

Petroleum Association of Japan

Initial Lesson learned from Recent Spill
with Mutual Industry Organization



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Topics:

- * How was Incident Happen?
- * Response according to the spill incident
- * Mutual Organization
- * Initial lesson learned from this incident
- * Future plan and Improvement

MYANMAR

LAOS

● Chiang Mai

Incident Location

● Khonkhaen

THAILAND

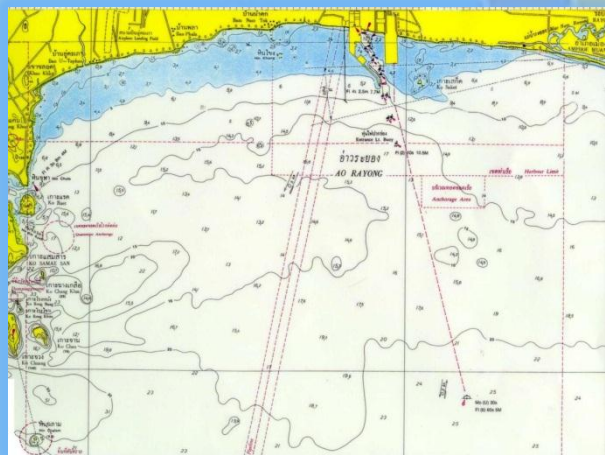
● Bangkok

CAMBODIA

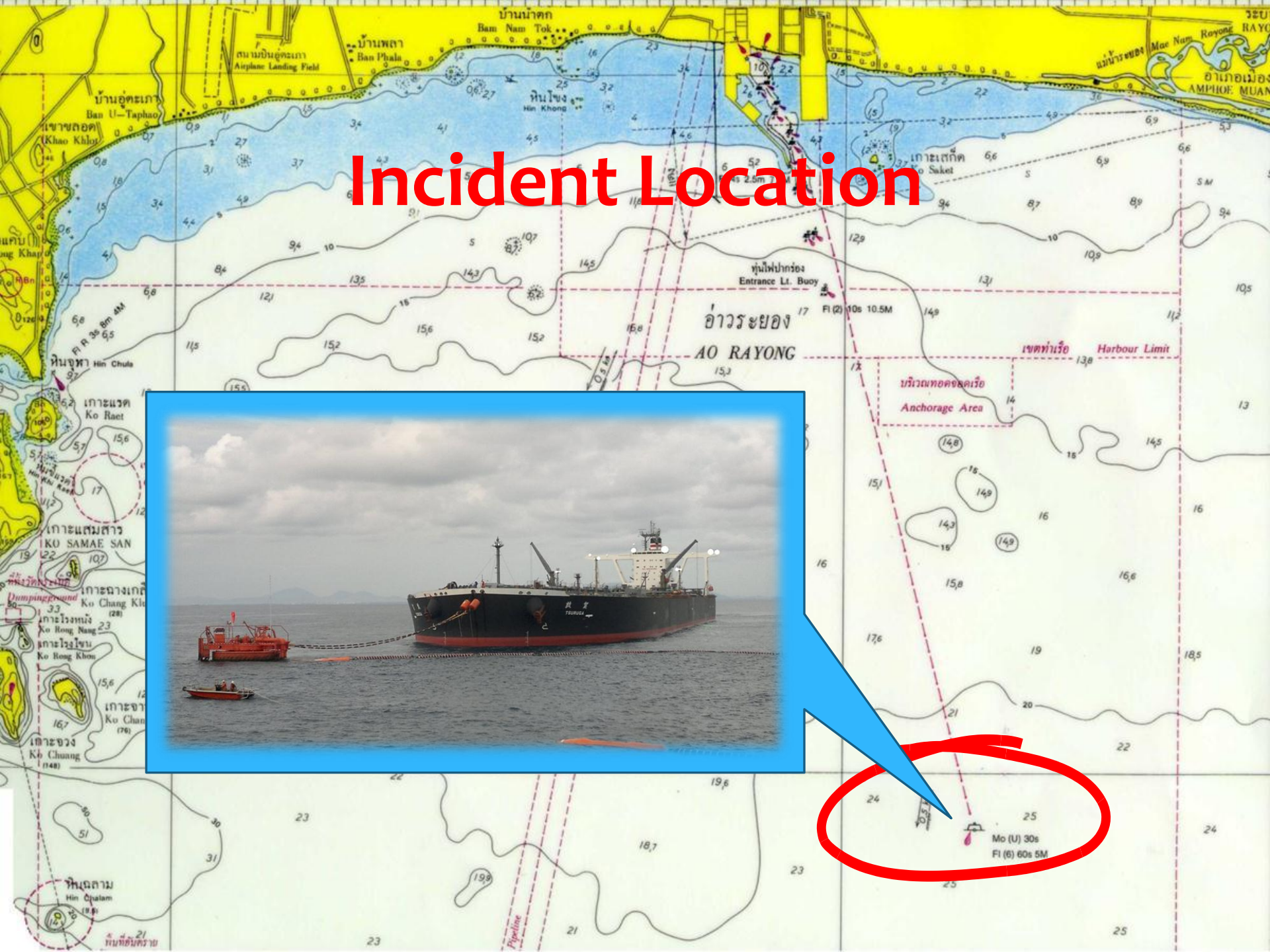
VIETNAM

● Ko Samui

● Phuket



Incident Location



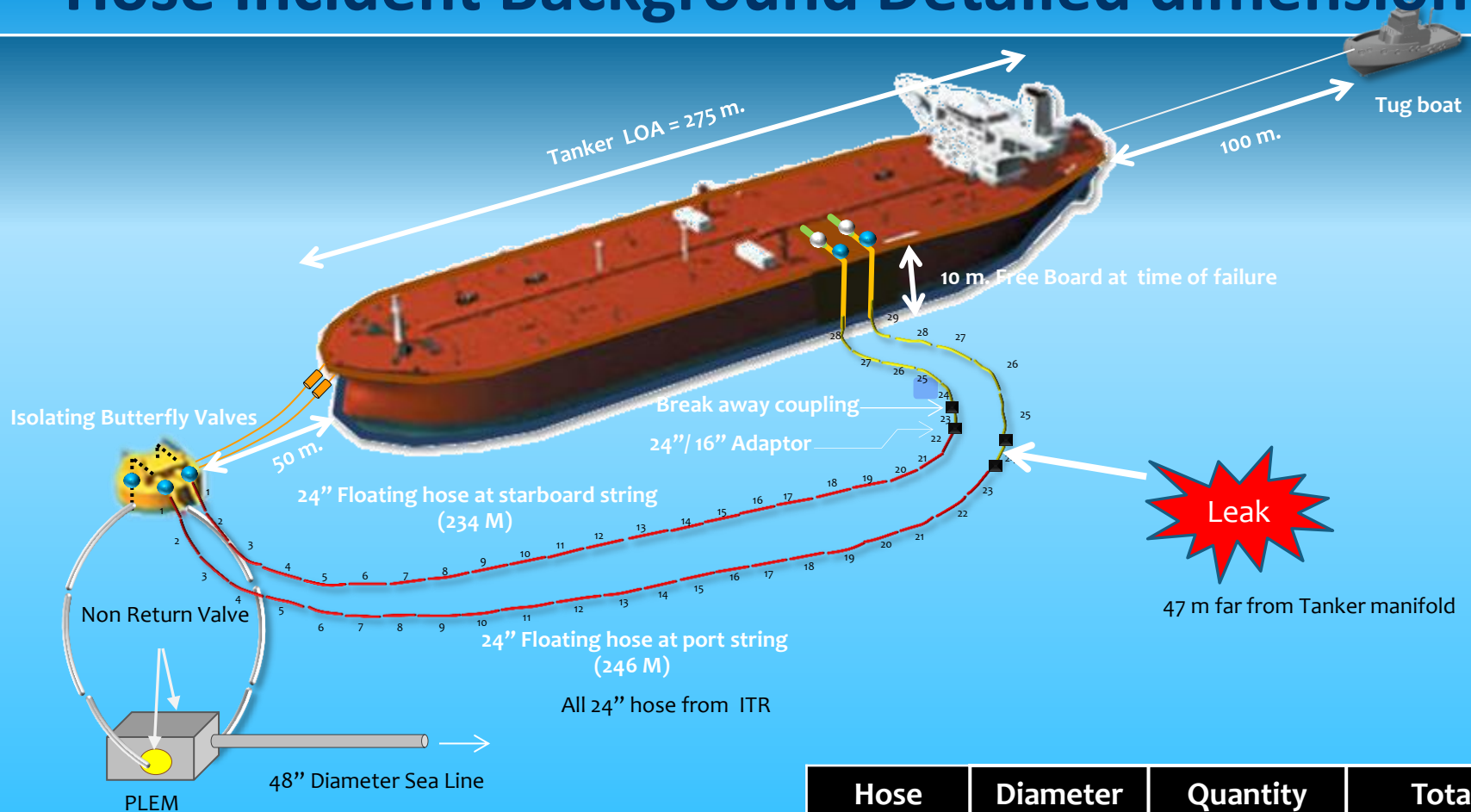
Crude Discharge via 2 of Floating Hose Strings



