

## Initial Lesson Learned from Recent Spill with Mutual Industry Organization



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### 1. Introduction

At around 0630 hrs when Oman Blend crude oil was transferred from the oil tanker through the single point mooring (SPM) to the pipeline for delivery to the refinery, the leak occurred in a 16" diameter marine hose at the SPM, located 20 kilometers south of the Map Ta Phut seaport in the Gulf of Thailand (Lat-Long: 12°29'12.6"N, 101°11'57.8"E). A patch of oil slick reached Ao Prao bay, the northwest coast of Samed island, contaminated the coastline.

### 2. Incident Summary

The Off shore crude transfer facility which located about 10 miles away from South of the Map Ta Phut seaport area. The single point mooring (SPM) was installed with hard pipelines on the seabed, connected SPM to the refinery facility. Transferring crude oil from the oil tanker to the SPM used 2 strings of floating hose connected from the SPM. Each string comprised of a 16" and a 24" diameter flexible hose connected together with a 24"/16" concentric reducer installed between 16" and 24" pipeline. At time of incident, an oil tanker was moored at the SPM to transfer crude oil. After the preparation was completed, the transfer began at 0600 hrs. The pressure at the tanker manifold was slowly increased to the normal operating pressure at 0616 hrs. At 0630 hrs, an immediately leaked at floating hose was observed. The leak occurred from a 16" hose section 1.7 meter breakaway coupling. After investigation, there was confirmed that the damage of floating hose was not came from the Operation practices and operating condition.

### 3. Incident Response

The incident response effort was collaboration between PTTGC, Royal Thai Navy, Royal Thai Army, Marine Department, the Mayor of Rayong province, Department of National Park, Wildlife and Plant Conservation (DNP), Pollution Control Department (PCD) and Industrial Estate Authority of Thailand (IEAT). In preparation for oil spill control, the emergency response team also requested support from Oil Industry Environmental Safety Group Association (IESG) and Oil Spill Response Limited (OSRL). OSRL was requested to support aircraft for aerial dispersant spraying operation. However, the aircraft arrived late than the schedule and caused the spraying operation to begin when the oil patch was already closed to the Samed Island.

The oil dispersants used in the oil spill control operation were Slickgone NS and Superdispersant. Both of them were approved by Pollution Control Department (PCD) to be used in oil spill control. These dispersants were biodegradable without bioaccumulation, mutagenic effect and teratogenic effect.

### 4. Mutual Industry Organization in Thailand

Oil Industry Environmental Safety Group Association (IESG) is the non - profit organization and the Petroleum Industry Cooperative Organization for Excellence in Safety and Environment. The jointly Organization set up by most of Thai Petroleum Companies as Oil Industry Environmental Safety Group Association (IESG) occurred since 1968 with objectives of voluntary group and Non-profit making organization includes safety and environmental impact prevention and provision of mutual aid /assistance in case of emergency among IESG Members.

Currently the member of IESG consists of 20 Petroleum Companies in Thailand and also included Government Organization which considered as Executive Members as follows: Marine Department, Department of Energy Business and Department of Disaster Prevention and Mitigation. IESG Member was playing important role on immediate spill response support i.e. equipment, dispersant , manpower etc.

### 5. Initial Lesson Learned

5.1 Communication: Lack of clarity in communications between party concerns which result in delay support.

5.2 Shoreline Clean up:

5.2.1 There was not a proper site setup, for instance, no boundaries of work zones, security, or decontamination area. This issue was highlighted to the on-scene commander and the situation was greatly improved on the following day.

5.2.2 Groups of worker from different parties participated in the cleanup operations. Crowd control became a major issue since no clear common instructions were given to them. Therefore, the site supervisor was assigned on the following day to oversee the cleanup operations.

5.3 Crowd and Media: A lot of media and Crowd of People presented on site and there was no security plan in place to refrain the media from entering the area especially during Shore Line Cleanup process and get difficulty to control the media release.

5.4 Own Capability and Logistics Support: Review of stock pile, dispersant spraying tool, Boats etc. More importantly on Oil Spill Knowledge and understand on how to handle the situation once incident raised.

The logistics support is considered one of the most challenged since this spill occurred in sensitive and remote location and difficult for heavy equipment to reach.

5.5 National and Industry Level: All related parties should evaluate national and provincial emergency response plan to cover the oil contaminated coastline scenario and conduct the emergency response drill periodically. Mutual Industry supports are considered more important in spill response. The industry capability enhancement is to be review including necessary process.

## 6. Conclusion and Way Forward

The Crude Oil receiving facility is now back in normal service with additional mitigation measures in place. However, we have to remind that once spill happen, the present of public concerns and extreme environmental perception which considered significantly to related parties. In order to continue operation and minimize risk of spills in the future, the knowledge gain and lessons learned from this incident will be one of contribution factor for future development of our industry. Nothing Impossible!!.