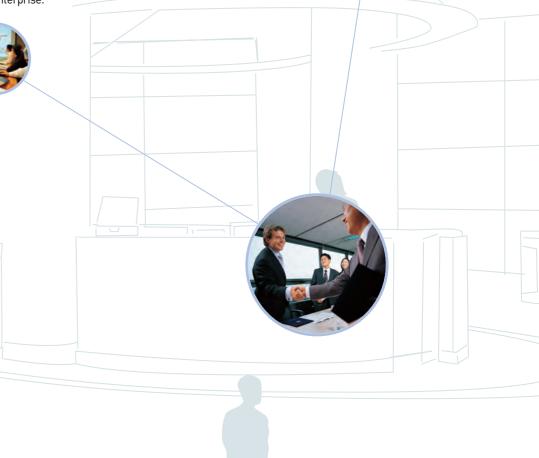
# Economy Sustainable Growth

# HPC is a true leader of petrochemical industry in 21st century.

Through a reformations and changes, HPC walked one way to play an influential role in development of national industry by enlarging production capacity and operating effective management, which helped the company to withstand in economic crisis and in high oil price. Based on the achievements of last 30 years, we are going to open a new horizon of petrochemical industry, and lead the economy of Korea as a trusted confidant and a respected enterprise.







# Management Strategy

HPC has been rated as one of the top industries in petrochemical field of Korea. HPC is now ready to become the best chemical industry in Asia with continuous preparation and investment. Not only investing on a new business, but also investing rationally on pre-existence businesses simultaneously with the aim of improvement in economic power for expansion abroad.

# Strengthen Business Competitiveness

Yeosu/Daesan plants are the international scale of production factories, with approximately 20 related plants. In 2008, more NC decomposition system has been newly established in Yeosu plant, so the increase of system efficiency and energy saving effect will be expected, as well as enlarging the scale and its production categories along with the additional completion of PC plants and EOA plants. Daesan plant is now equipped with production facilities capable of 1 million tons of ethylene, bringing out maximum efficiency of the single plant through the establishment of NC plants. With the recent establishment of PP plants and PP/EG/TBA plants and the increase of BRU, EG, SM, BD, PE plants enabled the direct vertical systematization to take place, from the resources



to products. The affiliation of HPC and Lotte Daesan were in progress since January of 2009, establishing the general operation system. The decrease of distribution cost and IT spending, the production efficiency is successfully growing as well.

# **Acquire Future Growth**

HPC is constantly pushing forward with the EO business and MMA business to strengthen the high value business. In Korea we had additional completion of EOA plants, and in China joint business of EO/ETA is in progress. In Japan, we have extended the production capability of MMA by working with Mitsubishi Layon. Also, throughout newly established PC/PMMA business, we are working toward the transparent resin, which is expected to grow rapidly in the future. We will develop polymer products which are light, strong, and eco-friendly as LFT and EPP, and by continuously working on future businesses such as green business and life science, we will increase our internal capability.

	Yeosu Plant	Daesan Plant
Investment Outcome	Newly established PC plant Enlargement of EOA plant with NC Supplementing the extended sites	Newly established PP 2nd plant and EG 2nd plant Enlarging BRU, SM, BD and PE plant

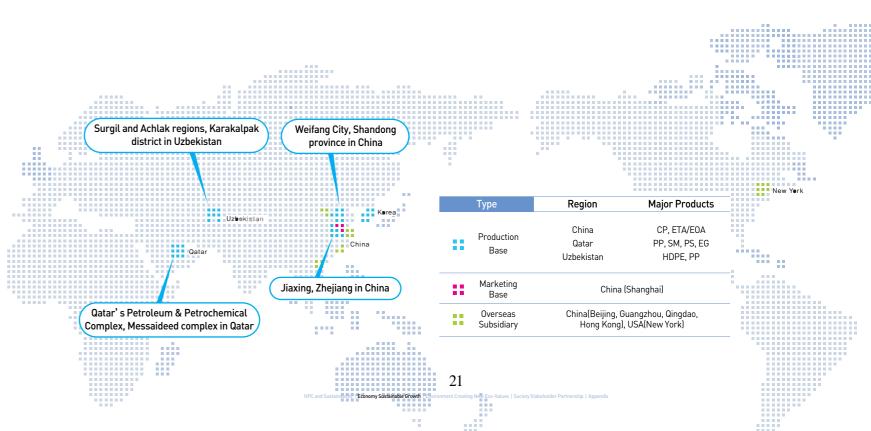
Main Products	Productivity (Thousand ton/year)			Scale Rank	
	Yeosu Plant	Daesan Plant	Total	In Korea	Overseas
Ethylene	750	1,000	1,750	2nd	17th
MEG	400	640	1,040	1st	5th
PP	380	500	880	1st	14th
PE	370	400	770	2nd	20th

# **Constructing Global Business Basis**

### • Qatar Cooperation

As a first petrochemical company in Korea, HPC decided to directly invest on production plants in the Middle East. We are now in a process of promoting joint venture project with state-owned oil company in Qatar, also known as QH, an independent company of Qatar Petroleum, and QP, Intermediate Industry Holdings of Qatar. The Middle East has abundant natural resources, including natural gas and petroleum, so that they have more competent petrochemical facilities to gain economical power than any other regions. Joint venture in Qatar is a good opportunity of HPC to step forward, since we could use their low priced petroleum to secure competent petrochemical facilities and expect for synergy effect of current business.

- Joint Venture in Uzbekistan Independent States) regions and to China.
- Jiaxing Hoseok Engineering Plastics in China soon
- Joint Business with Weifang, China





Uzbekistan project is a business established by UNG and Korean Consortium, which have contributed 50:50 stakes in a joint venture. Currently, we are investigating on recoverable deposits after exploration of gas field, and once gas field and gas chemistry plants are constructed and activated in full operation, we will be able to produce 2.8 billion m' of natural gas, 380,000 ton of Ethylene, 380,000 ton of HDPE, and 80,000 ton of PP. Then we will sell those products to CIS (the Commonwealth of

We are a multi resin processing company located in Jiaxing, China and we are running a business to enhance the ability of synthetic resins used for cars, batteries and construction materials, using PE,PP, and PC. The productive CAPA per year is 13,000 tons, but it is in its way of 6th plant of construction (5000 tons per year), and EPP business is being reviewed to be processed

This business is currently in progress, along with the investment spending on production facilities which is now ready. Weifang is known as the best CPE maker in the world, and by establishing an affiliated company with Weifang, we are working hard to achieve global competitiveness as well as extending market areas, exclusively supplying the HDPE resources.

# **Economic Performance & Distribution**

# Economic Performance in 2008

### | Profit and Loss Outline |

			(Unit : KRW bilion)
Sections	2006	2007	2008
Sales	21,813	22,553	30,982
Operating Profit	2,554	2,734	903
Recurring Profit	3,816	4,634	-453
EBITDA	3,500	3,609	1,638

\* In the net profit of current period of 2008, the loss of Lotte Daesan's share which amounts to -2,484 is included, and the major reason of loss is due to accelerated depreciation of fixed capital

### | Balance Sheet Summary |

				(Unit : KRW bil
Se	ections	2006	2007	2008
Total Assets		29,976	35,874	35,510
	Current Assets	9,432	10,038	8,861
	Non-Current Assets	20,545	25,835	26,649
Total Liabilities		5,580	7,107	7,472
	Current Assets	3,311	4,174	2,645
	Non-Current Assets	2,270	2,933	4,827
Total Equities		24,396	28,766	28,038

# Profitability Index

			(Unit : <sup>0</sup>
Sections	2006	2007	2008
Sales Operating Profit Margin	11.7	12.1	2.9
Total Business Profit	8.5	7.6	2.5
Equity Capital Net Assets	10.5	9.5	3.2
Ratio of the Cash Flow for Operation with Total Net Assets	10.1	9.8	-1.3

# Stability Index

Sections
Current Ratio
Debt Ratio
Dependence on Borrowings
To Operating Income, Interest Cove

# Growth Index & Activity Index

Sections
Sales Growth
Operating Income Gro
Net Profit Growth
Total Asset Growth
Asset Turnover Ratio

# **Distribution of Economic Value**

				(Unit : KRW bilion)
Section	15	2006	2007	2008
Stockholders & Investors	Total cash-dividend amount	239	319	80
Creditors	Interests	14	-	40
Customers	Sales-finished goods for domestic	10,044	9,730	13,471
	Sales-finished goods for export	11,671	12,723	17,511
Suppliers	Raw material purchase	15,828	17,126	26,365
	Out-side service charges	19	20	21
Employees	Wages	666	687	625
	Severance and retirement benefits	75	75	57
	Fringe benefit	77	88	93
	Annuity	24	23	23
Society	Donations	46	51	21
Government	Tax	13	17	16
	Corporation tax	1,503	1,326	-262
	Tax credit for energy	0.5	0.0	1.6

# (Unit : %)

	2006	2007	2008
	284.9	240.5	335.0
	22.9	24.7	26.6
	-	-	6.1
overage Ratio(time	s) 65.01	100.57	22.68

•			(Unit : %)
i	2006	2007	2008
	3.2	3.4	37.4
Growth	-24.9	7.0	-67.0
	-25.4	3.1	Deficit conversion
	7.4	19.7	-1.0
io (times)	0.75	0.68	0.87

# Innovation of Business Management

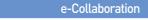
HPC has spent total of one billion won for a project that builds a system called 'e-Collaboration', so that the corporation could achieve unity of processes and operations, and be connected to ERP, Lotte Petrochemical Corp. We also have built a foundation of communication and cooperation with relative enterprises. As a result, we expect to organize an effective business process and to improve business efficiency through the process of synchronization and sharing information with partners and customers. The e-Collaboration of HPC has been a big support on the ambience of IT in the corporation at 'CIO Awards 2009' and won the best of IT projects, and this improved competitive power of enterprises in 2008.



Official Verification Agency Credit Evaluation Agency



Forwarding Agency **Business Partners** Agency  $\leftrightarrow$ Custom Brokers General Contractor Credit Card Company ASP Company





e-Sales Product information/ Customer information/ Digital guarantee Ordering management/ Examination report/ Credit debt inquiry Claim management/ Visiting report management/ Business support

e-Portal Environmental management/ Log management/ Menu management Statistics management/ Uniform code management Rights management

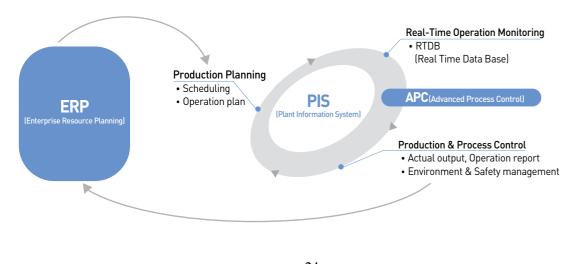
Integration of Interface



### ERP(Enterprise Resource Planning

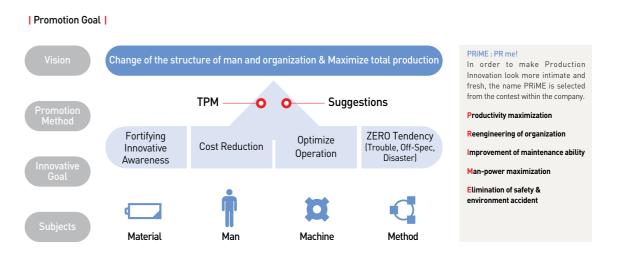
It means 'enterprise resource planning' and is integrative operation system that improves business efficiency and that shares information by integrating general business processes of an enterprise, such as producing, selling, purchasing, personnel and accounting, into only one system

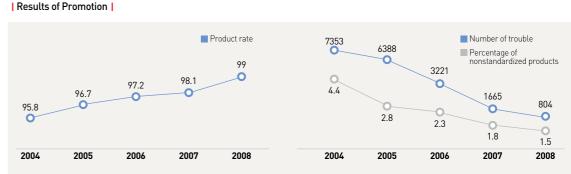
Honam petrochemical corporation is equipped with the optimum system by connecting RTDB(Real Time Data Base), being able to monitor the factory's operation data in real-time, with PIS(Plant Information System) or ERP and realize maximum productivity and stable operation by establishing APC(Advanced Process Control), advanced operation and controlling system, which can automatically operate even in an extreme condition.



