



# BLUE WATERS

## Newsletter

On Marine Environment Security

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## From the Director General's Desk



A very happy new year to all.

The collision between MSC Chitra and MV Khalija off Mumbai in Aug 2010, and the consequent oil spill is a grim reminder of the increasing risks of oil pollution in the vicinity of our ports. Though the Coast Guard played a major role in mitigating the pollution damage, some part of the oil eventually reached the shoreline due to strong tidal actions aided by the south-west monsoon.

The Government of Maharashtra was also challenged by the deleterious effects of the oil spill. The Indian Coast Guard has sensitized all Coastal State Governments to prepare Local Oil Spill Contingency Plans for effective oil spill response, as this is a difficult task which cannot be undertaken by any single agency. There is an immediate requirement for all concerned Ports and Coastal State Governments to prepare themselves adequately taking due cognizance of the detrimental effects of an oil spill. Further, the regulatory authorities, such as DG Shipping, need to analyse the incidents of ship collisions, and institute preventive measures to avoid the consequent oil spill.

The Coast Guard's oil spill response capability has been strengthened by the commissioning of the first indigenously built Pollution Control Vessel in October 2010. The utility of the Pollution Control Vessel during the oil spills, will certainly enhance the oil spill response considerably.

The Chitra incident prompted the Indian Coast Guard to analyse the existing inventory of equipment, and identify suitable pollution response equipment to be operated through vessels of opportunity. A working group has been constituted to recommend a suitable response system. The group would recommend the road map for the future oil spill response in India. In addition, a seminar on oil spill response with participation of international speakers is also planned in Jul 2011 at New Delhi, to obtain information on recent developments in oil spill response all across the globe. I request all the stakeholders and other interested organisations to participate in this seminar and gain from it.

Jai Hind

(Anil Chopra)  
Vice Admiral  
Director General  
Indian Coast Guard

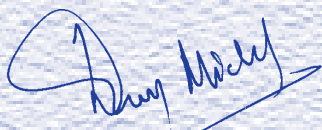
31 Jan 11  
New Delhi



## Editorial

This edition of 'Blue Waters' focuses on 'Oil Spill incident of MV MSC Chitra', which occurred at Mumbai Port on 07 Aug 2010. The oil spill though estimated to be around 800 tons caused damage to the sensitive coast lines, in spite of spirited efforts put up by Coast Guard, Govt. of Maharashtra, MbPT, Indian Navy, Salvage Company, Pollution Control Boards, NGOs and the volunteers. The strong tidal currents aided by South West monsoon, and the floating containers inside the channel posed several challenges, making the response agencies to adopt several contingency measures and learn valuable lessons from the incident. The concerned ministries have already initiated several measures so that the oil spill emergencies are addressed effectively in all weather conditions and challenging situations.

The second part of the Oil Spill response operation undertaken by the response agencies for Deep Water Horizon oil spill at Gulf of Mexico is also included in this edition, so as to provide the complete account of the efforts made for the clean-up. The primary oil spill prevention measure as identified by the Coast Guard is the removal of source of oil spill from the ships that have met with casualty. The Coast Guard has accordingly directed the shipowners to remove the trapped oil from sunken ships. The trapped oil from most of the ships such as MV Asian Forest, MV Den Den, MV Black Rose, MV Chitra that have met with casualty, are removed by the salvors and the efforts are being made by the concerned ministry to have such salvage capacity in India through a service provider. A brief account of removal process undertaken for MV Black Rose is included in this edition for information of the readers.



(Donny Michael)  
Commandant  
Director (F&E)

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## ARTICLES

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### MSC CHITRA INCIDENT

On 07 August 2010, at 0950 hrs, the container vessel MV MSC Chitra carrying about 1200 containers from JN Port while leaving harbour, collided with an inbound bulk carrier MV Khaliya-III, leading to grounding of MV Chitra near the Prongs reef light. The impact of the collision caused rupture of two fuel tanks situated on the port side of MV Chitra. The ships crew were safely evacuated and the vessel started to list dangerously to the port side. The rupture of the tanks led to oil spill at a steady rate of 20 tons per hour. As the South West monsoon was active, the prevailing strong winds and sea state prevented the laying of containment booms by the Coast Guard. The port was affected by the high tides which ranged upto 4 meters. The major ports did not take any preventive action to contain the oil spill as they did not have any oil spill response equipment. The situation got worsened when the tide changed after two hours from the collision, the continuous impact of the waves caused more list to the grounded vessel and about 300 containers fell overboard making it dangerous for navigation. Indian Coast Guard deployed 5 ships, 2 helicopters and 2 Dorniers in pollution response configuration and applied oil spill dispersants to mitigate the damage caused by the effects of the heavy oil. The tidal currents

in combination with the local currents carried the spilt oil in the south and other coastal areas affecting the fisher folks seriously. The port's traffic was closed due to floating containers, several ships and tankers waiting outside for entry were forced to the outer anchorage area. In addition, it was found that 43 containers were packed with IMDG cargoes and some of it fell overboard and washed ashore.

