

**PETROLEUM ASSOCIATION OF JAPAN**

**OIL SPILL SYMPOSIUM 2006**

**SAUDI ARAMCO**

**Oil Spill Prevention and Response**

**By Ali A. Al- Mohsen**

**February 24, 2006**

**International Convention Room, 11<sup>th</sup> floor  
Keidanren Building, Tokyo, Japan**

## **INTRODUCTION**

Saudi Aramco is a fully integrated Global Petroleum enterprise of the Kingdom of Saudi Arabia. The company has been in business for more than 70 years and has operations in exploration, production, refining, marketing and international shipping. The company headquarters is in Dhahran, Saudi Arabia.

Saudi Aramco will assure that its operations do not create undue risks to the environment or public health, and will conduct its operations with full concern for the protection of the land, air and water from pollution. The company will promote environmentally sound waste disposal practices and cost effective waste minimization through source reduction, reuse and recycling.

In all its activities, the company will meet the standards specified by the Kingdom's environmental regulations. Where there are no established standards, guidelines will be developed which are compatible with the Kingdom's objective of environmental protection. The company will cooperate and participate with government and industry, as appropriate, in the development of effective environmental control programs and regulations.

It is the responsibility of each organization to assure that its facilities are designed and operated in compliance with the established corporate Environmental Protection Policy and that they do not present unnecessary risks to the environment or public health.

## **OIL SPILL PREVENTION**

Prevention of accidents, leaks, and spills from company operations is always considered high priority. The company analyzed all possible sources of pollution and established all preventive measures to ensure that operation will not cause any harm to the environment. For example, tanker operation will have to meet certain acceptance safety standards and requirements that are designed to reduce oil spills during loading, unloading or while transiting from one location to another. The company has also built several proactive systems in place designed to eliminate oil spillage or leakage from any offshore facilities including pipelines or platforms and loading terminals.

Other measures are also taken to ensure onshore oil production and pipelines facilities are always well maintained to prevent sudden operational failure which may result in damages to the environment for example these measures include, but not limited to:

1. Each offshore platform is equipped with slop tank to collect any oil for recycling.
2. Aid to navigation to keep marine vessels away from all oil platforms, which is to eliminate risk of collision.
3. Critical locations are marked to prevent marine vessels grounding or contacting any subsea facilities and guide marine traffic.
4. Periodic diving and above water inspection are regularly performed to ensure integrity of the offshore production facilities.

5. Emergency shutdown systems are always integrated in all oil production facilities.

## **EFFECTS OF OIL SPILL IN THE MARINE ENVIRONMENT**

Whenever there is a major oil spill into the sea there is the possibility of damage to the following:

- Marine mammals
- Marine corals and plants
- Mangroves and salt marshes
- Sea birds
- Industrial plants (desalination plants, power plants and refinery water intakes)
- Recreational activities

As the Gulf is a major oil shipping and production area, to protect the marine environment, Saudi Aramco made it mandatory requirements that each contractor or company employee observing an oil spill must report the spill to the oil spill response coordinator through offices manned 24-hours wherever we operate. The response coordinator is responsible for activating the response system and alerting other organizations if necessary.

## **CONTINGENCY PLANS**

Since the early 1970s, Saudi Aramco has had in place, a contingency plan covering its operations. It is in line with the company's position as an environmentally responsible petroleum producer and exporter. Due to the expansion of the company's operations over the years, a Global Oil Spill Contingency Plan was developed covering its worldwide areas of operation. The plan establishes an oil spill policy for Saudi Aramco's worldwide operations and directs Saudi Aramco and its affiliates to join major oil spill cooperatives to provide additional resources as deemed necessary. The plan also assigns regional responsibility for oil spills and requires the development, implementation and maintenance of regional and owner tanker oil spill response plans. The regional plans outline formal notification procedures and local high-risk areas. The plans also define response options and identify available resources for combating oil spills. Specifically for Saudi Aramco's operations in Kingdom, two regional plans have been developed for the Arabian Gulf and the Red Sea.

## **RESPONSE ORGANIZATION**

As part of Saudi Aramco's oil spill contingency plans, functional organizations were designed to be activated in case of an oil spill. These functional organizations include the following:

- A committee of executives meets on regular basis to review oil spill prevention and preparedness activities, they also meet during major spill emergencies to discuss the immediate actions to be taken to effectively contain and control the spill.

- A dedicated Global Oil Spill Response function has been established to oversee the Company's readiness to respond to oil spills and ensure compliance of the Company's operations with established standards and regulations.
- An Oil Spill Response Team (OSRT) has been set up for each facility. The team members are called upon during response to major spills.

## **POLLUTION CONTROL EQUIPMENT**

Saudi Aramco own, operate and maintains several large stockpiles of pollution control equipment which are located and ready to be deployed on short notice in Saudi Arabia.

Two major bases are located near the coast of the Arabian Gulf and another five smaller bases close to Red Sea shorelines, this equipment are mainly placed to respond for company oil spill emergency and also assist with other oil spill if they ever occur close to our operating areas.

Also the company owns operate and maintain two dedicated Air Tractors 802 to be used for chemical dispersant applications, and several helicopters which can be used for surveying and spotting oil spills. The marine fleet is equipped with vessels to provide capabilities for deep and shallow waters; these boats are very specialized and can be used for equipment deployment, mechanical recovery, recovered oil storage, chemical dispersant applications and may be used for agitation.

In addition to the owned and operated equipment by the company, Saudi Aramco maintains memberships with several oil spill cooperatives and mutual aid organizations such as Oil Spill Response Limited (OSRL), Regional Clean Sea Organization (RECSO).

Recently Saudi Aramco and other National Oil Companies just developed another agreement to share pollution control equipment and experience among member companies. This agreement is now being circulated for approval, once this agreement is approved, it will provide further access to more experienced personnel and additional equipment all over the world.

## **OIL SPILL TRAINING**

We strongly believe that having a Contingency Plan and all the equipments will not be enough to clean the marine environment unless qualified personnel are available to lead the clean-up action during emergencies.

With the above in mind, Saudi Aramco has committed a substantial amount of efforts, time and money to train employees in current oil spill control techniques, the training include the following:

1. Equipment hands-on
2. Supervisory level
3. Crisis management

## **OIL SPILL DRILLS**

We strongly believe that realistic oil spill drills are additional training to enhance response to spill emergencies. For many years we have held drills to improve the readiness level of our responders. Also in the past few years, we have held many international joint oil spill drills. The last one was conducted recently with Petroleum Development of Oman off the coast of Muscat, Oman.

As a result we gained great experience especially in sharing equipment and experiences with each other. Also pollution control equipment mobilization and demobilization among countries has been done many times and became much faster.

## **SUMMARY**

Marine oil spills can be extremely costly and disastrous. The presentation will detail how Saudi Aramco prevents oil spills and respond effectively in case it ever occurs.