 Production Innovation Activity Since 2005, HPC continuously operated TPM (Total Productive Maintenance) activity with the name of PRiME, in order to change awareness, improve productivity and strengthen the foundation of future development. The suggested PRiME numbers and applied numbers are increasing every year, so that the product rate has increased but the number of trouble cases and nonstandardized production has decreased simultaneously. In 2008, new team, called production innovation team, is organized with a slogan (JUMP 2) for the second activity. Now we are promoting the first activity in Daesan plant and building a firm foundation for future development.

TPM(Total Productive Maintenance)





\*Results of Yeosu Plan



TPM is defined as 4M (Material, Man, Machine, Method), the key factor in a production field, and also known as an innovative production activity for dramatic improvement, HPC has named the activity, PRiME and is expecting for novel progress through an improvement in production and a change in employee's awareness.

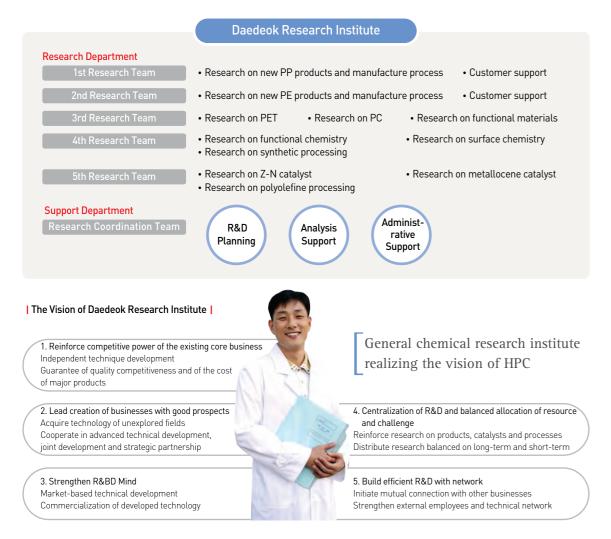
# **R&D** Performance

HPC reinforces the existing business with competitive power, which the corporation obtained through accumulation of experiences, knowledge and leading high technology in petrochemical industry. Furthermore, we also foster competency of R&D by enlarging the field of R&D and investment on high-value-added products.

We will establish countermeasure for each product by studying how existing products will be affected by future trends, such as environment and energy, for enlargement of new business. We will also be investigating expected future business that is likely to grow in the long term and will put forward in R&D of manufactures and materials so that we will have successful results in the future. In addition, we put efforts to become a top global general chemical enterprise of the 21st century.

### Progress of R&D

Daedeok Research Institute, constructed in 1991, is equipped with the best facilities in Korea, for example, there are 105 kinds of macromolecule analysis devices and 206 kinds of measuring equipments for processing and the center positioned itself as a influential hub of R&D, where 205 patents are applied. The center is constantly carrying out the research which is supported by a government with governmental contribution which costs 1 billion and 60 million won in 2006, 940 million won in 2007 and 730 million won in 2008.



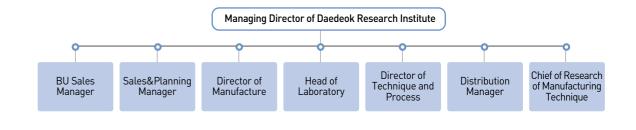
### Main R&D Fields in 2008

Field of Research	Field of Research	
Polyolefine R&D		
EO Derivatives Researc	cł	
BTX Derivatives Resea	r	
PC Research		
PET Research		

### Main R&D Outcomes in 2008

Sections	
	Development
	Development
R&D Products	sized home a
	Development
	Development
Improvements	Development
improvements	Development
	Development

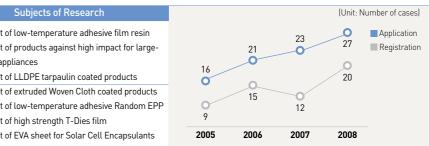
• Quality Improvement Committee In Daedeok research institute, we are having quality improvement committee conference every month, for each category. With the chief of Daedeok research institute, the committee members are putting lots of effort into making efficient quality improvement operation and product differentiation, by discussing about the product planning, discussing about production outcome, customer complaints and needs, etc.



26



	Promotion of Priority Research
	Polyolefin catalyst and innovative process development
	Metallocen products and process development
ı	New EOA products development
:h	Cost reduction of BTX derivatives and increase efficiency of process
	High-value-added PC products research
	High-functional products and process development

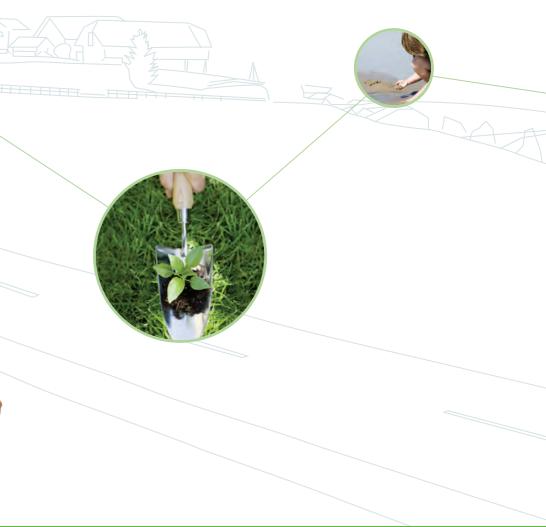




# Environment Creating New Eco-Values

# Honam Petrochemical Corp., an enterprise reflecting the nature

There is a gentle breeze and fresh smell of grass, which make us want to hum along with the birds. We will sing a greenish and hopeful song with faith of green until our melody reaches to the next generation.



Green Management RC Activity Energy Control & Responding to Climate Change Environmental Management Safety & Health Responding to REACH

# **Green Management**

HPC is trying to protect the earth, so we observe the law and governmental regulations on soil, water, ocean and land. Our employees are all positive about green management and they voluntarily participate in this promotion.

# **Creating New Eco-Values**

HPC is minimizing all the negative effects to the environment by prioritizing environmental-friendly values in decision-making. We have never been applied financial sanction nor been imposed a fine, and since 1997, we are promoting accident-free business zone. This is a result of our activities of green management through a perfect environmental control system.

In March, 2009, we have altered policy of environment, safety and health, and integration of company standards, in order to demonstrate company's social responsibility and continuous growth of environment, safety and health.



# Environment, Safety & Health Management Standard

HPC determines a course of standards below for the responsibility of environment, safety and health on domestic and international business, cooperators and employees.

- 1. Consider environment, safety and health as a priority in our management and go through all the process of product design, production and usage, and wastes to find out their influence on environment
- 2. Not only observe regulations on environment, safety and health, but also satisfy the higher level of care.
- 3. Prevent environmental pollution, preserve resource and energy, control usage of toxic substance, reduce industrial waste and protect from global warming.
- 4. Based on RC activity, we train and develop educational program for environment, safety and health.
- 5. Our company is socially responsible and we let open communication with interested parties, such as local residents, customers, shareholders, and government in the matter of our production. 6. In order to achieve the standard, we should set a goal and continuously propel any improvements.

March 27, 2009 President & CEO, Chong, Bum Shick

# **RC** Activity

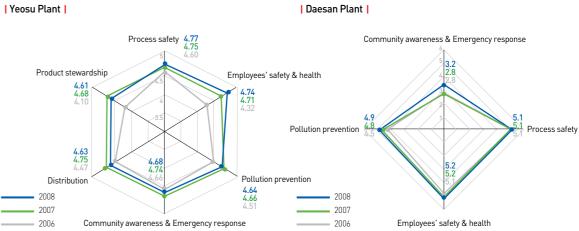


# 2008 Main Activity of RC

• Enlarged Management System Based on RC (1) Constant operation of RC T.F.T (2) Unified operation of RC Workshop and RC internal assessment & education ③ Internal RC self-assessment operation ④ Strengthen the awareness of environment, safety and health management system through external assessment

Externally, CEO of HPC is in charge of a chairman of KRCC and also in charge of a supervisor of emergency response code, thus, He has actively participated in applying relevant action guidelines. Moreover, our CEO has participated in RC Outreach activity and constantly making a contribution. Internally, he has constructed and managed the Intranet within the company, so that the RC activity became an activity where all the employees participate in.

 Outcomes of RC Self-Assessment codes.





HPC is actively participating in RC, which has positioned itself as a significant issue in international society, and is constantly achieving management performance in the fields of environment, safety, health and energy. In 2008, RC activity spread out through all the operations and Responsible Care<sup>®</sup> offices (Seoul HQ, R&D research institute and plants), and HPC paved a way for safety, health, environment, quality unified management system (SHE&Q).

We evaluate self-assessment on possibility of effective operation and adherence to the requirements of RC, which consist of six RC codes: process safety, safety and health of employees, prevention of pollution, distribution, emergency response, community awareness and product stewardship. In the future, Daesan Corporation is also planning to apply product stewardship and distribution code through the whole process, organizing the whole operating system by activating and managing those six RC

# **Energy Control & Responding to Climate Change**

Every where in the world now put efforts to recover environment in order to prevent global warming, the major environmental issue of the world. Therefore, we are also proactively responding to climate change by minimizing greenhouse gas emission and maximizing energy efficiency.

# Responding to Climate Change

It is necessary for a corporation to have eco-friendly facilities for resource and energy to become a sustainable corporation in the future. As a key factor of a competent corporation, strategy for responding to climate change became more and more significant issue. Thus, HPC accomplished a VA contract and established an emission control system in order to reduce emission of greenhouse gas more efficiently. We are also preparing for Post-Kyoto system for our company and are acting on a mid- and longterm strategy we have planned step by step.

# Energy Control

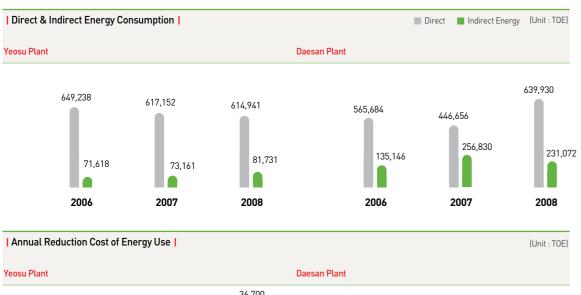
Centered on energy reducing TF team, we endeavor to maximize the value added energy use through process of production innovation and eco-friendly production line. Since we had concerned about energy saving and had a passion for reducing energy and cost of material, in November 2008, we were awarded a prize in honor of the president as a man of merit by saving energy.

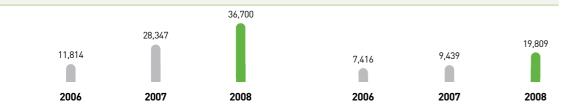


Grand Prize in Energy Management

In the case of Yeosu plant, the indirect energy usage was increased compared with previous year due to rise in purchase of external energy. Moreover, Daesan plant also increased direct energy use due to new plant's operation. However, we have continued to

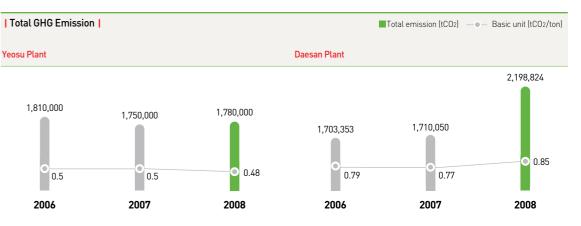
improve in reducing energy use, and in fact, the total energy reduction is increased every year.





# Greenhouse Gas (GHG) Emission Control are building the second inventory foundation. amount of GHG emission that is all within the standard boundary. emission will make a difference in the future.

previous year.