Coast Guard ships and aircraft relentlessly carried out the oil spill response in spite of the dangerous containers floating inside the harbour. As the leaking spot of the tanks could not be reached by the salvage team, and at the same time, it could not be transferred to other tanks, the Coast Guard took a conscious decision to allow the oil to drain from the two ruptured tanks. The oil egress from the tanks stopped after 48 hours. By then, 60 kilometers of the shoreline area, including the residential, fisheries, mangroves, ports and historic islands were affected by the heavy fuel oil. The remaining oil at sea was neutralized by the Coast Guard in the next 3 days. It was found that the majority of the oil that washed ashore did not emulsify due to the effect of the dispersants applied by the Coast Guard. In the following two months, a dedicated shoreline response team including a special team from Oil Spill Response Limited, Singapore undertook shoreline clean-up of the affected areas. In some areas, the clean-up went on upto four months. The port traffic was effectively closed for five days, and only limited movements with a mine sweeper escort was allowed. The restriction of the ship movements, severely affected the logistics chain supporting the shipping movements. The harbour was closed for fishing for about a month, thereby affected the fishermen and fish related traders due to unemployment. The Coastal State Government, Mumbai Port, Coast Guard and other affected parties have submitted claims for clean-up and for causing pollution



damage on the shipowner. The shipowner, employed professional salvors immediately and all out efforts were made to remove all the containers drifting and sunken containers. By end August 10, almost all the sunken containers were identified and removed. The remaining containers onboard were safely removed by November 10. The trapped oil of about 1200 tonnes of fuel oil was removed by the salvors, and the efforts are being made to remove the wreck by end March 2011.



### **Lessons Learnt**

Several lessons were learnt from the MV Chitra oil spill incident. The pollution response equipment available with the Coast Guard were not compatible to contain the oil spill in the fast tidal current. The shoreline terrain was mostly rocky and the inshore boom laying was not found useful. For effective protection of mangroves, there is a need for deflection booms. The vessels deployed for the response require modification to carry pollution response equipment for skimming operations. There is no private oil spill response provider available to undertake oil spill response on behalf of the polluting ship or on behalf of the port. The local State Government is ill prepared to prevent the spill reaching their shorelines and also to undertake the shoreline clean-up. The contingency plan prepared by the ports and oil handling agencies do not cater for complete response for more than 100 tons. Hence, proposals were made to augment the pollution response capacity to the ports by the Ministry through

the Oil Cess Fund.

### **Post MSC Chitra Measures**

The Coast Guard being the Central Coordinating Authority (CCA) for oil spill response, is reviewing its national plans and also recommended the Shipping ministry to direct all the ports to mandatorily maintain oil spill response facility either by them or through the service providers. A separate Committee has been appointed to undertake the efficiency test of all pollution response equipment available with the Coast Guard inventory and also to recommend the necessary legislative measures to make the polluting ship undertake the clean-up immediately and also to pay immediate compensation to the affected parties. The Coast Guard's oil spill response capability has been strengthened by the commissioning of the first indigenously built Pollution Control Vessel having side sweeping arms with skimming capability of 110 tons per hour each. If this ship was available during the MV Chitra oil spill, it would have been effectively positioned near the leaking area and would have skimmed the oil easily. The Coast Guard environment protection directorate is coordinating with all the stakeholders to put in place an effective pollution response system in India. Post MV Chitra oil spill incident, there is an increased awareness among the media and the local populace about the negative effects of oil spill on the marine environment. The public looks





upon Coast Guard to provide necessary solution and the organisation is taking all measures that is necessary to meet all the expectations and also to ensure that the marine environment is always protected.

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## **SALVAGE OPERATIONS FOR REMOVAL OF TRAPPED OIL FROM SHIPS**

Prevention of pollution and protection of Marine Environment has been the primary charter of the duties of Coast Guard and all necessary measures in accordance to the powers provided to the Coast Guard are taken promptly and assistance where required has been provided to other agencies on various occasions. Under the allocation of Business Rules 1962, and also under the procedure established in the National Oil Spill Disaster Contingency Plan (NOSDCP), the responsibility of responding to oil pollution at port premises rests with the concerned port and the port can claim the clean-up cost from the polluting shipowner/insurer. All ships above 500 tons and operating internationally are required to take compulsory insurance for Hull, Machinery and third party liability.

