

## Risk Management – Enhancement of Disaster Training

### Risk Management Using the Business Risk Management System and HSSE Management System

Showa Shell has introduced a business risk management system as one of the means of internal control. This system identifies risks associated with the company's business operations through annual audits. Management recognizes and verifies critical risks and formulates

appropriate action plans. In particular, HSSE risks are subject to strict HSSE management system control so that the company may avoid impediments to business before they occur or minimize such impacts.

### Establishing a Crisis-Management System and Taking It to a Practical Level through Training

A company is subject not only to natural disasters, such as earthquake and flood, but also to many business risks. If a company fails to respond appropriately, the effects may not be limited to the company itself but can cause social and economic problems. Showa Shell has previously resolved various business risks, and is taking preparatory measures and conducting training as described below.

#### ● Preparatory Measures by the Interdepartmental Team

The Interdepartmental Preparedness Team prepared the Crisis Management Plan and the Business Continuity Plan (BCP) over a period of approximately a year.

#### ● Preparing the BCP

Affiliated dealers and other customers across Japan place their orders over the Internet, and an automated accounting system issues invoices. If this IT-based system were brought to a halt in a crisis, everything would have to be done manually. Showa Shell is moving forward with preparations for such a contingency and the institution of business continuity measures.

#### ● Confirming Employee Safety Using Mobile Phone E-mail

Confirming the safety of employees becomes extremely important in the eventuality of a major earthquake, and Showa Shell has implemented a system that automatically sends an e-mail to confirm the safety of employees in the affected area using mobile phone e-mail, which offers the high-fault tolerance of packet communications.

#### ● Establishment of Crisis Communications Procedures

Satellite telephones are installed at all major business locations, and procedures have been established for communications in a crisis. In addition, wireless communications equipment is installed on every floor of the head office that will allow communications with the Crisis Response Office even if the elevators are not functioning.

#### ● IT Support for Telecommuting

Showa Shell is implementing a system that allows employees to log on to the company's IT environment from home using their personal computers. This will allow business continuity even if the avian flu or some other infectious disease were to make coming to the office problematic. Of course, appropriate IT security is being implemented.

#### ● Preventing Secondary Disasters

Taking a lesson from the falling cabinets during last year's Fukuoka Seihouki Earthquake in the Kyushu area (luckily, there were no injuries, as it was a holiday), Showa Shell has eliminated all cabinets that pose a danger of toppling over.

#### ● Preparation for a Major Earthquake in the Tokyo Metropolitan Area

On May 17 and 18, 2006, the Daiba head office, business locations, subsidiaries, affiliates, and associated companies from around Japan cooperated in an earthquake response training exercise. The scenario specified that the Tokyo metropolitan area was struck by a magnitude 6 earthquake, and training to organize the Anti-disaster Headquarters and to execute the BCP was conducted. Based on a review of this training, the Crisis Management Plan and BCP are being revised to make them more practical.



Training to organize the Anti-disaster Headquarters



Training in returning home on foot, after a major earthquake strikes.

### Disaster Prevention Systems at Oil Refineries and Depots

The Showa Shell Group's oil refineries and depots have 24-hour centralized monitoring systems. Virtually all processes are completely controlled by state-of-the-art computer systems and have fire-fighting systems installed. In addition, all oil refineries are equipped with large-scale chemical fire engines and other disaster prevention equipment and materials, as well as private fire brigades formed from the ranks of employees selected for fire-fighting duties.

#### ● Firefighting practice at Niigata Disaster Control Training Center

When a fire first breaks out, it is crucial to manage the fire immediately. This is especially true with refinery fires, as refinery fires are usually chemical in nature and demand professional firefighting expertise. Showa Shell, with this in mind, opened its Disaster Control Training Center at its Niigata Petroleum Product Import Terminal in April 1993. Here, its fire defense forces from operational sites all over the country may train in fighting actual fires.

Showa Shell refinery, operation site, terminal, oil tank, and other facility employees acquire basic firefighting knowledge and skills to control an initial-stage oil fire by using model facilities in their training. The training center has an oil tank, pump, drum, various pipes, LPG tank, tank lorry, and other equipment to mimic actual operation sites. Practical training is conducted for various types of fires by simulating the types of fires possible at various facilities, with safety as a priority.

The Showa Shell Sekiyu Disaster Control Training Center is under the head office's HSSE Department. During training periods, the department's staff act as instructors, providing lectures on such topics as the company's basic disaster prevention posture. Practice in extinguishing live fires provides the group with serious



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training in disaster prevention.

Over the 13 years since it opened, this training center has provided instruction to about 1,900 employees of group companies. The trainees have benefited from an enhanced consciousness of disaster prevention as well as improved fire-fighting skills. The center also gives on-site disaster prevention training at business locations and provides firefighting training in cooperation with neighborhood associations to enhance communication with local communities and raise fire-prevention awareness.

This training center has worked not only with employees of Showa Shell Group companies but also with employees of industrial complexes and other businesses across Japan. The number of trainees increases year by year, and the level of disaster preparedness in various regions has been raised.

In addition, every year since 1996, the Niigata Prefecture Firefighting School has given new firefighters their first live fire training at the center.

This training center is highly regarded in the petroleum industry, and the Petroleum Energy Center (PEC) web site lists it as a "PEC Safety Assist for Engineer in Refinery" facility.

## Risk Management – Improving Disaster Prevention Equipment

### Installing Large-capacity Firefighting System

Reacting to the complete incineration of a floating-roof tank at a Hokkaido oil refinery following the 2003 Tokachi-oki Earthquake, the Law on the Prevention of Disasters in Petroleum Industrial Complexes and Other Petroleum Facilities was revised. This amendment requires all business locations with floating-roof tanks above a specified size to have Large-capacity Firefighting System installed by November 30, 2008.

High-volume water spray systems can supply 30,000 liters per minute, which is approximately ten times as much water as the chemical fire engines that have been used and represents a substantial increase in firefighting capabilities.

Disregarding the existing framework of private disaster prevention organizations and disaster prevention cooperating organization, the Law on the Prevention of Disasters in Petroleum Industrial Complexes and Other Petroleum Facilities stipulated that Japan be divided into 12 blocks, each containing multiple special disaster prevention regions. The establishment of extensive disaster prevention cooperating organization within these regions has allowed the joint installation of Large-capacity Firefighting System at businesses covered by the law.

At present, the Showa Shell Group is energetically engaged in preparations for the establishment of extensive disaster prevention cooperating organization in the blocks created by the amended law, and in the formulation of disaster prevention tactics utilizing the new equipment.

In cooperation with regulatory agencies and participating business locations, the company is working toward an early installation of the equipment, which will be a significant augmentation of disaster prevention systems.



A stream from a Large-capacity Firefighting System



A high-volume water spray nozzle.