### Trend of GHG Emission Reduction

Plai	nts	Description	Expected Reduction(tCO2)	Year
	NCC	Reduction in energy use by application of fluid coupling on NC Quench Oil circulation Pump	1,312	2008
Yeosu	3EG	Reduction in usage of LS Steam by installation of heat exchanger for waste heat recovery [E-3208]	7,045	2008
	Power	FA-703 surplus CH4 boiler Fuel recovery	5,199	2008
	EG1	Vent CO <sub>2</sub> according to recovery reduction in GHG emission	14,526	2008
	NCC	Naphtha feed for heat recovery ventilators (HRV) of Quench water/oil Reduction of CO <sub>2</sub> and energy through installation of preheater	1,676	2007
Daesan	BRU	GHT unit 2nd stage HRV reactor Hot Reduction of CO <sub>2</sub> and steam use by installation of separator	2,626	2007
	EG	Reduction of energy use by installation of heat exchange preheater for HRV	1,167	2007



To directly deal with Climatic Change Convention, we have developed greenhouse gas reduction system according to the overall domestic and international policy and trend, and we were also certified from Energy Star after early and thorough investigation of process range and energy consumption range of greenhouse gas emission and potential reduction, with adherence to the international IPCC standard. Moreover, we have completed constructing first greenhouse gas inventory foundation and now we

In HPC, GHG is discharged based on optional boundary, such as direct GHG emission, energy indirect GHG emission, and other indirect GHG emission, imposed by WRI GHG Protocol and ISO 14064-1. In addition, we have added optional information to the optional boundary, suggested by GHG Protocol of WRI. In consequence, our management has been broadened by controlling the

In the case of Yeosu plant, new operating system has increased the total GHG emission compared with previous year, but continuous efforts and improvements have reduced the total CO<sub>2</sub> per ton. Similarly, Daesan plant's GHG emission is increased compared with previous year due to enlargement of the plant and facility, but we believe that constant efforts to reduce GHG

\*In the case of Yeosu plant, there may be a minor difference in measurement since the standard of discharge of GHG in 2007 and 2008 is different from

# **Environmental Management**

Based on HPC's motto, 'Harmony between nature and human being', HPC always deliberate environmental aspect in the process of decision-making, so that we could continue sustainable eco-friendly management.

rom the foundation of business, we are operating 'Environmental effect evaluation' which helps to evaluate economic and social effects, so that we could assess major environment problems in advance. As a result, HPC always assess all the internal and external hazards and maximizes environmental performance through prospecting and controlling possible effects.



### Environmental Performance Assessment

As an objective verification tool for environmental management, the result of environmental performance is used to reflect in decision-making and to communicate with interested parties. Moreover, we are making constant improvements from all the feedbacks and regular internal and external evaluation. We have gained. In 2008, the main reason for reduction in the level of environmental performance was that the industrial and water wastes increased after enlargement of plants and its operation. However, we are still making every effort to drop the amount of wastes through constant environmental care and management.

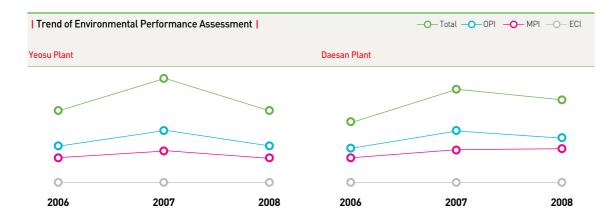
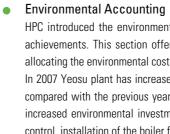


Table of Performance Indicator

Performance Indicator (KPI)	Boundary of Assessment	Range of Subordinate Assessment
OPI	Providing information about environmental performance related to operating system of an organization	Inputs Products
MPI	Providing information about manager's effort, which influenced the environmental performance of an organization	Environmental management system Observing the law Eco-friendly management Relationship with local community
ECI	Providing information for local, regional, national and international environment conditions. - For ECI, there is no direct relationship between management and the company, and it is merely a simple monitoring indicator.	Surrounding areas Environment pollution condition











HPC introduced the environmental accounting that can promote efficiency of environmental investments and environmental achievements. This section offers information that helps to decide business related decisions by examining, measuring and allocating the environmental cost which can arise to reduce environmental influence induced by various business activities.

In 2007 Yeosu plant has increased investments for routine maintenance and in 2008 it decreased its environmental investments compared with the previous year. Besides, Daesan plant's environmental investments has increased each year, and in 2008, it increased environmental investments because of the increase of environmental facilities, such as facilities for offensive odor control, installation of the boiler for incinerating waste gas and of Bag Filter.

# Air Quality

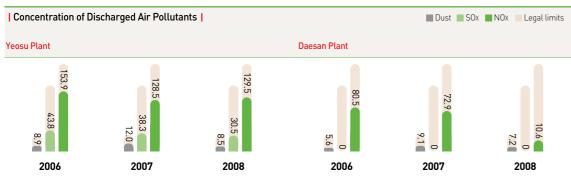
HPC has cut down the amount of air pollution from the sources by using substance, which has low Ozone depletion effect and emissions, and by using selected pollution control facilities for pollutants.

The pollution control facilities are operated in optimal condition by regular check and transmitted it to the control center, which is operated by environmental management corporation. The data which Tele-Monitoring System measures the concentration of discharged air pollutants real-time by



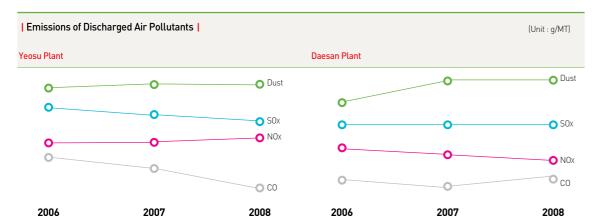
installation of TMS (Tele-Monitoring System) placed at major pollutants outlets and is controlled by the control center operated by environmental management corporation. To prevent leakage of pollutants from nonpoint pollution sources, portable detectors are used to measure leakage regularly and the corporation tries to cut down discharged pollutants through immediate repair and replacement if any problems are found.

Yeosu plant has higher concentration of discharged air pollutants compared with Daesan plant, because of operation of the boiler. However, Yeosu plant is manages to control this within legal limits of 50% and tries to improve air quality by reduction of discharged VOC.



\*The standard of legal limits for dust 30(mg/m3) , SOx 180(mg/m3), NOx 250(mg/m3).

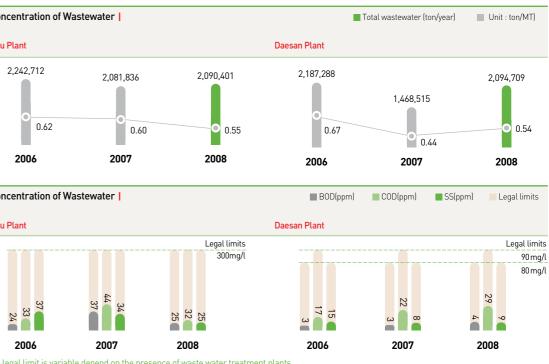
\*SOx is not detected at Daesan plant, because there is no boilers and the incinerators which use liquid fuel containing SOx.

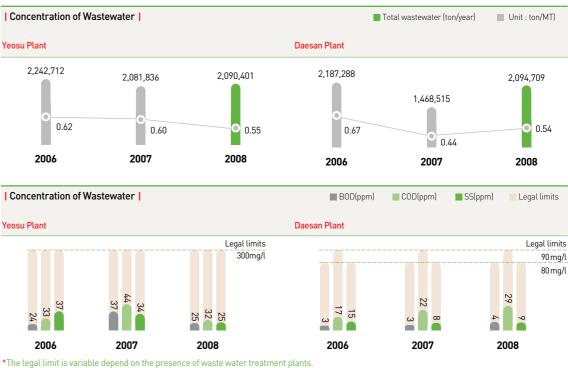


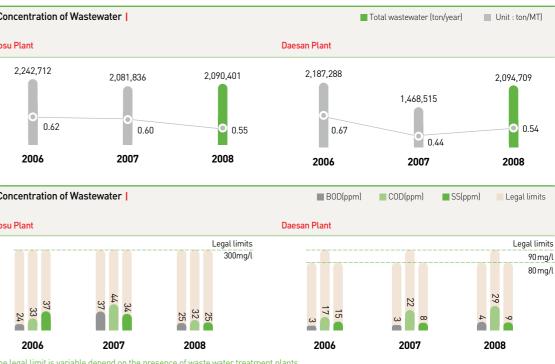
	2006	2007	2008		2006	2007	
Dust	1.9×10 <sup>-5</sup>	2 × 10 <sup>-5</sup>	1.9×10 <sup>-5</sup>	Dust	1.5 ×10 <sup>-6</sup>	3×10-	
SOx	2 × 10 <sup>-5</sup>	1.8×10 <sup>-5</sup>	1.6×10 <sup>-5</sup>	SOx	0	0	
VOx	3.6 ×10 <sup>-4</sup>	3.9 ×10 <sup>-4</sup>	4.3×10 <sup>-4</sup>	NOx	1.8 ×10 <sup>-6</sup>	1 × 10 <sup>-6</sup>	0
CO	1.5 ×10⁻⁵	1.4 ×10 <sup>-5</sup>	1 × 10 <sup>-5</sup>	CO	0.9 × 10 <sup>-8</sup>	0.2 × 10 <sup>-8</sup>	2

# Water Quality

Waste water generated during the production is treated in a waste water treatment plant primarily and then disposed in a final disposal plant. We make every effort to improve the water quality by operating physical and chemical treatment plant, and biological disposal plant where they use pure oxygen aeration. We installed water quality measuring instrument in the main waterway to monitor water quality Waste water treatment plants frequently. In the case of leakage, recovery pumps are all ready to prevent any chance of water-polluting accident. In 2008, the amount of waste water increased due to the enlargement of the plants. To resolve this matter, we have invested 5.5billion won (\) to construct additional waste water treatment plants and with the help of the allotted tasks and improved equipments, the annual amount of waste water has been reduced. Furthermore, water usage has dropped since we have recycled steam-drum Blow Down water into coolant through pyrolysis from Naphtha Cracking method (NCC). In Daesan plant, the amount of waste water has increased due to enlargement of plants, therefore the company contributed efforts to reduce the amount of waste water through high concentrated waste water stabilization treatment. The company also strictly manages concentration of discharging waste water limit to less than 15%, within the legal limit.







# Soil Quality

HPC is strictly managing the construction of soil treatment plants and closedown of such plants after using them according to a management policy in order to prevent soil pollution. In particular, to prevent any polluting substance sinking into the ground, we have covered the ground, where soil treatment plant is located, with concrete and then completely waterproofed the ground. In order to protect from diffusion of polluting substance, we make every efforts. The construction of discharge barriers and discharge facilities, and constant inspections are a good part of our effort. The results of soil pollution level test, according to the Soil Environment Conservation Act, indicated that the soil pollution level of the ground where previous soil treatment plant was located was less than the legal limit. It means that the company's constant effort has well achieved. Moreover, the fieldsupervisors are keep trying their best to conserve soil environment by paying attention to soil quality during a treatment process and do close examination with scientific methods.





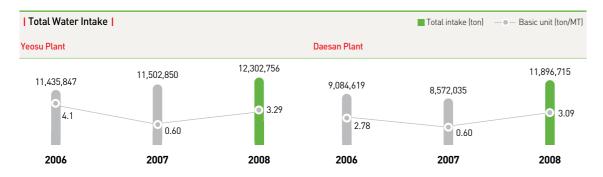
# Resource / Recycling

The major resource, Naphtha is supplied from domestic petroleum industry and overseas imports, and usage of this material is increased due to the enlargement of plants and increase in production. As a result, HPC is trying to maximize the efficient use of resource through production innovation.



Republic of Korea is classified as a country without much water by UN and since we are confronting realistic situation, we are slowly improving the efficiency of water resource. Petrochemical industry use copious amount of water and there is no recycled or reused water as a matter of nature of process in this particular industry.

In Yeosu plant, stable supply of water is from Ju-am dam and in Daesan plant, water is supplied from Daehoji, A-san Lake, Boryung dam. Currently, our company's source of water of workplace is not from Ramsar site, the preserved wet land, thus, the use of water resource does not have significantly impact on the environment.



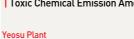
# Wastes

Previously incinerated water-content sludge, package paper and major and sub-materials are now transformed into recyclable substance. In our company, waste drums and waste pallets are recycled through recycling-special companies and we have introduced real-name system for the waste so that each department is responsible for their waste. Moreover, we are constantly trying to maximize the use of recycled material through improvements in origin of the waste. In the future, we are also going to increase the use of recycles which have been incinerated and land-filled.