In the case of ship sinking, generally oil spill takes place due to the presence of bilges in the engine room and other oils kept for ready use and not sealed in any tanks or containers. For a ship that runs aground, the oil spills may take place if the hull is breached and the oil escapes from the breached tank/tanks. Such oil spills which occur immediately after the casualty can be responded effectively after taking necessary assessment, planning, operations and clean-up coordination. However, the oil carried onboard the ship in the form of cargo or bunkers may still remain in their tanks intact even after sinking or grounding. For example, in the case of MV MSC Chitra, the ship carried 2600 tons of fuel oil out of which 800 tons of fuel oil

escaped from her two tanks due to the hole created during the collision with MV Khalija on 07 Aug 2010.

Earlier, the shipowners did not take any action to remove the trapped oil from the ship tanks. The Coast Guard nor any agency in India has the necessary expertise and the equipment to remove oil from a sunken ship. The trapped oil may come out of the tanks at any time without warning and may cause serious economic and ecological damage to the local marine environment. However, since the year 2006, the Coast Guard has taken proactive measures in making the shipowners responsible for removing the trapped oil from the casualty ridden ship. The first such case was the removal of oil from MV Ocean Seraya, which ran aground at Karwar and 900 tonnes of fuel oil was removed. In 2007, 350 tonnes of trapped fuel oil from sunken ship MV Denden was removed by salvors off Mangalore. In 2009, 330 tonnes of fuel oil was removed from MV Asian Forest off Mangalore and 930 tonnes of fuel oil from MV Black Rose off Paradip. In 2010, 20 tonnes of diesel was removed from MV Nand Aparita off Kavaratti and 1200 tonnes from MV MSC Chitra off Mumbai. The IMO wreck Removal Convention (Nairobi convention) has mandatory provisions for removing oil from the sunken ships by the shipowners besides the liability to remove the wreck that may happen in coastal waters.

### **Case study on Oil Removal Process from sunken ship - MV Black Rose**



The merchant vessel MV Black Rose sank 4 km outside the Paradip Port but inside the Port limits. Following the incident of sinking of the ship near the Paradip Port, the oil spill from bilges came out and there were reports of traces of dead fish and other marine life along the coast. The Coast Guard and the Paradip Port Trust responded to all minor traces of the oil sheen found outside the ship and it was feared that the ships can't be permanently positioned to respond to minor traces of oil every time as the ship still held 930 tonnes of fuel oil. The Ministry of Environment and Forests had expressed concern that in case the stored oil in the vessel is not evacuated at the earliest it could pose serious danger to the environment and marine species in the region.

The tender was awarded to Resolve Marine Groups, Florida. The agency assured to complete the operation in 45 days at the cost of Rs 17.50 crores.

Seven members of the agency visited the spot initially and surveyed the oil stock in the vessel. They said that the 975 tonnes of oil has been kept in three sealed chambers of the vessel and are in semi-solid form. The oil would be pumped out after heating the chambers. The hot-tapping equipment and other related materials were then brought to Paradip and the salvors commenced their work on 10 Oct 10. During this period the sea was calm which assisted the salvors to proceed with their work at greater pace.

Before salvage operations can begin, salvage company is required to recover any potentially polluting liquids first from a sunken vessel. Even in case where it is decided not to raise a vessel, as in this case, often it is still deemed necessary to remove any liquids that might be harmful, if they were to escape into the environment.

Removing these liquids represent a daunting

engineering challenge for salvors and increases the overall cost of the salvage effort for vessel owners. Advances in diving technology, the use of remotely operated devices, specially fitted emergency tank access ports on vessels and improvements in hot-tapping technology have all made liquid retrieval a more common practice in salvage.

The most widely employed technique for removing pollutants from the tanks of sunken vessels is **hot tapping**.

In the hot-tapping method, the naval architect of the salvage company working from the blueprints of the vessel, advise the divers to mark the tanks and the tapping locations. At each location, a 5/8-inch hole was drilled through the hull plating into the tank by a diver using a hydraulic drill. The hole was also threaded using the same tool. After removing the tool, the diver after determining the nature of the contents of the tank — whether oil or water — reseals the hole with a bolt. Once the tanks containing the pollutants had been identified, a landing plate with a valve and a cam lock hose fitting is then installed on the tank. A hot-tap device is thereafter fitted to the cam lock fitting on the landing plate.

The hot-tap device is designed to drill through the plating without allowing the tank's contents to escape.



The Oil removal work from sunken Mongolian vessel MV Black Rose began in October 09, after Customs gave clearance to Paradip Port Trust (PPT) authorities to transport the pumped out oil through lorries and was completed in Nov 09, thereby removing the threat of oil spill from the sunken ship MV Black Rose.

The wreck of MV black rose still remain in the area and a wreck marking has been done by the port. Post this incident, the DG Shipping has issued M.S. Notice No. 31 and 34 of 2009 on safe loading of Iron ores from Indian ports. It has also issued notice to all Principal Officers of MMD to ensure 100 % inspection of all ships arriving in Indian ports to load Iron ores.



