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Oil Spill Symposium 98

**Saudi Aramco**  
**Contingency Planning and Preparedness**

By

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## **INTRODUCTION**

The Gulf area holds a significant portion of the world's petroleum reserves and produces a large percentage of its oil. The majority of produced oil is exported to the industrialized world via sea, making the Arabian Gulf and Red Sea among the world's busiest tanker traffic waterways. In addition, both seas are a source of food, drinking water and living for local residents. Therefore, the significance of the area to the global economy and welfare of the people cannot be overstated.

As one of the world's leading Oil producing and exporting Companies, with operations spanning the globe, Saudi Aramco has, over its 65 years of existence, stressed the importance of working in a safe and environmentally friendly manner. This is especially true with oil spills. Prevention is considered the first line of defense against oil spills. To that end, Saudi Aramco has instituted a number of oil spill prevention measures on vessels and terminals. Also, training of oil handling personnel has been formalized and tailored to ensure the operation is carried out spill free. It is, however, the nature of the business that oil spills are bound to occur.

To prepare for the unlikely event of a spill, both the Saudi Arabian Government and Saudi Aramco have taken precautionary and preparatory measures to ensure timely and effective response to oil spills. Among those measures were the development of contingency plans and the staging of pollution control equipment stockpiles.

## **CONTINGENCY PLANNING**

The Saudi Arabian National Oil Spill Contingency Plan was approved in 1991. The plan requires all agencies with marine and coastal facilities or activities to develop their own local oil spill contingency plans. The plan also requires these agencies to provide adequate equipment and manpower to respond to oil spills in their local areas of operation.

Since the early 1970's, 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 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 owned tanker oil spill response plans. The regional plans outline formal notification procedures and local high-risk areas. The plans also include local legislative requirements, define response options and identify available resources for combating oil spills. Specific for Saudi Aramco's operations in Kingdom, two regional plans have been developed for the Arabian Gulf and the Red Sea.

## **RESPONSE PRIORITIES**

Saudi Aramco's Oil Spill Contingency Plans have specifically defined priorities to be followed in response to an oil spill. These priorities are:

- Protection of human life.
- Protection of vital Saudi Government and Saudi Aramco facilities.
- Minimizing disruptions to the safe operation of the Saudi Aramco oil export terminals and critical production facilities.
- Protection of environmentally sensitive marine areas.

## **RESPONSE ORGANIZATION**

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

- An Oil Spill Committee composed of company executives. It meets on a regular basis to review oil spill activities and charts the course of the future that ensures prevention and preparedness. During a response to a major spill crisis, the Committee ensures that necessary resources are immediately made available and response to is carried out efficiently and effectively. The committee is considered in session on a 24 hour-a-day basis in case of a major oil spill.

- An Oil Spill Response Team (OSRT) has been set up for each facility. The team members are called upon during response to major spills.
- A dedicated Global Oil Spill Coordination 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.

## **RESPONSE OPTIONS**

In responding to oil spills, Saudi Aramco regards the containment and recovery method as its primary option for dealing with the spilled oil. In cases where mechanical recovery is not feasible, the Company revert to the use of dispersants. This option has the advantage of preventing the incursion of the slick into sensitive areas due to its speedy nature. As a policy, dispersant is not applied directly over environmental sensitive areas or over water depth less than 30 feet. The use of dispersant, however, is judged on a case by case basis considering the net environmental benefits.

## **EQUIPMENT STOCKPILES**

Saudi Aramco has an extensive array of oil spill equipment, ranging from containment boom to recovery skimmers to dispersant to sorbents. In addition, there are dedicated vessels for oil spill recovery that are equipped with recovery skimmers and onboard storage. The company also has two dedicated dispersant spraying aircraft, with a capacity of 800 US gallons each.

There are oil spill equipment staging sites in Ras Tanura and Tanajib, along the Arabian Gulf coast. Along the Red Sea coast, oil handling facilities at Jeddah, Rabigh, Yanbu, Duba and Jizan are also equipped with pollution control equipment that is capable of ~tier 1 oil spills.

Whereas, equipment stocked along the Arabian Gulf coast is capable of handling tier 1 and tier 2 spills. Additional resources can be made available as required.

On the national level, Saudi Arabia's Metrology and Environmental Protection Administration (MEPA) has its own resources at various ports along the Red Sea and Arabian Gulf coasts. In addition, the Petroleum Association of Japan (PM), took the initiative in placing sizable stockpiles of pollution control equipment. One stockpile is

staged at Khafji, at the northern Arabian Gulf Coast while the other is staged at Abu Dhabi in the United Arab Emirates. These equipment stockpiles are included in our contingency plans as a viable resource.

On the regional level, the Gulf Area Oil Companies Mutual Aid Organization (GAOCMAO) member companies have a mutual aid agreement. Under the terms of this agreement, any member company can request the assistance of other members to handle oil spills that are beyond its capabilities or resources.

On the global level, for response to oil spills which are determined beyond the capability of local and regional resources, Saudi Aramco has invested in membership in the Oil Spill Response Limited (OSRL) of Southampton, UK, the world's largest oil spill response cooperative. Saudi Aramco has access to OSRL's stockpiles and expertise in case of a major oil spill.

## **PERSONNEL TRAINING**

In order to effectively deal with oil spill incidents, Saudi Aramco has always believed in the strength of knowledge. This goes in parallel with its long-standing and highly acclaimed employees' training programs.

As a minimum, Saudi Aramco conducts two oil spill response courses annually to members of its oil spill response teams. These formal courses cover a wide range of oil spill related topics that include: contingency planning; response strategy; environmental considerations; oil slick surveillance & tracking; mechanical recovery; shoreline cleanup; use of chemical dispersants; waste management; hazards to response personnel; dealing with the media; and dealing with the issues of claims and compensation.

Saudi Aramco regularly conducts oil spill drills and exercises to test the effectiveness of its oil spill response contingency plans, test communications and notification procedures, as well as coordination procedures, and fine-tune the skills of Oil Spill Response Teams. Also, exercises are designed to test the logistics associated with mounting an oil spill response operation. Exercises take the form of either tabletop and or include field deployment of personnel and equipment where hands-on training is performed. Internationally recognized experts in the field of oil spill response conduct the courses and facilitate the exercises. Each exercise is thoroughly critiqued with a view to revise and update Contingency plans to reflect lessons learned from drills and exercises.

In-Kingdom, the Company conducts two major oil spill exercises annually at different locations. Local industry and concerned Government agencies are invited to participate in these exercises with objectives to share knowledge and fine tune coordination among all involved parties. In addition, Saudi Aramco, in close coordination with its subsidiaries and affiliates, conducts oil spill drills at various international locations along its oil tanker routes. As examples of the international exercises are ones conducted in the United States, Caribbean, Europe and Africa.

The drills usually last between one to three days. The objectives of the international drills are to better understand available local resources, test coordination between the Company and local authorities to facilitate the across boundary movements of oil spill response resources, etc.

## **SUMMARY**

Saudi Aramco as one of the world's leading oil companies, has adopted procedures to ensure that its operations are carried out in an environmentally friendly manner. Prevention has been established to be part of its normal activities. Contingency plans have been developed and regularly tested to ensure their effectiveness. The Company has procured sizable amount of necessary oil pollution control equipment and has staged the equipment at all areas of operations. Specific policies and procedures are put in place to ensure the availability of additional adequate oil spill response capability. In addition, the Company has and continues to invest in the training of its oil spill response team to ensure the at most preparedness. Oil spill-training courses are conducted on regular basis and oil spill drills and exercises, both on the national and international levels, are organized.