# Toxic Chemicals

HPC completed the 'Voluntary Chemical Waste Discharge Reduction Agreement' with the Ministry of Environment and does its best to reduce maximized emission rate of harmful substance. We are adding budgets on the incinerators, condensers and retrieval facilities, and we regularly check the total released toxic substance. HPC installed detectors for suppressed-leakage and isolating equipments, and -- periodically providing education about management of toxic substance to employees now. Moreover, we are operating substantial management system to be able to deal with emergency situations and provide trainings for controlling equipment and check-up of toxic leakage. The emission rate of harmful chemical substance has increased since we have rebuilt our plants in Daesan. However, since we have tried our best to improve reduction in toxic substance, the basic unit of emission has dropped noticeably.





 Protection of Ecosystem The region where Yeosu and Daesan plants are located, does not have much endangered plants and animals, which means the diversity of organism value is not high enough to worry. However HPC is keep regularly monitors the ecosystem using a scale with consideration of regional feature and we put extra efforts and care to protect the natural environment by actively participating in Convention on Biological Diversity.



\* In 2008, Yeosu and Daesan plants produced according to unified the emission rate standard. Thus the emission rate may differ from previous year.



# Safety & Health

HPC is actively performing safety conscience enhancement, claiming safety in facilities and process, assuring workshop safety, and health management in order to achieve the ultimate goal, accident-free workplace.

# Industrial Disaster Prevention Actions

Through self-safety inspection, HPC is searching and ameliorating the field's unsafe elements, and also accompanying the endeavor to nurture professionals through education and training. Especially, HPC is operating on the information system (EH&S) that deals with environment, health and safety, and it's using EH&S to improve safety conscience for all employees. Moreover, HPC prioritizes workshop safety investments and is expanding facilities annually, and is assuring workplace safety through thorough work permit procedure, standard work statement revision, and partner enterprise safety management education.

Statistics drawn from EH&S system show that in 2008, there were 5129 (7.8cases per one person) cases of near miss and possible dangers, and through 2003 October to 2008 December 31st, there were no single human/material accidents resulting in total of 8,620,000 safe workers. In December 2008, the HPC received the highest grade P in PSM (Process Safety Management). HPC is running on a 4 consecutive year zero percent injury rate, occupational diseases rate, lost day rate, and absentee rate, that is crucial in workers' spirit and production rate.

# | Graph of Injury rate, Occupational diseases rate, Lost day rate, Absentee rate, Incident rate |

	2	Section		2006	2007	2008
Yeosu Plant	Total Working Hours Occupational diseases ra	Total Working Hours Occupational diseases rate, lost day rate, Absentee rate, Incident rate		1,520,827 0	1,517,642 0	1,515,135 0
Daesan Plant	Total Working Hours Occupational diseases rate, lost day rate, Absentee rate Incident rate			1,175,356 0 74.2	1,210,270 0 49.57	1,230,159 0 9.27
	ncident Rate culation of the Minitry of Labor)		*Calculation Formula			
<ul> <li>Chemical-products manufacturing industry</li> <li>Total industry in Korea</li> <li>Honam Petrochemical Corp.</li> </ul>		Occupational Diseases Rate, ODR     ODR = Total number of occupation disease     total working hours     Lost Day Rate, LDR				
1.07 O	0.98		LDR = <u> Total number of</u> total working	day lost hours X 200,0	000	
0.77 •••••••••••••••••••••••••••••••••••	0.72	0.71	• Absentee Rate, AR AR = Total number total number of en	of absent day in nployees worke	certain period d within that peri	X 200,000
2006	2007	2008	<ul> <li>Injury Rate: IR</li> <li>IR =</li></ul>	ury cases ours X 100		

HPC monitors environment & safety diagnosis in weekly bases, and is establishing autonomous environment & safety management by operating task force, composed by professionals in the field to maintain legal compliance and to make counter-plans for potential risk. Also, it maximized safety management's efficiency, flexibility, reliability, and safety through reforms and centralization of emergency protection system. Through Committee of Industrial Safety & Health and Labor-Management, both participate as labor force, HPC is sharing information and important factors on workplace environment reforms and worker's safety and health.

 Health Promotion Movement for Employees the work place.

Moreover, aiming for non-smoking environment, HPC provides smoking resisting supplements, lectures on non-smoking from professionals, performs smoke resisting acupuncture treatment, and actively participates in non-smoking campaigns. Furthermore, it also provides stretching sessions and aerobic classes are provided before work, in order to upkeep worker's best conditions to concentrate on working. Since brain apoplexy is one of the rising issues, HPC is acting on after care and examines the possibility of brain apoplexy weekly.

HPC not only takes responsibility for workers' health, but also takes responsibility for their family's health. It provides health examination for worker's partner, and under the impression "Workers and their family's health is the company's resource", it provides gym, swimming pool, tennis court, and golf practice center. Such facilities are open to anyone in the region to practice "together" culture.

 Dupont Safety Management Technique now completely removed.



HPC, under the belief "worker's health is the company's health", strives to reform working environment, provides medical examination and after care under the regulations. Especially, we endeavor to prevent Work-related musculoskeletal disorders ; we provide professional musculoskeletal examination, improve working condition for better working environment, and provide safety equipments to maintain musculoskeletal disorder free in

In striving to bring safety management up to world-class level, HPC was consulted from world-famous chemistry industry Dupont. Since we have introduced Dupont's organized leading safety management system, the dangerous aspects and fundamental causes of accidents, which used to be insurmountable with sole technology and equipments, are



Emergency Protection Sv



Safety Construction Education



Non-Smoking Education



Fitness Facilities

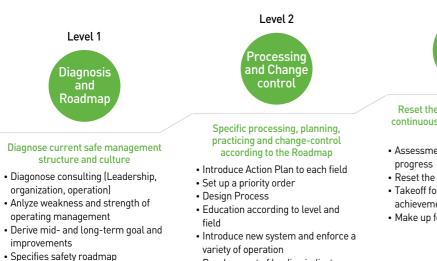


# **Responding to REACH**

In particular, HPC has formed safety committee for organized safety management and proclaimed "The safetest eco-friendly enterprise" as their safety vision. HPC enhanced worker's safety conscience level through continuous promotion and education. This as its foundation, HPC achieved a positive outcome in management including quality, prime cost, production, and sales.



# | Dupont Safe Management Technique |



# Activities of DuPont Safety Association

Proclamation of management

commitment

Starting safety committee Organize executive members, Directors of teams, Committee of final decision-making Operation of emergency preceding work • Orderly arrange the field, Return and disuse wastes and discarded materials Activity of safety audit - Control unsafe behavior through observation and communication Motto & poster contests • Build up safety awareness of employees through participation Operation of Safety Contact (Safety conversation at each meeting) Safety pause Inscribe safety sentence in head line documents Inscribe emergency exit in buildings (Meeting rooms, Resting rooms) Proclamation of safety vision -o 'The safetest eco-friendly enterprise' Establishment of necessary safety regulations Define 7 unacceptable unsafety actions within safety regulations

Unified safety organisation, activities of subcommittees Support operation of Consulting Action Plan Establishment of goals, safety policy and principles



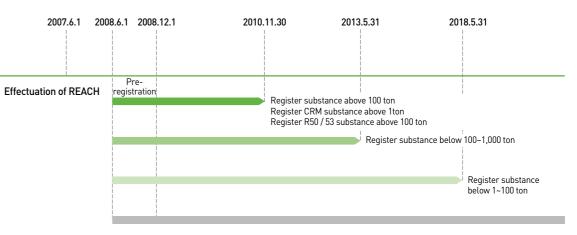
- achievement
- Make up for shortcoming



- Development of leading indicator

- - Completion of Pre-registration
  - Preparation of Registration

### | Registration Dates of REACH |



Pre-registrant substance New substance, not pre-registrant substances



# REACH(Registration, Evaluation, Authorisation and Restriction of Chemicals)

The regulation, REACH, which was issued by EU on June 1, 2006, is a provision that are designed to register, evaluate, authorize and restrict all chemicals depending on the amount and harms that are produced or imported within EU in over one ton.

Pre-registration is a process in which we submit all essential information of the preexistence substance that are required to be registered by the regulations of REACH to Europe Chemicals Agency. As REACH was issued on June 1, 2007, all corporations that failed to pre-register during the 6 months pre-registration period of June 1, 2008 through December 1, 2008 were declined to import chemicals to EU until they go through the process of pre-registration. HPC carefully examined every factor that would affect its import activity in response to REACH and successfully completed the pre-registration on November 11, 2008.

We are currently framing TD(Technical Dossier), CSR(Chemical Safety Report) and SDS(Safety Data Sheet) for chemicals that are subject to REACH in preparation for registration as well as participating in SIEF in order to submit all the required documents in time. In addition, we are enhancing our cooperation and communication with our customers and our purchasing cooperation and strengthening the network with suppliers in active response to REACH.





# HPC is a corporation that enriches everyone's life.

Little by little, we are stepping towards creating a society where everyone leads a

# **Ethics Management**

Based on confidence in humans and loving nature, HPC endeavors to promote common interests for humans and a nation, and try to return the profits made to stakeholders, society and nation.

A /e believe that winning our customers' trust is the most important factor in our corporation's success. Under the guidance V V of our executive members, we have adopted ethical and transparent management.

We prioritize ethics before any other values and are practicing a just, fair and transparent business operation according to the business ethic standards. Ethics management organization is formed with an ethics office and we are promoting an active participation in the activities. As part of mandatory training, over 60% of our employees have completed ethics education. Our goal is to have all the employees to complete this course.

# **Ethics Regulation**

Based on company's motto 'Affluent future creation', employee's of HPC always strives to pursue company's sustainable development and prosperity, moreover, common interests of nation and human beings. The effort of employees begins from company's feature, clean and transparent ethics, and such ethical feature is our company's norm, employees of HPC should act and make decisions based on the ethics regulations below.

# 1. Responsibility and Duty to Customers

• Act as you are in customer's perspective and serve them Keep faith with customers by fulfilling our obligation Protect customer's information and profits

- 2. Responsibility and Duty to Shareholders
- Maximize the value of stocks with sincere management Maintain the transparency and observe the regulations of
- business management
- Listen and reflect justifiable opinions from minority shareholders

### 3. Fundamental Ethics for Employees and Executives

- Executives and employees shall comply with social norms and high ethical standards, to maintain the company's reputation and individual dignity.
- Executives and employees shall have a sense of duty, and actively and creatively contribute to the company with a challenging spirit, innovation and cooperation.
- Executives and employees shall receive fair compensation, based on capabilities and performance.
- Executives and employees shall protect company properties and information.
- Employees shall not provide gifts to each other, or engage in loans or joint liability on loans.
- Employees shall not act rudely to each other, and shall prevent 7. Management of Ethics Commit sexual harassment in workplaces, in order to create a favorable For effective management of ethical standards and moral code, the working environment
- actively respond to all opportunities and crises, and set examples of compliance with global standards for business operation. · Employees shall respect executives with dignity and endeavor to
- promote a positive working environment.

### 4. Co-Existence and Co-Prosperity with Partners

- All partners shall be provided with equal opportunities, and goods and services shall be traded with transparency for mutual interests.
- The company shall not exploit its advantageous position to make unfair claims, or to receive inappropriate treatment or bribes.

### 5. Contribution to Nation and Society

- The company shall abide by relevant laws and regulations and create social wealth and promote the quality of lives, through sound business.
- The company shall not engage in politics.
- The company shall make efforts in protecting the environment and natural resources.
- The company shall promote the safety of community, customers and employees and prevent accidents.

### Reinforcement & Punishr

Employees and executives are responsible for other employees whether they observe the regulation. Morally outstanding employees or disobedient employees are reinforced or punished respectively according to the deliberation made by personnel committee after ethics management committee' s proposal.

Ethics committee should have offices within the companies, and for • Executives shall live up to social responsibilities. They shall specific ethical management including internal accusation system, follow the managerial regulations prescribed by ethics committee.

# Human Rights

### Fair Trade

We are clearly aware that violations of the law such as unfair business practice and breach of Fair Trade Act are stumbling blocks to our administration. Consequently, we have adopted CP (Compliance Program) and have strictly reinforced our law system as part of our transparent management.

