



Quality, Safety, Health, and Environmental Performance

PTT has a clear goal over Quality, Safety, Health and Environment (QSHE). Regarded as the core component of sustainable development, QSHE has been analyzed and assessed with the needs of the stakeholders in mind. The findings have found application in the formulation of policies and systematic management direction for risks. In 2008, notable moves to improve performance efficiency are summarized below.

PTT Group QSHE management

Under the PTT Group management approach, QSHE is regarded as essential for petroleum and petrochemical businesses and seriously needs efficient management to forge synergy and alignment. This would supplement the competitiveness of PTT Group while encouraging sustainable development of communities, society, and the Kingdom alike. To date, a QSHE Policy Committee has been set up for the group, for which the roadmap, vision, missions, and QSHE performance direction were clearly defined. This year, significant joint actions included

- Compilation of SHE performance indicators
- Renewal of the Oil Spill Response & East Asia Response Limited (OSRL) membership
- Technical-exchange seminar organization
- Exchange of lessons learned
- Reconciliation and linkage of each company's preventive and emergency mitigation plan and PTT's own emergency and crisis management plan.



PTT Group's QSHE Policy Committee Meeting



Preventive and Emergency Handling During Fire Drill

Management in compliance with Thailand Quality Award (TQA) criteria

In 2008, the Natural Gas Transmission group constantly upgraded its performance under the TQA criteria and won the Thailand Quality Class (TQC) for the second consecutive year. In addition, PTT has been named one of the state enterprises under a pilot project for the so-called State Enterprise Performance Appraisal by the State Enterprise Policy Office. The year therefore saw the preparation of a TQA Framework & Roadmap for PTT as a whole along with training for PTT officers on the guidelines for TQA compliance for division chiefs and higher.

Systematic control and prevention of occupational health and safety losses

A fundamental management system for all PTT sites, the TIS 18001/BS OHSAS 18001 occupational health and safety management system is a prerequisite, to be tested by a certification body. This system was also expanded to new target sites during the year: Pathum Thani - Nimit Mai NGV Mother Stations and PTT Research and Technology Institute. The Natural Gas Transmission group also initiated the upgrading of an occupational health and safety management system tailored to its own processes, based on international and best practices of the petroleum industry.

As regards preventive actions and the cultivation of awareness of safety and occupational health to control and monitor risks for employees and contractor employees, the year saw

- A constant push for reporting near-misses and substandard conditions/acts
- Auto-accident control through the issuance of the PTT Defensive Driving Manual
- Defensive Driving Training for employees who regularly used company vehicles
- Auto-accident investigation to systematically identify causes and define preventive measures
- Supervision of safety and occupational health for contract employees by urging contractors to institute physical examinations and occupational health examinations as required by law
- Procurement of personal protective equipment
- Appointment of safety officers at various levels of work
- Systematic safety-related data compilation and performance measurement. Apart from drills on fire prevention and mitigation at all sites and additional drills on earthquakes at PTT Head Office, PTT envisions the high skills and potential of its QSHE units and personnel in this area and therefore registered with the Department of Labour Protection and Welfare a primary firefighting training unit,



Earthquake Drill

Visual Examination



Emergency Drill Against Terrorism



Bomb Detecting Procedure



Access Control with Finger Scan

a firefighting drill and evacuation unit, and a safety officer training unit. All these contributed to SHE achieving a world-class standard against peer companies of the same industry, as seen in the 0.27 lost-time injury frequency (LTIF) rate and 0.27 total recordable injuries rate (TRIR) for employees.

Security management

The recent domestic unrest has reminded PTT of the criticality of security, the threats of which could be detrimental to PTT. As a result, the Company defined the following measures for systematic management.

- Additional security measures included the detection of explosives in all vehicles entering or leaving sites or plants; close monitoring of intelligence from relevant agencies; installation of high-efficiency access control, including the accuracy of headcounts of those entering or leaving sites during ordinary and emergency periods. At the Rayong gas separation plant (GSP), an Access Control with Finger Scan system is now in use for process plants by plant personnel and external parties alike; institution of control plans in case of protestors blocking the entrance to GSP; and installation of efficient closed-circuit TVs to cover all areas.
- Policy announcement and security management requirements to frame clear work performance and name relevant officers (executives, the rank and file, and wage earners) to jointly take care of security of lives and PTT assets.
- Preparation of security alert levels and security guidelines for use by all to communicate, assess, and apply in accordance with security alert levels appropriately and efficiently. Recognizing the criticality of the cooperation of all executives and the rank and file to efficient security management, the Company stressed the cultivation of security awareness through the issuance of a personal security manual for use as basic information in warding off personal threats.
- Emergency drills for acts of sabotage and bomb retrieval at PTT Head Office and installations nationwide through close coordination with public agencies and relevant agencies in each area.

Management to control environmental impacts

Along with its business conduct, PTT values the management of environmental aspects resulting from its activities, processes, products, and services. The year continued to see proactive environmental management together with PTT's value attached to the business value chain as a whole (including within PTT Group). Particularly in Map Ta Phut and Rayong province as a whole, where PTT Group had assorted plants



Environmental Impact Control



Water pollution Control Testing



Anti-Global Warming Networks



Pressure Control Room for NGV Stations

and sites, the Company not only monitored and measured water and air pollutants and industrial waste as required by law, but also paid attention and was committed to applying pollution management technology for maximum efficiency and minimum environmental impacts. These would enable PTT Group to grow along with a decent quality of life for society and surrounding communities. The year also saw detailed inspection of plant pollution removal and investment plans made for machinery upgrading, with installation of pollution-treating instruments equipped with the best available technology, including

- Investment in adding the height of emission stacks at GSP Unit 3
- Installation of the Dry Low Emission (DLE) process to optimize the temperature in the combustion chamber, which yields the lowest resulting nitrogen-oxide and carbon-monoxide concentrations
- Installation of the Selective Catalytic Reduction (SCR) system, regarded as highly efficient in nitrogen-oxide treatment.