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## **AN UPDATE ON THE GULF OF MEXICO OIL SPILL PART - II**

*(Continued from previous edition of Blue Waters)*

*(Source - Internet Resources)*

The **Deepwater Horizon oil spill** or **Gulf of Mexico oil spill** or popularly known as the **BP oil disaster** is an oil spill which flowed for three months in 2010 commencing 20 Apr 2010. The impact of the spill still continues even after the well was capped. It is the largest accidental marine oil spill in the history of the

petroleum industry. The spill stemmed from a sea-floor oil gusher that resulted from the April 20, 2010 Deepwater Horizon oil rig explosion. The explosion killed 11 men working on the platform and injured 17 others.



On July 15, the leak was stopped by capping the gushing wellhead, after it had released about 4.9 million barrels, or about tons of crude oil. It was estimated that 53,000 barrels per day (8,400 m<sup>3</sup>/d) were escaping from the well just before it was capped. It is believed that the daily flow rate diminished over time, starting at about 62,000 barrels per day (9,900 m<sup>3</sup>/d) and decreasing as the reservoir of hydrocarbons feeding the gusher was gradually depleted. On September 19, the relief well process was successfully completed and the federal government declared the well “effectively dead”.

The reports reflects that the spill continues to cause damage to marine and wildlife habitats as well as the Gulf’s fishing and tourism industries. In late November 2010, 4,200 square miles (11,000 km<sup>2</sup>) of the Gulf were re-closed to shrimping after tar balls were found in shrimpers’ nets. The total amount of Louisiana shoreline impacted by oil grew from 287 in July to 320 miles (510 km) in late November. In January 2011, eight months after the explosion, an oil spill commissioner reported that tar balls continue to wash up, oil sheen trails are seen in the wake of fishing boats, wetlands marsh grass remains fouled and dying, and that crude oil lies offshore in deep water and in fine silts and sands onshore.



Skimmer ships, floating containment booms, anchored barriers, sand-filled barricades along shorelines, and dispersants were used in an attempt to protect hundreds of miles of beaches, wetlands and estuaries from the spreading oil. Scientists have also reported immense underwater plumes of dissolved oil not visible at the surface as well as an 80-square-mile (210 km<sup>2</sup>) “kill zone” surrounding the blown BP well. The U.S. Government has named BP as the responsible party, and officials have committed to holding the company accountable for all cleanup costs and other damage. After its own internal probe, BP admitted that it made mistakes which led to the Gulf of Mexico oil spill.

## Use of Dispersants deep Under Water

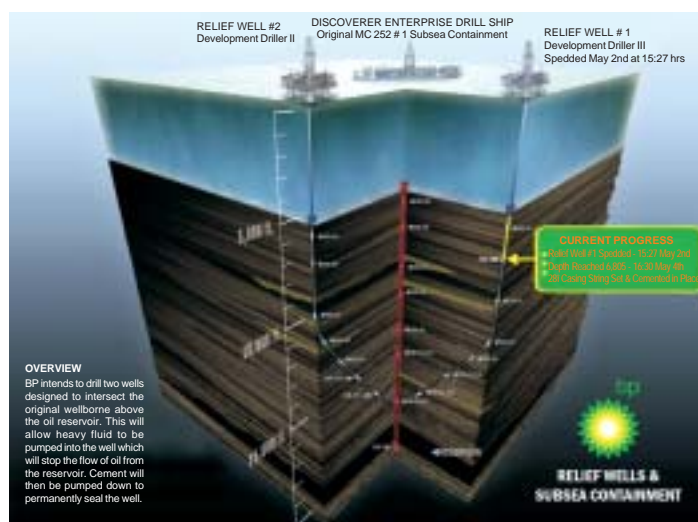
Some 1,100,000 US gallons (4,200,000 l) of chemical dispersants were sprayed at the wellhead five thousand feet under the sea. This had never previously been tried but due to the unprecedented nature of this spill, BP along with the U.S. Coast Guard and the Environmental Protection Agency, decided to use “the first subsea injection of dispersant directly into oil at the source”.

Dispersants are said to facilitate the digestion of the oil by microbes. Mixing the dispersants with the oil at the wellhead would keep some oil below the surface and in theory, allow microbes to digest the oil before it

reached the surface. Various risks were identified and evaluated, in particular that an increase in the microbe activity might reduce the oxygen in the water. Various models were run and the effects of the use of the dispersants was monitored closely. The use of dispersants at the wellhead was pursued and the National Oceanic and Atmospheric Administration (NOAA) estimated that roughly 409,000 barrels of oil were dispersed underwater.