# Appointment of the Supervisor for CP

In order to operate CP with responsibility and objectivity, our board of directors has appointed a supervisor for CP. The supervisor strives hard for our adherence to Fair Trade Act in charge of the CP department. **Pledge of Employees** 

In order to maximize the effect of CP, our CEO has posted compliance of employees on our website. Subsequently, all our employees wrote a pledge that agrees to complying with all regulations and laws of fair trade. Investigation of Fair Trade within the Corporation

market.

### Fair Trade Education

We have produced and distributed manuals for fair trade and inform each department of any revision in the regulations so that employees themselves can detect any violation of law in the corporation.

### Consultation Regarding Fair Trade Act

We have prior consultations with fair trade professionals about our purchase, marketing, new projects, etc. in order to prevent any law violation.

We do not discriminate our employees based on personal attributes such as religion or gender by the regulation of ethics (code 3). Also, our employees receive annual mandatory ethic education in order to prevent possible workplace discriminations. Furthermore, we operate anonymous proposal board through which anyone can freely inform the administration of any discrimination or corruption within the corporation. However, nothing has been reported in 2008 regarding discrimination or corruption.

We make it a rule to select our job applicants through open, fair process. We have gradually been increasing our female labor force and we give preference to applicants to local workers for overseas branches so that we may contribute to the local economy.

There is no potential risk of child labor in our corporation, as it is restricted to hire children in our industry. Also, we have workers union which provides vacations and overtime payments on time, so there is no danger of forced labor. In addition, we strictly adhere to the regulations in the labor law, volume 3 and we consult the workers union when we make changes to employees' working condition. Our minimum wage excluding other allowances is relatively higher than the legal minimum wage and we annually examine our payment system in order to maintain our minimum wage in accordance with the government standard. Furthermore, we write agreements and investment contracts with domestic or international firms with respect to domestic or international laws.

We carefully investigate ourselves within the corporation in order to prevent violations of Fair Trade Act which may incur damages and strive to reinforce our competitiveness in the

# Performance of CP Management in 2008

Investigation of fair trade within the company (twice a year)

Fair trade education (twice a year)

Legal consultation regarding fair trade act (52times a year)

It's a self regulation system for the company to observe Fair Trade Act. Compliance program is to provide the quideline by education to help the nanagement and employees to observe Fair Trade Act in the business environment and to report to the board of directors the result of inner investigation and performance of self regulation. By adopting and operating CP, company can prevent and remedy the violations of the related laws of its own accord.

# **Social Contribution**

To accomplish the vision 'Top-tier Asian chemical company', we have strengthened the foundation for continuous growth. HPC recognize the business activity as 'Corporation's Social responsibility' and reflect our responsibility in our business decision-making.

PC have intensified social contribution, and organized 'Deliberation committee of social contribution', by promoting systematically, with backup organization structure in each workplace. To make everyone enjoy their life and live bountifully, we are promoting social contribution since 2007. In particular, we expect our contribution to not just serve as one-time event or simple and tangible contribution, but expect it to be sustainable for mid and long term so that we pursue systematical strategy under the Roadmap. Moreover, to activate the local economy, we are expanding the local purchase of resource and equipments, and reducing the conflicts with local residents by solving their problems. In the future, HPC will make continuous contributions for local development under the collaboration with local residents, and become a well-respected enterprise by members of community amongst socially responsible business management.



# | Strategy for Mid and Long Term Social Contribution |



\*Honam M  $\cdot$  B  $\cdot$  P  $\cdot$  Honam M  $\cdot$  B  $\cdot$  P is the abbreviation of 'Most Beautiful People' and is a program of providing opportunity of overseas volunteer program for employees who have accumulated the most volunteer service points

Social Contribution Program	Section	Programs			
Sharing Culture	Sharing Culture	<ul> <li>Matching Grant and fraction system</li> <li>Supports development funds for local community near plants</li> <li>Charity bazaar with sharing love</li> <li>Donation of secondhand PC</li> <li>Donation of books</li> </ul>			
Social Welfare	Social Welfare	<ul> <li>Donation of secondhand PC</li> <li>Donation of books</li> <li>General volunteer programs in sister village (once in farm, once in a sea village The year-end social volunteer activity</li> <li>Contribution to local social welfare facilities</li> <li>Preparation of Kim-chi with love</li> <li>Deliver rice with love</li> <li>Support farmers in farming season</li> <li>Provide seoul experience opportunity for parentless and needy children</li> <li>Work-study program in Yeosu industrial complex</li> <li>Fun Chemical World, in 2008</li> <li>5th Chemistry Frontier Festival</li> <li>CEO engineering educaton</li> <li>Local community's nature purification activity</li> </ul>			
	Loving Environment	<ul> <li>Local community's nature purification activity</li> <li>Gardening Yeosu</li> <li>Voluntary work in recovery of oil leakage at the west coast</li> <li>Planting trees within/around the plant</li> </ul>			

# **Sharing Culture**

- Matching Grant and Fraction system employees participate in both programs.
- also provide scholarships to excellent pupils and best students.
- Charity Bazaar with Sharing Love child hunger and help needy neighbors.
- Donation of Secondhand PC at the same time.
- Donation of Books hearted competent persons.



We have introduced a fraction system and matching grant to incite employees from CEO to officers, so that they can participate in social contribution activities and to expand the donation culture through the whole society. In particular, the fraction system, which requires employees to donate less than 1000 won from their payment, and matching grant system, which the corporation make the equal donation fund as much as the employees have contributed, are representative social contribution program of HPC since all the

# • Supporting Development Funds for Local Community Near Our Plants

We are delivering development fund to local community near the plants annually and we

As a part of campaigns to help needy neighbors, a group of wives within the company is opening a bazaar so that they donate the profits to the near-by schools in order to reduce

We donate second-hand PCs for free to social welfare organizations, so that we can narrow down the information gap between social strata and use our resource efficiently

Lotte scholarship foundation and HPC have donated 800 recommended books to children in Sungsan elementary school near Yeosu, so that the children will grow up as warm-



Grant Ceremon



Donation Made to a Charity, A Beautiful Store Organization





Donation of Llead PCs



# Social Welfare (Volunteer Activity)

# • General Volunteer Programs in Sister Village (Once in Farm, Once in a Sea Village)

HPC has set up sisterhood relationship with farming and fishing communities and substantially helped them throughout many activities, such as renovating houses, mending public facilities, cleaning the village, medical & immunize activities, and selling their regional products. Moreover, we have expanded the interactions and understanding through participating in village events and invitation events. Since 2008, we are striving to strengthen ties with communities, through expanded interaction.



Sisterhood Village Party for Elders

Sisterhood Activities

Yeosu Plant	Ciatestand valation akin beyond alda	149 households
Daesan Plant	Sisterhood relationship households	113 households

# Invitation of Sisterhood Village Residents and SupportingTourism for Elders

In every May, we are supporting and operating tourism for elders, above 65 years old, who live in the sisterhood villages and we also invite residents to our plants for sightseeing along with little presents for them.

### **Compliment Festival Presents to Sisterhood Villages**

We deliver presents door-to-door for every house in the community during the harvest festival and New Year's Day.

# Support to Create New Jobs in Sisterhood Community

To provide jobs to the local residents, we give weeding tasks around the plants twice a year.

# **Renovate House of Love**

The fraction fund, accumulated with employee's donation, is donated to the volunteer activity committee, which will restore and rebuild the poor houses of sisterhood villages.

# • The Year-End Social-Minded Activities

At the end of every year, we retrieve and evaluate the whole activities we have done for a year and we give donations and supplies for wintering to local community and social welfare facilities. We also plan a special event to express our gratitude to residents. Although winter is cold, volunteers of HPC have hearts warm enough to share love with local residents at the end of year.



Sisterhood Village Citizens' Visit to Plants

revention of Enidemics Around the Plants



Providing Additional Services to Fix the House

- reflect them in our supportable documents.
- Preparation of Kim-chi with Love the village is left out and can have warm winter.
- Deliver Rice with Love to realize better world with all the neglected classes of people.
- Support Farmers in Farming Season during farming seasons.

2005	2006	2007	2008
Twice	Three times	Three times	Once



# Make a Donation to Local Social Welfare Facilities

We visit 7 different social welfare facilities within the local community, other than Namsan nursing home, and we give our warm-hearts by providing them firewood, sidedishes, and other necessities. In addition, we also participate in their regional events, so that we could collect any difficulties they are confronting due to their poor facilities and

Wives of our employees often prepare Kim-chi with cabbages and radishes cultivated from Eco-friendly organic farming and deliver them to each household so that no one from

In every May, the month of family, we deliver rice with love and do other social activities for the community. Particularly, we deliver rice with other supplements as a group, consisting of 2 people in each team, to disabled people, solitary old people, children leading family, and other needy people. The budget of this activity was prepared by the prize of innovative activity. In the future, we will continue to operate the social activities

We go and help farmers, who suffer from a lack of hands in farming season within the sisterhood community, and since 2005, we have helped poor households near the plants







reparation of Kim-chi with Love





Support Farmers in Farming Season

# Social Welfare (Fostering Future Generation)

# • Seoul Field Trip for Children of Indigent Level

HPC tried to inspire hope and dream to young children who suffered from economic crisis through a field-trip to Seoul every year. We have invited children in Nakdo for two nights and 3days trip, and provided opportunities for them to experience various cultures including Presidential Residence, IMAX movie theatre, observatory, the Cheonggye creek, Kyungbok palace, Youngsan war memorial hall and Lotte World.



Seoul Field Trip for Children of Indigent Level



Open! Fun Chemical World! in 2008

미용비누 만들기

# Local School Field-Trip

We are operating field-trip programs as one of the educational support, for kindergartners, elementary and middle school students in the local society.

### Open! Fun Chemical World! in 2008

'Open! Fun Chemical World!' is organized under the supervision of Korea Responsible Care Association ; it was a program for social contribution subjected at elementary school students. We run this program for students, who are dreaming to become an expert in science and chemistry field every year and in 2008 HPC had planned and organized the program.

# The 5th Chemical Frontier Festival

HPC cooperated with Ministry of Education, Science and Technology, LG Chemical Corp., Hanhwa Petrochemical Corp. and SK Energy Corp. for Chemical Investigation Frontier Festival, which is programmed to increase the awareness of importance of chemistry, which we use every day, to high school students who are going to lead the science society. We desired to find and foster the best students for future chemical industry and wanted to expand the interest of chemistry nationwide. 'Future dream made of chemistry' is the title of the 5th contest, where 615 teams (1230 students) participated from 150 high schools and 40 teams were selected to continue investigation for three months. For the selected candidates, we provide an opportunity to studying abroad.

# • CEO Engineering Educaton

HPC establishes CEO engineering education in major universities every year. From CEO to major executive members lecture and operate field-trips for students so that students after the education can have broad knowledge in petrochemical industry and learn management process.



The 5th Chemical Frontier Festival

**CEO Engineering Educaton** 

# Loving Environment

- Local Community's Nature Purification Activity roads.
- Gardening Yeosu with Plants places, including, watercourse, parks,
- number of employees involved: 300 people)
- Planting Trees within and Around the Plants promoting tree-planting activities.