Incident Details

- * Vessel Type: Crude Oil Tanker
- * DWT: 158,795 M/T
- * LOA: 274.29 m.
- * Beam: 48.04 m.
- * Built: 2009
- * Product: Oman Crude oil
- * Time at incident : 0630 hrs
- * Incident Source: Floating hose burst
- * Spill Quantity: @50 M3

Hose Incident Background Detailed dimension



| Hose string | Diameter | Quantity | Total length |
|---------------------------|----------|----------|--------------|
| Outer string (Port) | 16" | 6 | 54 m. |
| | 24" | 23 | 246 m. |
| Inner String (Starboard) | 16" | 6 | 54 m. |
| | 24" | 22 | 234 m. |

Response Strategic

- * Objective: Oil must not be reached shore line.
- * Strategic:
 - * Apply Oil dispersant with Support vessels to demolished oil slick
 - * Trajectory of Oil fate by using Oil Modeling and Air surveillance to monitor oil path
 - * Notify Mutual Support Organization on standby with dedicated response equipment and being process for activating.

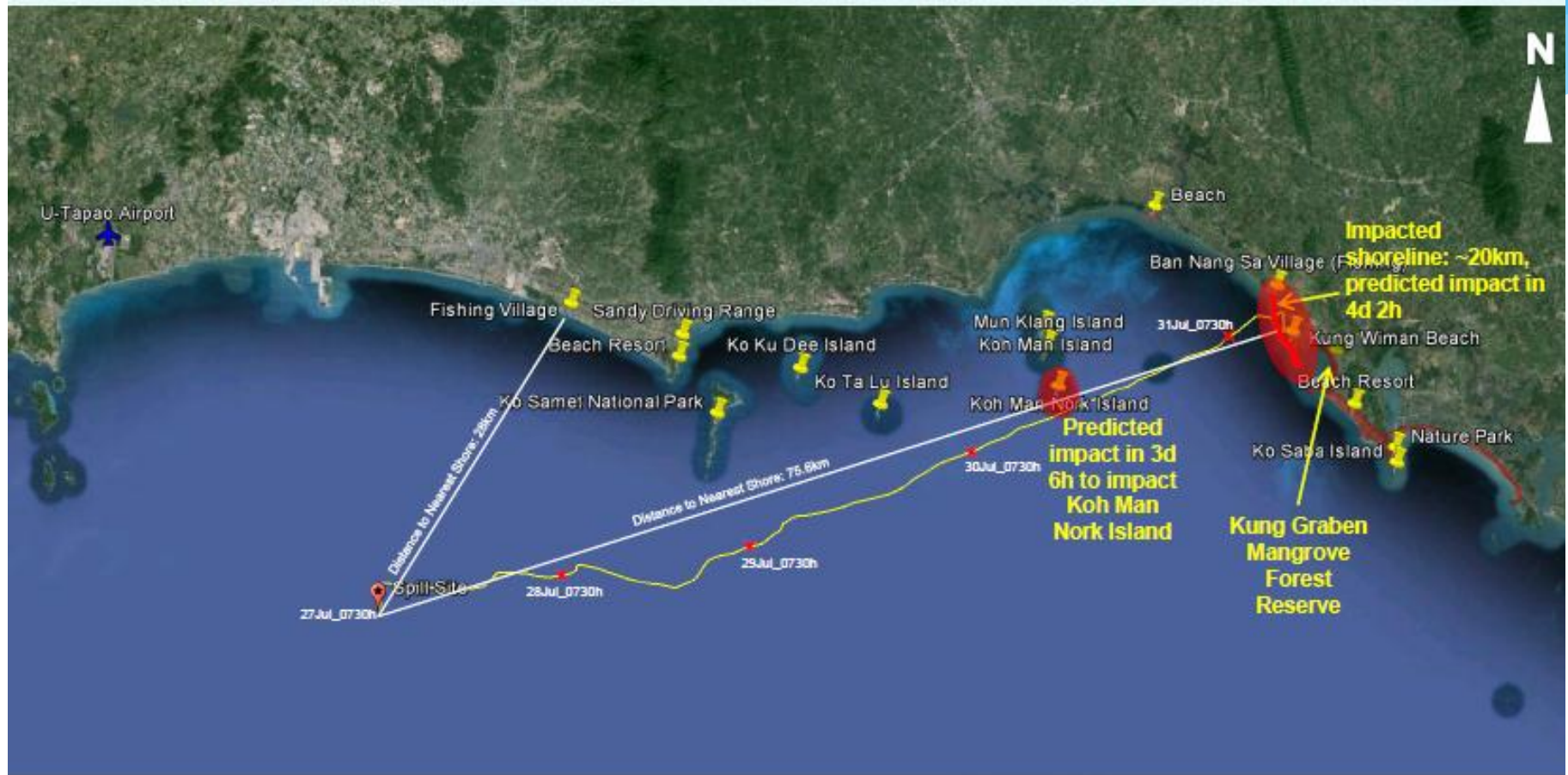
1st Air Surveillance Received at 1000 hrs