Environmental scientists say the dispersants, which can cause genetic mutations and cancer, add to the toxicity of the spill and that sea turtles and bluefin tuna are exposed to an even greater risk than crude alone. According to them, the dangers are even greater for dispersants poured into the source of the spill, where they are picked up by the current and wash through the Gulf. The researchers say the dispersed oil appears to be having a toxic effect on bacteria and phytoplankton - the microscopic plants which make up the basis of the Gulf's food web. The field-based results were consistent with shore-based laboratory studies showing that phytoplankton are more sensitive to chemical dispersants than the bacteria, which are more sensitive to oil. On the other hand, the NOAA says that toxicity tests have suggested that the acute risk of dispersant-oil mixtures is no greater than that of oil alone. However, some experts believe that all the benefits and costs may not be known for decades.

Because the dispersants were applied deep under the sea, much of the oil never rose to the surface - which means it went somewhere else, reported a marine scientist. One plume of dispersed oil has been that measured at 22 miles (35 km) long, more than a mile wide and 650 feet (200 m) tall. In a major study on the plume, experts found the most worrisome part to be the slow pace at which the oil is breaking down in the cold, 40 °F (4 °C) water at depths of 3,000 feet (910 m) ‘making it a long-lasting but unseen threat to vulnerable marine life’.



## Removal

Three basic approaches to removing the oil from the water have been burning the oil, filtering off-shore, and collecting for later processing. On April 28, the US Coast Guard announced plans to corral and burn off up to 1000 barrels of oil each day. It tested how much environmental damage a small, controlled burn of 100 barrels did to surrounding wetlands, but could not proceed with an open ocean burn due to poor conditions.

BP stated that more than 215,000 barrels of oil-water mix had been recovered by May 25. In mid June, BP ordered 32 machines that separate oil and water with each machine capable of extracting up to 2000 barrels per day. By June 28, BP had successfully removed 890,000 barrels of oily liquid and burned about 314,000 barrels of oil.

More recently the EPA reported that there were successful attempts made to contain the environmental impact of the oil spill, in which the Unified Command used the "situ burning" method to burn off the oil in controlled environments on the surface of the ocean to try and limit the environmental damages on the ocean as well as the shorelines. 411 controlled burn events took place, of which 410 could be quantified. The Environmental Protection Agency prohibited the use of skimmers that left more than 15 parts per million of oil in the water. Many large-scale skimmers were

therefore unable to be used in the cleanup because they exceed this limit. An urban myth developed that the U.S. government declined the offers because of the requirements of the Jones Act. This proved untrue and many foreign assets deployed to aid in cleanup efforts. The Taiwanese supertanker *A Whale*, recently retrofitted as a skimmer, was tested in early July but failed to collect a significant amount of oil.

According to a senior scientist at NOAA's Office of Response and Restoration, who defended a report written by the National Incident Command (NIC) on the fate of the oil stated that using an Oil Budget Calculator (OBC) developed for this spill, 6% was burned and 4% was skimmed and much of the oil has evaporated or been dispersed or dissolved into the water column, and about 800,000 barrels were siphoned off directly from the well. NOAA has been criticized by some independent scientists and Congress for the report's conclusions and for failing to explain how the scientists arrived at the calculations.

More debates on the use of dispersants under water and the long term effects in the Gulf of Mexico are being discussed in many environmental forums and will likely to continue. The Deepwater Horizon oil spill response ranks one of the largest ever response made in the annals of history and the lessons it provided will pave way for many countries to take suitable preventive measures and avoid the recurrence of another Deepwater Horizon type incident.



## REPORTS

## INDIA WATCH

## OIL SPILL BY MV MSC CHITRA

On 07 Aug 10 at about 0925 hrs the Panama flagged MV MSC Chitra collided with St Kitts registered MV Khalijia-III about 02 kilometer SE of prongs Lt. near Mumbai Harbour. Consequent to collision MV MSC Chitra ran aground and dangerously listed 35-40 degree to port. As a resulted of the list the containers fell over board in the channels, leading to a dangerous navigational situation. The Mumbai port was closed shortly to clear the dangerous containers and the commercial vessels were allowed to enter and leave with naval minesweeper escorts.

On 08 Aug 10 for augmentation for Pollution Response "Operation Chitra" was launched by Indian Coast Guard vessels. The patches of oil were observed in various locations in the channels and inlets within port limit area extending were responded from 08-11 Aug 10 by five Coast Guard vessels and four Aircraft.

It was estimated that approximately around 800 tonnes of FFO leaked from MSC Chitra. Other details on MV MSC Chitra oil spill incident is provided in the main article.



## COLLISION BETWEEN MV TIGER SPRING AND GREEN VALLEY

The Information received by Coast Guard District Headquarter regarding collision between MV Tiger Spring and Green Valley in Hoogly River near Nurpur Reach on 23 Nov 10. The damage on stbd side tank no.3 and 4 of MV Tiger Spring resulted in flooding within the ship causing the vessel list precariously to one side.