HPC is participating in environment-friendly activities step by step. Firstly, we started environment-friendly activity for local society in at a watercourse, mountain, and road. Then we expanded our purification activity in a reservoir, waterway, coast, mountains and

In 2012, there will be Yeosu international exhibition opening for local residents and thus all the employees are voluntarily involved in planting trees and purifying the public

# • Voluntary Work in Recovery of Oil Leakage at the West Coast

In order to recover the west coast polluted by oil leakage, we have donated 100 million won to Susan city as a recovery fee and we sent 30 volunteers from our company to go there and helped extermination of oil. (The number of volunteer service: 9 times / the

HPC is always practicing environment care in the surrounding areas of the plants. Within the plants, we have planted around 10,000 of Chinese juniper trees, royal azaleas, and palm trees, and installed a fountain so that the garden looks great in view. We have also have planted 5,000 wild roses, plum trees, royal azaleas and etc., and plan to keep



Gardening Yeosu with Plants



/oluntary Work in Recovery of Oil Leakage at the West Coast







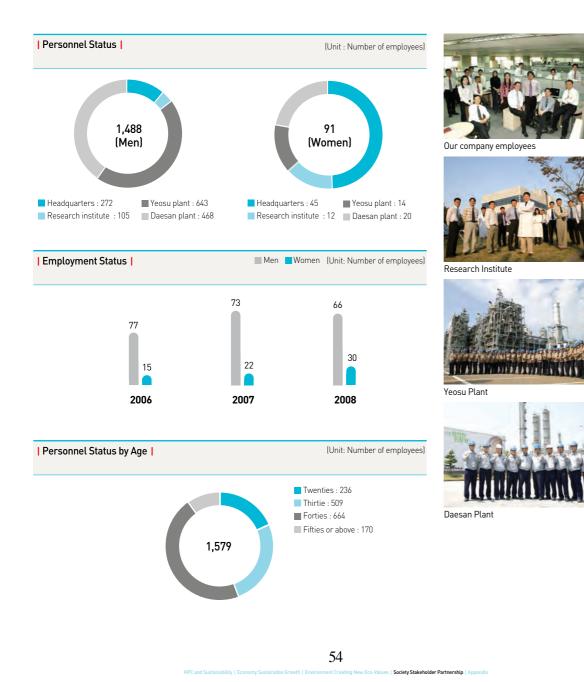
Planting Trees

# **Employee Satisfaction**

HPC endeavors to become a corporation for employees, not employees for the corporation by providing optimum work environment.

As a result, although 65.8% of employees have registered in a labor union, we have created our own mythology of no labor disputes.

The total number of employees in HPC was around 1,579 in December, 2008. To classify regionally, in Seoul HQ, there are 317 people, 117 in Daedeok research institute , 657 in Yeosu plant and 488 in Daesan plant. To distinguish by gender, there are 1488 men and 91 women so that there are 14% of women working in the company. In the subject of personnel Status by Age, there are 36 of twenties, 29 of thirties, 23 of forties, and 20 of Fifties or above. To classify workplaces, there are 36 in Daesan plant, 31 in Yeosu plant, 32 in Seoul HQ and 3 in Research Institute .



# Employee Benefits





HPC is operating variety of employee benefits to improve employees' quality of life. We also enforce overseas industrial training to shape a global mind and strengthen the adaptability of change in overseas environment. In Yeosu plant, there are welfare facilities, such as gym, fitness center, indoor swimming pool, restaurants and events hall, a size of 43,000 pyeong. Thus, we try our best to provide good facilities so that the employees are able to remain healthy and spend sound leisure time.

HPC equally applies 4 different insurances and retirement grants to every employee, and we also give 50% of national annuity for living expense of people after retirement. For former retired employees, we are providing 3 months holiday system before they retire and w also give incentives or open a way for promotion according to employee's performance once or twice every year. There could be minor differences between individual payments, depending on their performance, tasks and position, but there is no differentiation in payment according to gender if they work the same tasks with comparable duty.

Support R&D research institute, plants and residenceAid in education fundGiving allowance of 100,000 won when children of employees enter elementary & middle school Aid in total middle & high school, university expenses (all children)Provide congratulations andSupport employee or family of employee's wedding and anniversary Provide them expenses for congratulations and day-offProvide free meals or aid in lunch fundProvide them expenses for family events and day-offPree shuttle bus or aid in transportation feeBacking task-related transportation feeReinforce long-term employeesProvide rewards or holidays for long-term employed person who has worked for 10, 15years Provide traveling fund for Southeast Asia to long-term employed couple worked for 20 yearsAid in medical expenseAid in medical expense for an employee, a spouse, children, and parents under certain circumstancesFree health check-upsGive a medical examination for employees once a year (twice a year for a spouse)Group accident insuranceRegister in group accident insurance for any case of injure and death of employeesHoliday systemSaturday day-off system and summer holiday (5days)CondominiumProvide a membership card which can be used nationwide	Add in the section formal	Aidin have numbering for dendlares have densit
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employed couple worked for 20 years         Aid in medical expense         Aid in medical expense for an employee, a spouse, children, and parents under certain circumstances         Free health check-ups       Give a medical examination for employees once a year (twice a year for a spouse)         Group accident insurance       Register in group accident insurance for any case of injure and death of employees         Holiday system       Saturday day-off system and summer holiday (5days)         Condominium       Provide a membership card which can be used nationwide		who has worked for 10, 15years
Aid in medical expense       Aid in medical expense for an employee, a spouse, children, and parents under certain circumstances         Free health check-ups       Give a medical examination for employees once a year (twice a year for a spouse)         Group accident insurance       Register in group accident insurance for any case of injure and death of employees         Holiday system       Saturday day-off system and summer holiday (5days)         Condominium       Provide a membership card which can be used nationwide		Provide traveling fund for Southeast Asia to long-term
and parents under certain circumstances         Free health check-ups       Give a medical examination for employees once a year (twice a year for a spouse)         Group accident insurance       Register in group accident insurance for any case of injure and death of employees         Holiday system       Saturday day-off system and summer holiday (5days)         Condominium       Provide a membership card which can be used nationwide		employed couple worked for 20 years
Free health check-ups       Give a medical examination for employees once a year (twice a year for a spouse)         Group accident insurance       Register in group accident insurance for any case of injure and death of employees         Holiday system       Saturday day-off system and summer holiday (5days)         Condominium       Provide a membership card which can be used nationwide	Aid in medical expense	Aid in medical expense for an employee, a spouse, children,
group accident insurance       Register in group accident insurance for any case of injure and death of employees         Holiday system       Saturday day-off system and summer holiday (5days)         Condominium       Provide a membership card which can be used nationwide		and parents under certain circumstances
Group accident insurance       Register in group accident insurance for any case of injure and death of employees         Holiday system       Saturday day-off system and summer holiday (5days)         Condominium       Provide a membership card which can be used nationwide	Free health check-ups	Give a medical examination for employees once a year (twice a
death of employees       Holiday system     Saturday day-off system and summer holiday (5days)       Condominium     Provide a membership card which can be used nationwide		year for a spouse)
Holiday systemSaturday day-off system and summer holiday (5days)CondominiumProvide a membership card which can be used nationwide	Group accident insurance	Register in group accident insurance for any case of injure and
Condominium Provide a membership card which can be used nationwide		death of employees
	Holiday system	Saturday day-off system and summer holiday (5days)
Athletic meeting Open regular athletic meeting every year	Condominium	Provide a membership card which can be used nationwide
	Athletic meeting	Open regular athletic meeting every year

# Develop Capacity of Employee

HPC provides regular educational sessions for employee's improvement in productivity through different level of education, job training, knowledge training and special education. We also try to fulfill employee's desire for learning language and selfdevelopment by supporting school funds. Moreover, we try to inspire employee's historical awareness through Korean history capability examination, and we endeavor to make optimum work environment through education, where they teach prevention of sexual harassment. In 2008, we have educated for 103.62 hours per employee in a year.

### Process of Training

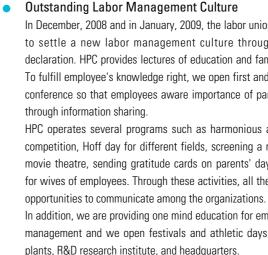
Education by level : Orientation for new employees, improvisation education Job training : OJT, in and out professional education in and out Grounding : Foreign language education, computation education, domestic and abroad inspection, moral education, and women clerk education, etc Scientific study and training : Achieving a master or doctor certificate Cyber study and training course : We have a cyber study and training course on the job or off the job (Lotte cyber study and training center)



Type of Education	Principal Contents
Foreign language education	We educate English, Japanese and other languages so that our employees meet the quality of cosmopolitan.
Computation education	We train a computation education for efficiency at handling tasks and elevation of capacity.
Domestic and abroad inspection tour	Learning advanced technique and extending our knowledge according to company's need
Moral education	We foster definite values and intelligible professional spirit for employees
Education for female employees	We supply a general education course for women clerk to improve their quality and for stability of their emotion
Korean history capability examination	We inspire employees with knowledge of Korean history so that they acquire a broad and accurate knowledge with well-balanced historical consciousness
Sexual harassment prevention education	We try to create optimum workplace by mutual trust and respect between workers
Special education	We have a special education other than educations listed above

# • Labor Management Collaboration

HPC is trying to maintain peaceful and constructive labor management relationship by ensuring the management right of the company and the right of labor of labor union at equal standing with labor management. More than 90% of our employees on field are registered in labor union and we share information of improvement in work environment and management for safety & health of employees through participation in labor union and the Ministry of Labor Affairs. Particularly, we are opening new variety channels of sharing information. For example, the director of labor union attends to a general meeting of stockholders, thus he or she understands the main business contents and future management, which will become known to all employees. Moreover, to keep peaceful labor management relationship, we are operating workshops for key officers and labor management conference every year. In consequence, based on the collaborative to labor management relationship, we have achieved extending our positive effects to the similar petrochemical industries and corporations by charging the authority of wage negotiation to a corporation for 3 consecutive years.



All workers and labor management are realizing zero labor management disputes in working environments through peaceful and developing labor management relationship, based on mutual trust and collaboration. We are also recognized for outstanding labor management culture, so we won the first prize in labor management culture by the Ministry of labor in 2008. In the future, HPC will strive to accomplish peaceful industry by maintaining excellent labor management relationship.





In December, 2008 and in January, 2009, the labor unions of two plants were determined to settle a new labor management culture through peaceful labor management declaration. HPC provides lectures of education and family program for employee's unity. To fulfill employee's knowledge right, we open first and second half year of management conference so that employees aware importance of participation and open management

HPC operates several programs such as harmonious activity (rafting in 2008), athletic competition, Hoff day for different fields, screening a movie in the company, going to a movie theatre, sending gratitude cards on parents' day and providing special education for wives of employees. Through these activities, all the employees feel united and given

In addition, we are providing one mind education for employee's unity and peaceful labor management and we open festivals and athletic days every autumn for unity between



Labor Management Union Declaration



Management Conference



Harmonious Activity for Entire Employees (Rafting)



One Mind Athletic Day for Labor Management Relationship



Ceremony of Awarding a Prize

57

# **Customer Satisfaction**

HPC is receiving good response from our customers since we have been building supportive partnership with customers and operating variety of customer satisfaction management.

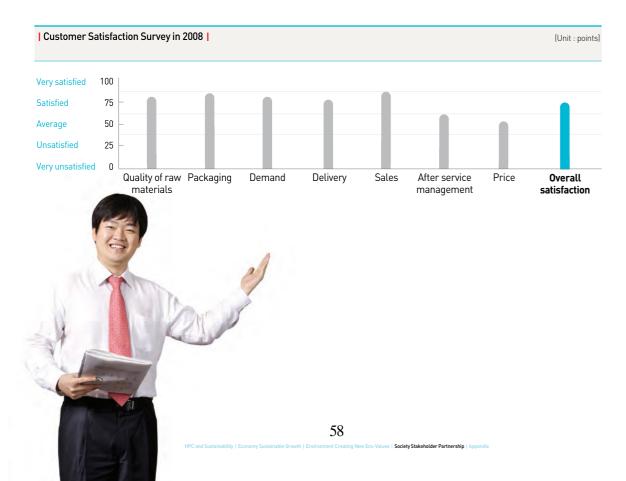


### Customer Privacy Protection

Protecting customers' privacy is one of the most concerning issues of HPC and in accordance; we put a great emphasis on the protection of customers' privacy and has made a policy and an organization to protect customers' privacy. HPC is operating a technical and management measure in order for private information not to be lost, stolen, leaked, changed, or damaged and we also provide education to employees for better awareness of privacy protection.

# Customer Satisfaction Survey

Every year, HPC does customer satisfactory survey to find out our current state, such as quality of raw material, packaging, ordering, delivery, sales, after service and price. Through the survey, we will recognize customer's requests and effective customer service so that we will be able to recover customer's faith by processing customer's dissatisfaction and improve the quality of customer management promptly.