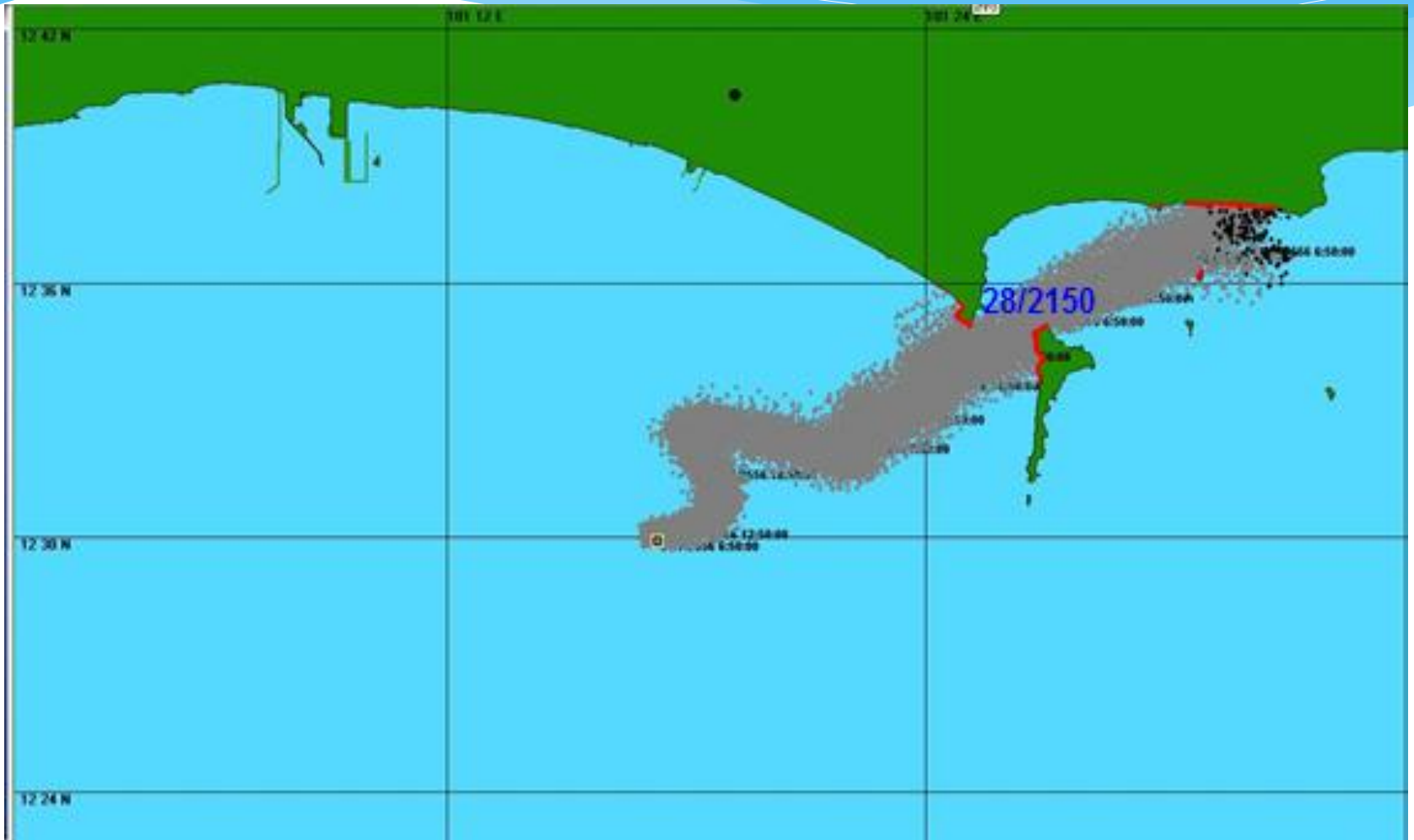
Air Surveillance Photo



1st Oil Spill Modelling received on 1540 hrs



2nd Oil Spill Modelling received on 1805 hrs



Day 1: Spill Tracking



Day 2: Spill Tracking



Day 2: Photo from Combat vessel at sea at 0900 hrs



Day 2: Oil Modelling at 1105 hrs



Day 2: Photo from Combat vessel at sea



Photo 1: at 1212 hrs

Photo 2: at 1439 hrs



Flight/Spray track of Dispersant spray from air at 1530 hrs

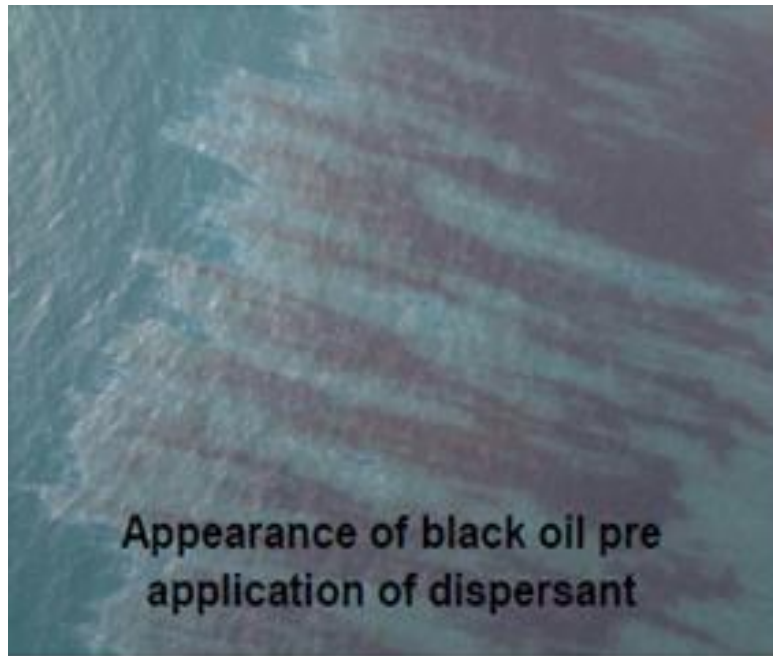


Flight/Spray track of Dispersant spray from air at 1530 hrs



Photo Reported from Air Craft

Before Spray



After Spray



Day 2: Spill Tracking



Day 2: Air Surveillance Photo at 1745 hrs



Oil Tracking by VTS at Laem Chabang



Day 3: Shore Line Clean up



Shore Line Clean Up Progress



Shore Line Clean Up Progress

Day 3



Day 4



Day 5



Day 6



Day 7



Day 8



Day 9





Thailand Mutual Oil Industry Organization

Oil Industry Environmental Safety Group
Association

What is IESG?