At about 1320 hrs, Coast Guard Dornier was tasked in Pollution response mode to assess the situation, Simultaneously, Coast Guard ACV H-186 along with damage control equipment was also deployed. Small patches of oil sheen observed around one NM from the datum. 50 litres of oil dispersant solution (OSD) was used to breakdown the oil films by Kolkata Port Trust.

DEFUELING OF  
MV NAND APARAJITA

On 16 Aug 10 MRCC Mumbai received a message from DG Shipping at 1620 hrs regarding grounding of MV Nand Aprarjita in position 2 NM West of Kavaratti island due to rough weather and dragging of anchor. All crew onboard were safely evacuated. No damage



to hull has been reported. Coast Guard Station ICGS Kavaratti and the local administration directed the ship owners to remove the fuel oil from the ship prior undertaking any salvage efforts due to the presence of coral reefs.

20 kl diesel from MV Nand Aparajita was removed on 18 Aug with the assistance of Indian Coast Guard and Lakshadweep Harbour Works Department. No oil spill occurred from the vessel.

## WORLD WATCH

### HURGHADA, EGYPT

On 17 June 10, an oil slick was discovered north of Hurghada, Egypt, in the Red Sea. It has affected about 20 kilometers of coastline, much of it popular tourist destinations. The leak has been sealed but the oil has damaged coral reefs and beaches in the area, threatening two of Hurghada's most important industries - tourism and fishing.

The Egyptian government has blamed the spill on tankers transporting oil through the Red Sea, though local scientists and activists said it more likely came from a busted oil rig owned by the government.

### MONTREAL, CANADA

The bulk oil carrier MV Richelieu ran aground in the St. Lawrence Seaway on the south shore of Montreal on the night of 12 July 10.



The ship spilled about 20 tons of oil and caused authorities to close the seaway until July 15 when they allowed traffic to resume at a slow pace.

Because the spill was quickly contained, there was little damage to the environment, though many large shipping companies have incurred hefty late fees due to the closing of the seaway.

### ROSARIO, PHILIPPINES



On 14 July 10, an underwater Petron pipeline was damaged, causing a spill two nautical miles off the coast of the small town of Rosario in Cavite Province, Philippines. Estimates suggest that about 150 gallons have spilled and the local authorities have used both the boom and oil dispersant, to respond to the oil spill.



**SIXTY FIRST SESSION OF IMO  
MARINE ENVIRONMENT  
PROTECTION COMMITTEE (MEPC)**

The 61<sup>st</sup> MEPC held its 61st session under the Chairmanship of Mr. Andreas Chrysostomou (Cyprus) at IMO London from 27 Sep to 01 Oct 2010. The session was attended by representatives from 101 member States, 1 Associate Member, and 7 United Nations and Specialized Agencies. It was also attended by Representatives from 8 Intergovernmental Organization and 42 Non-Governmental Organizations in consultative status. The Secretary General opened with a few words on the drill rig explosion, loss of life and sinking of the Deepwater Horizon, and the subsequent oil spill. The Secretary General requested that the report of the accident be made available to the organisation, so the IMO may move swiftly to improve safety in the off shore industry. With regard to oil spill response for Arctic sea areas in view of the recent developments in north east passage by ships, the Secretary General stated that the recovery of oil in hostile environments will progress as society has a need for the energy provided by these exploration areas in the Arctic. He stated that the environmental sensitivity the Arctic Region requires that the maritime community give greater focus to these areas and the unique nature of the environment and the challenges.

The important items that were discussed during the meeting included following :-

- Invasive species in ballast water and hull fouling,
- Ship recycling facility guidelines
- Reduction of GHG emissions from ships
- Implementation of the OPRC Convention, and the OPRC –HNS Protocol resolutions
- Declaration of Straits of Bonifacio as a Particularly Sensitive Sea Area, (PSSA).

**Harmful aquatic organisms in ballast water.**

26 states have now ratified the 2005 Ballast Water

Management Convention representing 24.66% of the world fleet. In order to achieve ratification the IMO require the following criteria to be met, i.e. 30 states representing 35% of the world's DWT. The current figures fall short of the requirement for ratification, and the Secretary General urged member states to ratify the convention

**Recycling of ships**

The Committee noted that the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (the Hong Kong Convention) had been open for signature from 1 September 2009 until 31 August 2010. France, the Netherlands, Italy, Turkey and Saint Kitts and Nevis had signed the Convention subject to ratification. The Committee encouraged countries to ratify the Convention.

The Committee recalled that, since the adoption of the Hong Kong Convention, MEPC 59 had adopted the "Guidelines for the development of the Inventory of Hazardous Materials". Thereafter, MEPC 60 had agreed that three further guidelines should be developed in parallel (on facilities; on the Ship Recycling Plan; and on the authorization of the facilities) in view of the close interrelationship between them.