### • Customer Support

HPC is doing its best to restore customer's trust and confidence by dealing with customers' complaints as soon as possible. In customer support system, we record and store all the reports of dealings with previous requests and prevention of complaint reoccurrence. Moreover, we hold a meeting of Quality improvement Committee every month so that we can find the cause of complaints as well as institute the prevention methods. All the documents related to customer's dissatisfaction are computerized, thus, any departments can open the file and share the information to find better solution for further development. For customer support services, there are door-to-door technical support, safety check-up service and customer invitation seminar.

# **Technical Service**

# Safety Check-up Service

development.

# Polymer School

We invite customers to professional technique training seminar according to different items so that customers will understand and accept broaden technical information of related products. Moreover, we can have organic relationship with customers through constant technique interaction.

- Preparation Activity for Product Liability (PL) reports every second month to reflect them in the management. \*All MSDS of products are available to download from the homepage.
- Product Labeling

For domestic demand, according to Occupational Health and Safety Act and Toxic Chemicals Control Act, HPC put label of instructions to each product's case and cover, and also for exported items. HPC gives all the necessary information, provided by the exported country's law on the labeling, in order to prevent any accident that can occur during delivery and handling. There was not a single example of a missing warning sign or wrong information, which could be moderated by the law, and there was no mishandling of products to customers, which might have caused social criticism.



In order to ameliorate any problems of marketing, application and processing of new products, an research Group from Daedeok Research Institute satisfies the customer's desire through different services, such as visiting customers and educate them solutions and practically resolve any current problems.

Based on a concept of general safety, Safety Service is consulting that HPC sums up all the know-how about safety for 30 years of experience, applies them to the identified latent accident factors and find other countermeasure for further

In order to act effectively to customers' demand concerning liability of manufactured products, HPC has joined manufactured product liability insurance. Also we provide education and advertisement to prevent any loss form incidents and enact additional manufactured product liability regulation so that we can prevent expansion of damage after an accident. As a result, there was not a single case of violating law in both foreign and domestic business about product liability. The board of directors monitor PL

# Appendix Sustainability Report 2008

Prize & Verification Statement Verified Opinions GRI Index (G3) Glossary



We like to spend healthy time with your happy smile.

# **Prize & Verification Statement**

# **Prizes**

Year	Prize Description	Sponsor	Management
2003	Received grand prize in Korea's green business department	Korea efficiency Association	Korea Listed Companies Auditor
2005	Received grand prized in green management in green management	Korea Economic newspaper	Open management research Inc.
2005	Received grand prized Korea's green management	Korea efficiency association	Management research Inc.
2006	Received grand prize in Korea's productivity	KMA	Korea efficiency association
2007	Urban and suburban interaction recognition	Regional maritime affairs and fisheris office, in Yeosu	Suhyup
2008	Yeosu safety management evaluation	Yeosu city	
2008	Received grand prize in energy management	Federation of knowledge and economy	Energy management corp.
2008	Received grand prize in Labor and management	Department of labor	Labor development association.

# Affiliated Societies and National & International Associations

Name	Name
Federation of Korean Industries	Korea Surfactant and Adhesive Industry Cooperative
Korea Employers Federation	Korea Institute of Chemical Engineers
Korea Industrial Technology Association	Korea Chemical Industry Federation
Korea Petrochemical Industry Association	Korea Fair Competition Federation
① NCC and PO Council	Incorporated Assoication Korea Engineering Club
② Environment & Safety Board	Surplus Management
③ Korea Responsible Care Association	ASIA BUSINESS COUNCIL
Korean Tax Association	EPCA
Korea Specialty Chemical Industry Association	Custom Federation
Seoul Chamber of Commerce & Industry	Daesan Regional Representative Council
Korea International Trade Association	Local Agenda 21 for Susan
The Polymer Society of Korea	Korea Chemicals Management Association
Korea Efficiency Association	Korea Environmental Preservation Association
Korea Listed Companies Auditor	Korea Gas Safety Corporation
Korea LIsted Comapnies Association	Korea Fire Safety Association
Korea Productivity Center	Korea Radioisotope Association
Federation of Korean Industries (Korea Economic Research Institue)	Korea Electric Engineers Association
Federation of Korean Industries(International Management Institue)	Korea Fine Chemical Logistics Association
Korea-Japan Economic Association	

# **Verification Statement**

Verification Statement	Range	Certified Organization	Extra		
ISO 9001	Headquarter	KFQ			
	Research institute	KFQ	Quality management system		
	Yeosu plant	KFQ	Quality management system		
	Daesan plant	LRQA			
ISO/TS 16949	Headquarter	KFQ			
	Research institute	KFQ	Automobile quality management syste		
	Yeosu plant	KFQ			
ISO 14001	Research institute	KFQ			
	Yeosu plant	KFQ	Environment management system		
	Daesan plant	LRQA			
OHSAS 18001	Yeosu plant	KFQ	Safety & Health management system		
	Daesan plant	LRQA	Salety & Heatth management system		
KOSHA 18001	Yeosu plant	Korea Occupational Safety & Health Agency (KOSHA)	Safety & Health management system		
SONY Green Partner	Yeosu plant	SONY	Customer certification		



ISO 9001:2000 Quality management system The first registration : August, 1995

ISO/TS 16949:2002 Quality management system The first registration : December, 2007

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5



The first registrat November, 2008



2









ISO 14001:2004 Environment management The first registration : December, 1995



ISO 14001:2004 Environment management The first registration : May, 1997



OHSAS 18001:2007 Safety & Health management system The first registration : September, 2008



OHSAS 18001:2007 Safety & Health management system The first registration December, 2008



K0SHA 18001 Safety & Health management system The first registration : September, 2006

# **Verified Opinions**



# Honam Petrochemical Corp. Verification of Sustainability Report 2008

# Introduction

Korean Foundation for Quality ('KFQ') has independently verified the 2008 Sustainability Report of HPC (hereinafter `Report'). The compilation of the Report is the responsibility of the HPC management and KFQ's responsibility is to express our opinion on the Report based on the verification scope agreed. The guideline for completing this report is based on G3(2006 Sustainability Reporting Guidelines) from GRI (Global Reporting Initiative), which is widely adopted internationally.

# Independence of Verification

KFQ has no conflict of interest with HPC in terms of profit generation-related activities except providing third party verification service on the report. And we do not have any biased opinion on HPC's stakeholders.

# **Criteria of Verification**

KFQ have conducted verification in accordance with the 'AA 1000 Assurance Standard (AA 1000 AS)' published by Accountability in 2003. The standard requires 3 principles such as Materiality, Completeness and Responsiveness, thus the Reports were assessed by these principles. The subjects of verification criteria are the performance and sustainable activities conducted by Honam Petrochemical Corp. headquarter, Daedeok Research Institute, Yeosu plant, Daesan plant.

# Verification Scope and Procedure

Verification has been planned and undertaken to achieve reasonable assurance whether there is any material error or misrepresentation in the Report. Also KFQ has verified credibility of the Report contents and effectiveness of the internal process systems for preparing the Report according to the following steps.

• Desk Review	We have performed analysis in HPC's sustainability perspective data by comparing the contents described in the Report against GRI Guideline and information acquired through internet and media survey. Financial information in the report have crosschecked with audited '2008 Financial Statement of HPC'.
• On-site Assessment	We have visited the Seoul Head Quarter, Yeosu Plant and Daedeok Research Institute to assess accuracy of the information and performance data in the report and effectiveness of the data management system and/or process of preparing the report. Based on the sampling principle after due consideration of information materiality, we have examined relevant documents to sustainability management activities and its performance, and interviewed personnel in charge of reported sustainability activities to gather evidences.
<ul> <li>Resolution of Findings</li> </ul>	We have discussed the particular errors and distorted information found during the procedures above, and

reviewed the final version of the Report again to check the correction and reflection of the founded facts by HPC. Then, GAP analysis against the GRI guideline was conducted again on the final Report.

# **Consideration and Limitation**

# Conclusion

Based on our review, KFQ have obtained reasonable basis to express the conclusion on the Report are below:

1. HPC processes to identify sustainability of its management and understands the activities, performance, concerns and issues rose by stakeholders, and have disclosed their effort, and performance regarding to identify material issues properly. 2. HPC has implemented internal system to generate, gather and analysis information and data on the Report to make public available.

In conclusion, KFQ has not found that there is any material error or misrepresentation in the report.

# Recommendation

We recommend that Honam Petrochemical Corporation needs to strengthen organization and to implement systematic reporting process for improving compilation of sustainability report.

We also recommend HPC to develop performance indicators with reference to the 'Sustainability Reporting Guidelines (G3)' and analyze the performance in all aspects of sustainability continuously. Efforts and performance related to sustainability management should further be reported with a balanced view.

We suggest that through various types of channels, HPC needs to contribute more on requests of stakeholders and integrate this mechanism into HPC's business decision-making process.



Accuracy and completeness of performance data reported in the Report are subject to inherent limitations due to their nature and the methodology used determining, calculating and estimating such data.

> 20th August, 2009 CEO Jae Ryong Kim Korean Foundation for Quality (KFQ)

●: Reported ①: Partially reported O: Not reported ⊖: Not available N/A : Not available

GRI Index No.	GRI Index Details	Page	Reporting Level	Extra
1. Strategy a	nd Analysis			
1.1	Statement from the most senior decision-maker of the organization	7	•	
1.2	Description of key impacts, risks, and opportunities	13,14,7	•	
2. Organizati				
2.1	Name of the organization	8	•	
2.2	Primary brands, products, and/or services	9	•	
	Operational structure of the organization, including main divisions,	40		
2.3	operating companies, subsidiaries, and joint ventures	12	•	
2.4	Location of organization's headquarters	8	•	
	Number of countries where the organization operates, and names of countries with either major			
2.5	operations or that are specifically relevant to the sustainability issues covered in the report	8	•	
2.6	Nature of ownership and legal form	12	•	
	Markets served(including geographic breakdown, sectors served,			
2.7	and types of customers/beneficiaries)	9, 21	0	
2.8	Scale of the reporting organization	8, 12, 20, 22	•	
2.9	Significant changes during the reporting period regarding size, structure, or ownership	20	•	
2.10	Awards received in the reporting period	62	•	
3. Report Pa			-	
3.1	Reporting period	2	•	
3.2	Date of most recent previous report	2	•	
3.3	Reporting cycle	2	•	
3.4	Contact point for questions regarding the report or its contents	73	•	
3.5	Process for defining report content	17	•	
3.6	Boundary of the report	2	•	
3.7	State any specific limitations on the scope or boundary of the report	2	•	
3.8	Boundary of the report which can significantly affect comparability from period to period	2	0	
0.0	In the process of data measurement techniques, bases of calculations, including	2	U	
3.9	hypothesis and principles, supports applied expectations	2, 40	0	
3.10	Explanation of the effect of any statements of information provided in earlier reports	2, 17	•	
5.10	Significant changes from previous reporting periods in the scope, boundary,	2,17	•	
3.11	or measurement methods applied in the report	12, 20, 22	•	
3.12	Table identifying the location of the Standard Disclosures in the report	66~69	•	
3.12	Policy and current practice with regard to seeking external assurance for the report	2	•	
	roucy and current practice with regard to seeking externat assurance for the report	2	•	
	Governance structure of the organization	12, 13	_	
4.1			•	
4.2	Confirm whether the Chair of the highest governance body is also an executive officer (CEO)	12	•	
4.5	Constitute the highest governance body	12	•	
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body	12	•	
4.5	Linkage between compensation for members of the highest governance body,	40		
	senior managers, and executives, and the organization's performance	12	O	
4.6	Process in place for the highest governance body to ensure conflicts of interest are avoided	12	•	
4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics	e 12	0	