Oil Industry Environmental Safety Group Association (IESG) is the non - profit organization and the Petroleum Industry Cooperative Organization for Excellence in Safety and Environment.

Vision & Mission

**To be an Petroleum Industry Cooperative
Organization for Excellence in Safety and
Environment**

- **Improve organizational effectiveness**
- **Strengthen incident prevention measures and oil spill response capability**
- **Develop human resources' knowledge and skills in safety and environmental management**
- **Enhance cooperation among members and with stakeholders**

Oil Industry Environmental Safety Group Association (IESG)

- ✱ Jointly set up by most of Thai Petroleum Companies as Oil Industry Environmental Safety Group Association (IESG) **since 1968**
- ✱ Voluntary group and Non-profit making organization
- ✱ Objective includes safety and environmental impact prevention and provision of mutual aid /assistance in case of emergency among IESG Members

IESG Members



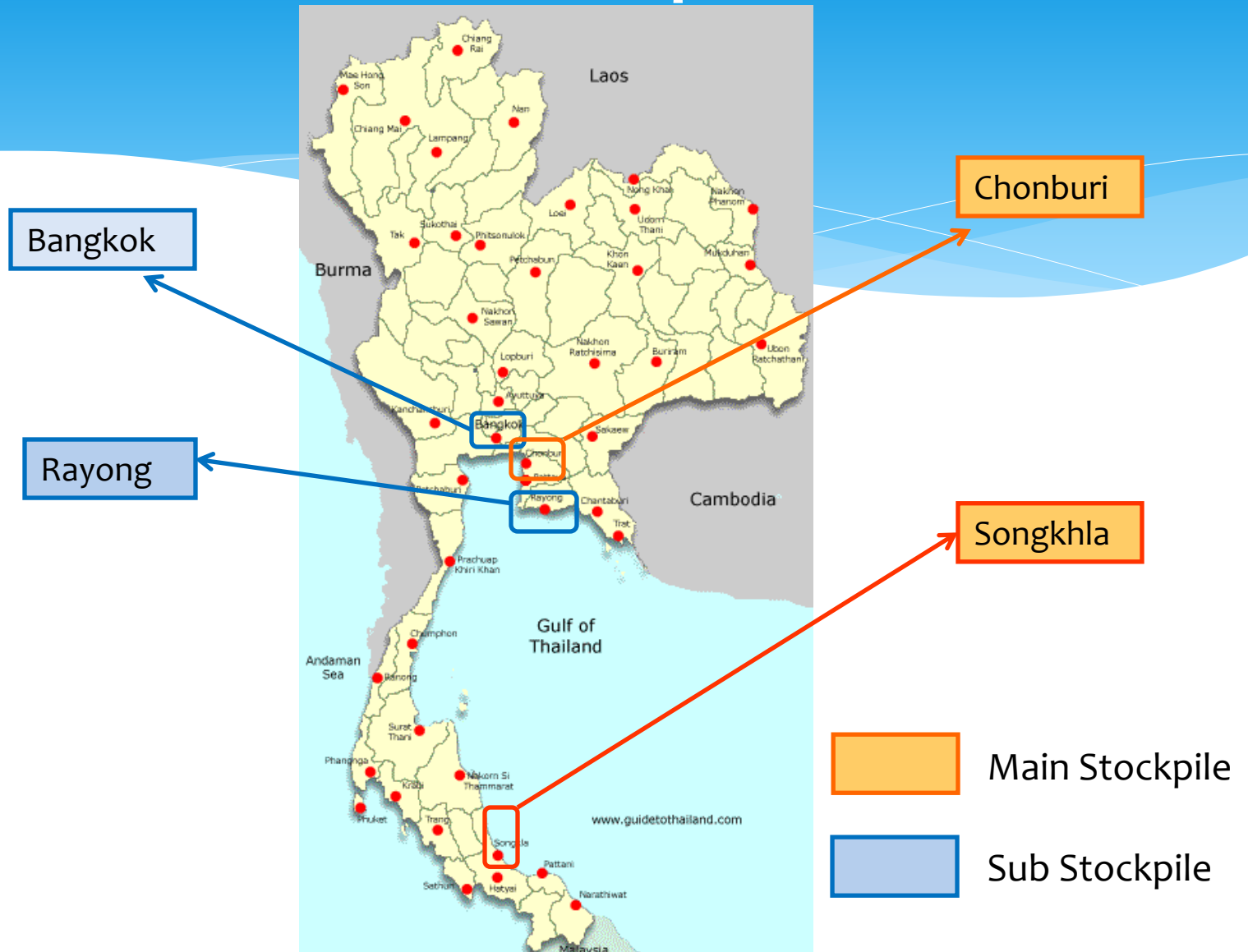
| Year | 1968 | 1970 | 2002 | 2005 | 2008 | 2009 | 2010 | 2011 | 2012 |
|--------|------|------|------|------|------|------|------|------|------|
| Member | 2 | 5 | 8 | 14 | 15 | 16 | 17 | 18 | 20 |