**Reduction of GHG Emissions from ships**

There were fifty papers submitted on this agenda item and the report from the inter-sessional expert group was also presented in plenary on Monday evening. With regard to Market Based Measures, in general the plenary was divided along the lines of Kyoto Annex 1 and non Annex 1 parties, and the debate became increasingly politicised. The main message from Non Annex one parties is that the UNFCCC should decided upon market based measures and the IMO should concentrate on technological and operation abatement measures abiding by the principles of CBDR. The view by Annex one countries is that the IMO is the vehicle to take all measures through to conclusion and those measures should be flag neutral and offer no more

favourable treatment. A great deal of plenary time was spent on these discussions to the detriment of other agenda items.

#### **Implementation of the OPRC Convention, and the OPRC – HNS Protocol and relevant conference resolutions**

The IMO Manual on Oil Pollution, Part 1, Prevention, amended by OCIMF along with IMarEST received general support for the document, with comments being received on chapter 8 oil tanker operations in ice. The paper MEPC 61 /8/2 Guidance on an Incident Management System was approved by the Committee during the meeting.

Paper MEPC 61/8/3 dealt with the Deepwater Horizon incident. The paper being a summary of the incident, and concerns were expressed by some local countries. With assistance from the IMO there were assessments made on these countries (Bahamas & Cuba) for technical advisory support, and also the organisation was requested to determine the type and quantity of skimmers and booming equipment available. Paper MEPC 61/8/4 submitted by Sweden, addressed the issue of the HNS information gap. The Committee submitted the paper to OPRC-HNS sub-committee for further necessary action.

#### **Identification of special areas and particularly sensitive sea areas**

The proposal for the Straits of Bonifacio to be declared a **Particularly Sensitive Sea Area** (PSSA) was Introduced by France and seconded by Italy, which consisted of reading of the paper in the plenary. The States proposing the PSSA stated that all guidelines are complete and will present them to NAV 57 for necessary information as required. The Additional Protection Measures (APM's) within the paper was amended to read, "RECOMENDED NON MANDATORY PILOTAGE" rather than mandatory pilotage." The chairman stated that the APM's should be sent to NAV, and the IMO should establish a TG at the next meeting, MEPC 62, to review and then approve at a later date after IMO have the report from NAV, for approval at a later meeting of MEPC.

## **EVENTS**

### **NATIONAL LEVEL POLLUTION RESPONSE EXERCISE (NATPOLREX - III)**



The Indian Coast Guard is the Central Coordinating Agency (CCA) for responding to all oil spills that occur in the Maritime Zones of India and therefore has been mandate to train, coordinate and exercise all stakeholders. Further, as per section 20 of NOSDCP, Coast Guard is entrusted with the responsibility of conducting regular exercise to assess preparedness and improve contingency plans of all stakeholders. Accordingly, third National Level Pollution Response Exercise (NATPOLREX-III) was conducted off Mumbai on 15 Jan 2011.

#### **AIM**

Aim of the exercise is to evaluate pollution response capabilities and readiness of all stakeholders, in the backdrop of oil spill incident from MV MSC Chitra in Aug 2010. It was also aimed to showcase to other stakeholders, media and general public, the capabilities of recently commissioned Pollution Control Vessel of Indian Coast Guard, ICGS Samudra Prahari. The exercise was conducted in two phases :-

#### **Phase I**

A table top exercise was conducted in the office



of Coast Guard Pollution Response Team, Mumbai on 14 Jan 11, wherein a simulated situation was exercised on paper to assess the response of various stakeholders to the given situation. Following subjects were exercised during table top exercise:-

- (a) Search and Rescue.
- (b) Crises Management Group Meeting.
- (c) Activation of NOS-DCP.
- (d) Oil spill trajectory assessment.
- (e) Mitigation measures for resources at risk.
- (f) Shoreline protection measures.



## **Phase II**

The phase II of the NATPOLREX-III involved the realtime exercise of oil spill scenario on 15 Jan 11 off Mumbai. Setting of the exercise was such that, collision had occurred between a tanker and a container vessel in the navigational channel of Mumbai Port, which resulted in oil spill. Following were exercised during this phase:-

- (a) Mobilisation of various pollution response resources.
- (b) Fire fighting assistance to stranded ship.
- (c) Intervention measures that included towing of a stranded vessel from the coast to minimize the effect of oil spill on the coastline.

- (d) Pollution Response operations, that included application of dispersant, containment and recovery of spilt oil by ICG ship/aircraft and ships of other resources agencies.