GRI Index No.	GRI Index Details	Page	Reporting Level	Extra
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to	11 20 //		
4.8	economic, environmental, and social performance and the status of their implementation	11, 30, 46	•	
( 0	Procedures of the highest governance body for overseeing the organization's	12	•	
4.9	identification and management of economic, environmental, and social performance	12	O	
4.10	Processes for evaluating the highest governance body's own performance,	12		
4.10	particularly with respect to economic, environmental, and social performance	12	O	
4.11	Explanation of whether and how the precautionary approach or principle is addressed	26, 27, 34	•	
4.12	Externally developed economic, environmental, and social charters, principles,	21 22 20 /2	_	
4.12	or other initiatives which the organization subscribes or endorses	31, 32, 39, 43	•	
4.13	Memberships in association of industrial, national and international	62	•	
4.14	List of stakeholder groups engaged by the organization	16	•	
4.15	Basis for identification and selection of stakeholders with whom to engage	16	•	
4.16	Approaches to stakeholder engagement	16	•	
/ 17	Key topics and concerns that have been raised through stakeholder engagement,	4/ 48		
4.17	and the response according to them	16, 17	•	
Economic Ap	proach & Performance Indicators			
EC1	Direct economic value generated and distributed	22, 23	•	
500	Financial implications and other risks and opportunities for the organization's			
EC2	activities due to climate change	32	O	
EC3	Coverage of the organization's defined benefit plan obligations	55	•	
EC4	Significant financial assistance received from government	23, 26	•	
505	Range of ratios of standard entry level wage compared to local minimum			
EC5	wage at significant locations of operation	47	O	
	Policy, practices, and proportion of spending on locally-based suppliers at significant			
EC6	locations of operation	48	O	
	Procedures for local hiring priority and proportion of senior management hired from			
EC7	the local community	47	O	
	Development and impact of infrastructure investment and services provided primarily			
EC8	for public benefit	48~53	•	
EC9	Understanding and describing significant indirect economic impact	20, 21	Ð	
	tal Performance Indicators	20,21	v	
EN1	Materials used by weight or volume	38	•	
EN2	Percentage of materials used that are recycled input materials	38	0	
EN3	Direct energy consumption by primary energy source	32	•	
EN4	Indirect energy consumption by primary source	32	•	
EN5	Energy saved due to conservation and efficiency improvements	32	0	
LING	Initiatives to provide energy-efficient or renewable energy based products and services,	02	U	
EN6	and reductions in energy requirements as a result of these initiatives	33	O	
EN7	Initiatives to reduce indirect energy consumption and reductions achieved	32	0	
EN8	Total water withdrawal by source	38	•	
EN9	Water sources significantly affected by withdrawal of water	38	-	
	Percentage and total volume of water recycled and reused	38	-	
EN10	Location and size of land owned, leased, managed in, or adjacent to, protected areas and	50	•	
	I acation and cize at land owned leaced managed in or adjacent to protected areas and			



		Level	
s, codes of conduct, and principles relevant to and the status of their implementation	11, 30, 46	•	
seeing the organization's nmental, and social performance	12	Ð	
dy's own performance, al, and social performance	12	Ð	
	0/ 07 0/		

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# ●: Reported ①: Partially reported O: Not reported ⊖: Not available N/A : Not available

GRI Index No.	GRI Index Details	Page	Reporting Level	Extra
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	39	0	
EN13	Habitats protected or restored	N/A	0	
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity	39	0	
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	N/A	Θ	
EN16	Total direct and indirect greenhouse gas emissions by weight	33	O	
EN17	Other relevant indirect greenhouse gas emissions by weight	33	0	
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	33	•	
EN19	Emissions of ozone-depleting substances by weight	36	0	
EN20	NOx, SOx, and other significant air emissions by type and weight	36	٠	
EN21	Total water discharge by quality and destination	37	٠	
EN22	Total weight of waste by type and disposal method	38	0	
EN23	Total number and volume of toxic substance spills	39	0	
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	N/A	Θ	
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff	N/A	Θ	
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	27, 36, 37, 39	O	
EN27	Percentage of products sold and their packaging materials that are reclaimed by category	N/A	Θ	
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	30	•	
Labor Praction	ce & Decent Work Performance Indicators			
LA1	Total workforce by employment type, employment contract, and region	54	O	
LA2	Total number and rate of employee turnover by age group, gender, and region	54	٠	
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations	55	٠	
LA4	Percentage of employees covered by collective bargaining agreements	56	•	
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements	56	0	
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advice on occupational health and safety programs	56	•	
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region	41	•	
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases	42	٠	
LA9	Health and safety topics covered in formal agreements with labor unions	56	Ð	
LA10	Average hours of training per year per employee by employee category	56	0	
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	55	0	
LA12	Percentage of employees receiving regular performance and career development reviews	55	•	
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity	54	O	

GRI Index No.	GRI Index Details	Page	Reporting Level Ext
LA14	Ratio of basic salary of men to women by employee category	55	0
S01	Nature and effectiveness of any programs and practices that assess and manage the	48	O
501	impacts of operations on communities, including entering, operating, and exiting	40	U
S02	Percentage and total number of business units analyzed for risks related to corruption	46	0
S03	Percentage of employees trained in organization's anti-corruption policies and procedures	46	0
S04	Actions taken in response to incidents of corruption	47	Ð
S05	Public policy positions and participation in public policy development and lobbying	31	O
S07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	47	•
S08	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	47	•
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening	47	Ð
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken	47	Ð
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	46	•
HR4	Total number of incidents of discrimination and actions taken	47	•
HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights	56	O
HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor	47	•
HR7	Operations identified as having significant risk for incidents of forced or compulsory labor,	47	•
HR8	and measures to contribute to the elimination of forced or compulsory labor Percentage of security personnel trained in the organization's policies or procedures	46	Ð
PR1	concerning aspects of human rights that are relevant to operations Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures	34	O
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes	59	O
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	59	Ð
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	59	•
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	58	Ð
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship	47	Ð
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes	47	Ð
PR8	Total number of substantiated complaints regarding breaches of customer privacy and loss of customer data	59	O
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	59	•

# ●: Reported ①: Partially reported O: Not reported ⊖: Not available N/A : Not available

# **GRI** (Global Reporting Initiative)

An international organization established in 1997 by UNEP and CERES, developing and spreading globally applicable sustainability reporting guidelines

# TOE (Ton of Oil Equivalent)

TOE is defined as 107 kcal calorific value generated from 1 ton of crude oil (use of gas, electricity and energy)

# Matching Grant

It's a system, whereby the company provides a contribution equivalent to the amount donated by an employee, to help the under-privileged.

# **PSM: Process Safety Management**

It is a 'total safety management system' to help ensure safe and healthful workplace, through systematical and scientific management of the plants with high risk facilities, which may cause severe industrial accidents.

# TMS: Tele-Monitoring System

An automatic measuring device set up to measure exhaust gases at the point of emission. The data is used to check whether businesses are complying with emission standards under the Clean Air Conservation Act, impose fines for excess emission, and to draw up air pollution policy.

# UNFCCC: United Nations Framework Convention on Climate Change

International agreement(Korea registered in 1993) in order to prevent global warming of the earth, through reducing emission of CO<sub>2</sub>, CH<sub>4</sub>, N2O, PFCS, HFCS, SF6 and etc.

# Energy VA (Voluntary Agreement)

An agreement to achieve 'voluntary participation in energy saving level and reduction of greenhouse gases', executed by corporations that produce, supply and consume energy and the government, based on mutual trust.

# ISO 14001(International Organization for Standardization)

It's an internationally recognized environmental management system, which certifies an organization for its environmental management.

# KOSHA 18001(Korea Occupational Safety & Health Agency)

A health and safety management certification system developed by the Korea Occupational safety & Health Agency (KOSHA)

# OHSAS 18001(Occupational Health & Safety Assessment Series)

It's an occupational health & safety management system for standards and guidelines. It also helps to protect industrial accidents through analysis of risky factors and constant management.

# **RC(Responsible Care)**

Through the perfect management of toxic substances, which produced and used in the chemical industry, company gains social responsibility because it continuously try to improve safety and health of employees and local residents, as well as cleaning the environment.

# Life Cycle Assessment

An objective process to evaluate the environmental burdens associated with a product, process, or activity, such as identifying energy and materials used and wastes released to the environment, distribution and recycles, so that we can evaluate and implement opportunities to affect environmental improvements.

# **Environment Account**

We estimate and distribute according to the cost and profit used in the environment. The information is provided in decision-making and reflected in the report, so that the interested parties will understand the outcomes and process of the enterprise.

# Performance on Environment assessment

It's an environmental management activity which can be trusted and prove verified information by measuring, collecting, analyzing and evaluating data related to the environmental management goal of an organization.

# Assessment of Environmental Effect

# Sulphur oxides, SOx

It is a compound or sulphur which is produce and emitted during incineration, production or in any other processes. The subjects of our research are SO<sub>2</sub> and SO<sub>3</sub>, and SO<sub>2</sub> is a reference (SO<sub>2</sub>/ton).

# Nitrogen Oxides, NOx

It's a nitrogen compound gas which is produced and emitted during incineration, production or in any other processes. The subjects of research are NO and NO<sub>2</sub> and NO<sub>2</sub> is a reference

# Chemical Oxygen Demand, COD

Amount of oxygen required to oxidize a chemical substance in water, using strong acidic substance (standard method is to use dichromate). Amount of oxygen is represented in ton.

# Carbon Dioxide, CO<sub>2</sub>

CO2 is directly produce and is the main by-product of fuel combustion in chemical industry and indirectly is related with electricity use. Thus, CO<sub>2</sub> emission is caused by amount of energy consumption.

# Direct Carbon Dioxide

the calculation of CO<sub>2</sub> emission in ton.

# Indirect Carbon Dioxide

Indirect Carbon Dioxide is calculated by average CO<sub>2</sub> emission per kwh, times the solely purchased electricity. Every nation has different types of energy generation and different average CO<sub>2</sub> emission.

# **Energy Consumption**

Energy consumption is the sum of electricity usage and fossil fuel(Subtract the sold electricity from the sum of consumed electricity and recyclable electricity). The unit is GWh, but it needs to be converted into toe for a calculation.

# Volatile Organic Compounds: VOC

Substances like paints, cohesive and petrochemical products, and they are liquid or gas. VOC form photochemical ozone, and form a photochemical smog which is harmful to human bodies with cancer risks, negative factor of global warming and potentially damaging genes. Thus every nation tries to reduce the emission of VOC ; such as benzene, acetylene, petrol and variety of solvents used in most industry.



We expect and analyze the aspects of environment which may influence negatively, so we introduce new improvements and evaluate the data to remove or reduce the negative effects.

Direct CO<sub>2</sub> emission is calculated by the amount of liquid, solid and gas formed fuel, used to generate electricity and energy use, times

# We are waiting for your valuable opinions

We are waiting for valuable opinions of the interested parties about sustainability of HPC and sustainability report. Fill the questionnaire below and send it through mail or fax then we will consider your opinions in the next report. We will send a small return present to customers who have sent this back to us.

# Questionnaire

1. Check the group y	ou helona						
<ol> <li>Stakeholder</li> </ol>	<ul><li>(2) Investor</li></ul>	③ Customer	(4) Partner	(5) NGO Local resident or NGO			
6 Government body	<ul><li>⑦ Association</li></ul>	<ul> <li>8 Academic circle</li> </ul>	0	(0) Employees of HPC     (1)     (2)			
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2. By what means do	o you know about HI	PC's sustainability r	eport?				
① Homepage ② Mass media (Newspaper, Magazine) ③ IR Seminar, Exhibition, IR ④ Employees of HPC							
(5) Other( )							
3. Which was the int		-					
① Report Summary	<ol> <li>Sustainable mar</li> </ol>	nagement section	③ Economy section	④ Environment section			
⑤ Society section	6 Appendix		⑦ Specific page(	]			
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<ul><li>⑤ Society section</li></ul>	<ul><li>6 Appendix</li></ul>	agoon cocton	<ul><li>⑦ Specific page(</li></ul>	)			
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5. Select your satisfa	action rate on each	question about this i	report. (On scale of	1 to 5)			
① Content is clear and	l easy to understand		Dissatisfi	ed 1 2 3 4 5 Satisfied			
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③ Report provides me	③ Report provides me useful and sufficient information I am interested in Dissatisfied 1 2 3 4 5 Satisfied						
④ Design is easy to se	(d) Design is easy to see and helps to understand the context Dissatisfied 1 2 3 4 5 Satisfied						
6. Please write down the information you want the next report to contain.							
7. If there is any other opinion about this report or Honam Petrochemical Corp. Please feel free to write them down.							





This report is published in Korean and in English, and we also release this report through a website (www.hpc.co.kr).

Please contact us if you have any questions or opinions on sustainable management and relevant reports.

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