Executive Members (Govt.)

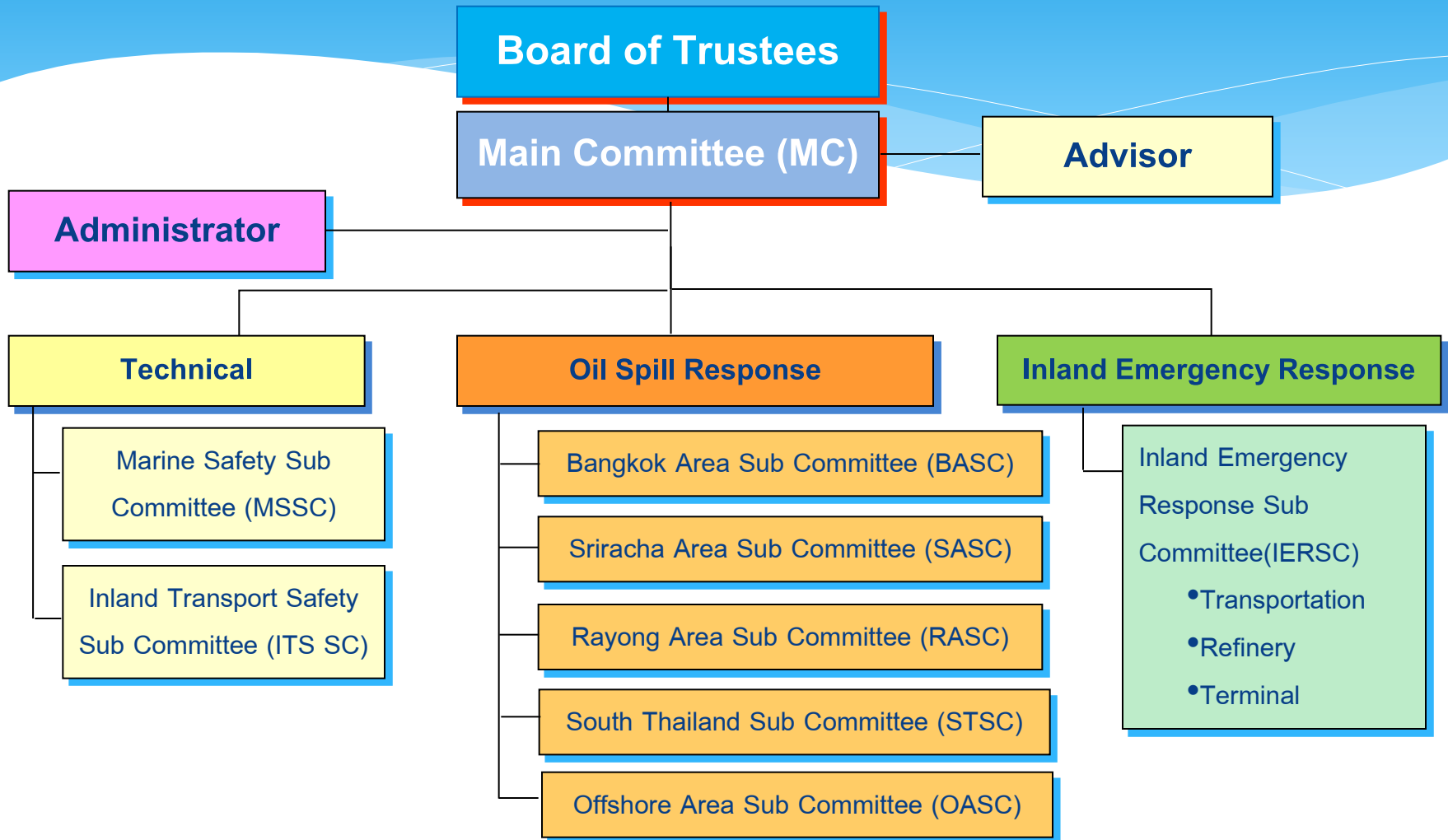
- ✱ The Director General - Marine Department
- ✱ The Director General - Department of Energy Business
- ✱ The Director General - Department of Disaster Prevention and Mitigation