As for suppliers and contractors engaging in PTT's businesses, the Green Procurement principle has been introduced, as seen in the announcement of the policy and the PTT Environmentally Friendly Procurement Manual, with pilot procurement of six items, namely fluorescent lamps, brown envelopes, business cards, correction fluids, black paper files, and computer printout paper.

And as for energy conservation, PTT signed a memorandum of understanding on its collaboration with the Ministry of Energy and the Electricity Generating Authority of Thailand under the so-called Anti-Global Warming Network Project using compact fluorescent lamps No. 5. In all, 38,000 such lamps were procured along with their fixtures for installation at all PTT sites, namely office buildings, PTT Research and Technology Institute, GSPs, depots (petroleum, oil, and LPG), and the Natural Gas Transmission System.

QSHE Achievements of 2008

2008 Thailand Quality Class (TQC), conferred by the National Quality Award Committee (May 12):

Natural Gas Transmission Department, Exploration & Production and Gas Business Group

TPM Awards for Excellence in Consistent TPM Commitment, conferred by Japan Institute of Plant Maintenance (JIPM)

Rayong GSP, Khanom GSP, Region V Pipeline Operations Division (Ratchaburi)

TPM Awards for Excellence, Category A, conferred by Japan Institute of Plant Maintenance (JIPM)

Chonburi Operations Center; Region II Pipeline Operations Division (Ayutthaya); Region III Pipeline



Thailand Quality Class Award



Outstanding Business Operator Awards



Outstanding QC Groups

Operations Division (Rayong); Region IV Pipeline Operations Division (Khon Kaen)

National Outstanding Business Operator in Safety, Occupational Health, and Work Environment Awards, conferred by the Ministry of Labour during the 22nd National Safety Week to promote standard and compliant practices of management and safety, health, and environment in workplaces (May 8), a total of 25 sites:

- Surat Thani Petroleum Terminal (12 consecutive years)
- Songkhla Petroleum Terminal (12 consecutive years)
- Lampang Petroleum Terminal (9 consecutive years)
- Nakhon Sawan Petroleum Terminal, Phitsanulok Oil Terminal (8 consecutive years)
- Chiang Mai, Phuket, Pak Phanang, and Lam Luk Ka Oil Terminals, Chonburi Operations Center (7 consecutive years)
- Phra Khanong and Udon Thani Oil Terminals, Region IV Pipeline Operations Division (Khon Kaen), Region V Pipeline Operations Division (Ratchaburi) (6 consecutive years)
- Den Chai Oil Terminal (6 years)
- Khon Kaen Petroleum Terminal, Ubon Ratchathani Oil Terminal (5 consecutive years)
- Sri Racha Oil Terminal, Khao Bo Ya and Ban Rong Po LPG Terminals, PTT Head Office (4 consecutive years)
- Bangchak Petroleum Terminal, Khanom GSP (Nakhon Si Thammarat), Region III Pipeline Operations Division (Rayong) (3 consecutive years)
- Phra Khanong Office Building

Zero Accident Campaign Awards, conferred by the Ministry of Labour, for workplaces that campaigned on work safety to the point of zero lost-time injury (August 27):

- Rayong GSP (silver award, for 3,000,000 - 9,999,999 total man-hours)
- Chonburi Operations Center (bronze award, for 1,000,000 - 2,999,999 total man-hours)
- Nakhon Sawan and Songkhla Petroleum Terminals, Chiang Mai Oil Terminal, Region III Pipeline Operations Division (Rayong), Region IV Pipeline Operations Division (Khon Kaen) (special-mention award, for zero accident during the year and up to 1,000,000 total man-hours)

EIA Monitoring Awards 2008, conferred by the Ministry of Natural Resources and Environment, for outstanding compliance with measures stated in environmental impact assessment reports and outstanding environmental management practice :

Khanom GSP, Surat Thani and Songkhla Petroleum Terminals

Good Laboratory Practice Awards under a project on the upgrading of private analytical laboratories registered with industrial works, conferred by the Department of Industrial Works, Ministry of Industry

Product Quality Analysis Unit-Eastern Terminal, Khao Bo Ya LPG Terminal, and Quality Control Section, Rayong GSP.

Outstanding QC Groups based on presentations at the Thailand State Enterprise QC Fair, representing Thailand at the 14th International Symposium on Quality Function Deployment (ISQFD 2008), Beijing, People's Republic of China (September 23-26):

- Operation Category
Pla Muek Yak Group, Logistic Evaluation and system Division, Products Transportation Department, Oil Business Unit
- Office Category

SCADAMAX Group, Automatic Control and Operation System Division, Transportation Management & Technical Services Department, Upstream Petroleum & Gas Business Group.

QSHE Management Standard Certification in 2007

(bar graph)

- During the year, all major business processes and 95 sites maintained their QSHE management standard certification (ISO/TIS 9001, ISO/TIS 14001, and TIS/OSHAS 18001) according to the Management System Certification Institute (Thailand)(MASCI).
- In 2008, one new target site achieved health and safety certification under TIS/OSHAS 18001 by MASCI, namely the Pathum Thani-Nimit Mai NGV Mother Station.

Percentage of ISO/TIS 9001, ISO/TIS 14001 and TIS/OSHAS 18001 Certified Sites

% of target sites