IESG Stockpile



IESG Organization



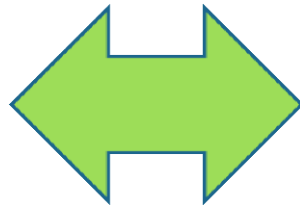
Mutual Agreement

Requested
Member

Equipment

Manpower

Technical



Coordinator

Boom

Fast
Tank

Dispersant

Absorbent

Manpower

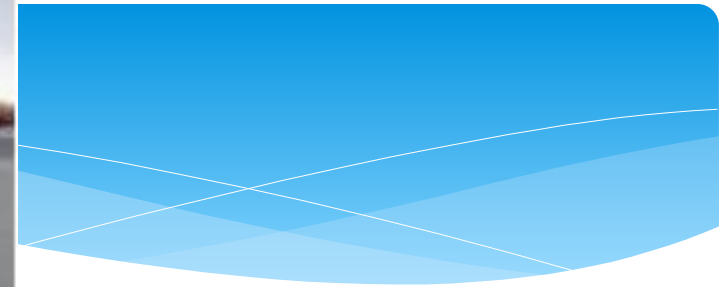
Technical

Lesson learned



PTT Global Chemical

10 Aug 2013, 02.00 PM.



- 16" Hose single carcass failure
- Different brand from others
- 1 year and 3 months hose service life, guarantee 1 year after installed
- Purchase in Y2010
- Failed at 8.5 bars within 30 mins of discharge operation
- 10 bars maximum operation



Floating Hose testing



- * Similar hose brand (burst incident – same position/service life) removed and conducted burst test and found burst at 26 bar g.
- * Other hose brand (service since Y2002) current kept as spare, conducted burst test and burst at 63 bar g.

Lesson learned



Skimmer (oleophilic type)



Lesson learned



Lesson learned (Photo)



Lesson learned Summary

- * Own Capability

- * Equipment: Boom, Spill combat tug, Air surveillance etc.
- * Manpower
- * Knowledge

- * Mutual Support

- * IESG member
- * Neighbor companies

- * External Support

- * National level
 - * Government sector: Marine Department, Pollution Control Department, Province etc
 - * Military team: Navy, Army
- * International level: OSRL, OSCT

- * Media management

- * Within company
- * Outside company

- * Shore Line Clean up

- * Strategic planning
- * Logistics support
- * Crowded management

- * Reputation

- * Compensation

Future Plan and Improvement

- * Review of National and Province Level in regard of Oil Spill Response Plan
- * Review the Frequency of Oil Spill Exercise in each level
- * Develop Oil Spill Knowledge for other related parties
- * Improve of Logistics Arrangement
- * Develop the Company Shore Line Clean up Plan
- * Review of Mutual Support Process

Summary from Incident

Nothing impossible???