## **Participation**

Seven ICG ships, two ICG Dornier aircraft, two ICG Chetak helicopter, one IN ship, two MSVs of ONGC, one Tug each from MbPT and JNPT and two salvage vessel from M/s Smit International (India) Ltd participated in the exercise. Vice Admiral Anil Chopra, AVSM, the Director General, Indian Coast Guard alongwith 35 personnel from 19 agencies witnessed the exercise.



## **SEMINAR ON OIL SPILL RESPONSE**

As part of the string of activities slated for the oil spill response reforms, a seminar on pollution response is being planned by Coast Guard and the date and venue will be intimated on finalisation.

The seminar will have technical sessions touching upon the important subjects such as Oil Spill threats, legislation, oil spill response preparedness etc. Eminent speakers from India and abroad are being invited to provide the information and knowledge on the important subject of oil spill response the wake of spills from MSC Chitra and Deep water Horizon. The participation in the conference is by invitation.

## INDIAN COAST GUARD ANNUAL POLLUTION RESPONSE TRAINING PROGRAMME - 2011

DATE	VENUE	TYPE OF TRAINING	COORDINATOR	REMARKS
<b><u>Western Region</u></b>				
21 - 25 Feb 11	Mumbai	IMO Level - I course for Resources/ Oil Handling agencies	PRT (West)	04 day Class room instruction. 01 day PR Exercise at sea.
22 - 26 Mar 11	Mumbai	IMO Level - I course for ICG Personnel	PRT (West)	04 day Class room instruction. 01 day PR Exercise at sea.
18 - 22 Jul 11	Mumbai	IMO Level - I course for Resources/ Oil Handling agencies	PRT (West)	04 day Class room instruction. 01 day PR Exercise at sea.
01 - 05 Aug 11	Mumbai	IMO Level - I course for ICG Personnel	PRT (West)	04 day Class room instruction. 01 day PR Exercise at sea.
17 - 21 Oct 11	Mumbai	IMO Level - I course for ICG Personnel	PRT (West)	04 day Class room instruction. 01 day PR Exercise at sea.
21 - 25 Nov 11	Mumbai	IMO Level - I course for Resources/ Oil Handling agencies	PRT (West)	04 day Class room instruction. 01 day PR Exercise at sea.
<b><u>Eastern Region</u></b>				
14 - 18 Mar 11	Chennai	IMO Level - I	PRT (East)	Class room instruction. 01 day PR Exercise at sea.
08 - 12 Aug 11	Chennai	IMO Level - I	PRT (East)/	Class room instruction. 01 day PR Exercise at sea.

## INDIAN COAST GUARD ANNUAL POLLUTION RESPONSE TRAINING PROGRAMME - 2011

DATE	VENUE	TYPE OF TRAINING	COORDINATOR	REMARKS
07 - 11 Feb 11	Chennai	IMO Level - I	AMET University	04 day Class room instruction/ shoreline assessment and 01 day PR Exercise at sea.
25 - 29 Jul 11	Chennai	IMO Level - II	AMET University	04 day Class room instruction/ shoreline assessment and 01 day PR Exercise at sea.
<b><u>North West Region</u></b>				
25 - 28 Apr 11	Vadinar	IMO Level - I	ICGS Vadinar	Training for Reps of various Oil Handling / Resources agencies.
17 - 20 Oct 11	Vadinar	IMO Level - I	ICGS Vadinar	Training for Reps of various Oil Handling / Resources agencies.
<b><u>Andaman &amp; Nicobar Region</u></b>				
30 May - 03 Jun 11	Port Blair	IMO Level - I	PRT (A&N)	Batch-I for Local Resources agencies
27 June - 01 Jul 11	Port Blair	IMO Level - I	PRT (A&N)	Batch-II for Local Resources
17 - 19 Oct 11	Port Blair	Capsule Course	PRT (A&N)	Batch-I for Coast Guard Personnel
30 Nov - 02 Dec 11	Port Blair	Capsule Course	PRT (A&N)	Batch-II for Coast Guard Personnel

(PR Exercise will be conducted after each course conducted as mentioned above.)



**MINOR & MAJOR OIL SPILLS IN INDIAN WATERS (SINCE 1982)**

S. No.	Date	Qty and Type of Spill (Tonnes)	Location	Spilled by
01	1982	Not Assessed	West Coast	Sagar Vikas
02	24/10/88	1000	Bombay Harbour	Lajpat Rai
03	1989	Not Assessed	West Coast	SEDCO 252
04	1989	5500/Diesel Oil	795 nm SW of Bombay	MT Puppy
05	04/8/1989	Not Assessed	Bombay Harbour	ONGC Tanker
06	29/8/1989	Not Assessed	Saurashtra coast	Merchant ship
07	29/8/1989	Not Assessed	Bombay Harbour	Unknown
08	22/3/1990	Not Assessed	NW of Cochin	Merchant Ship
09	07/9/1991	692/FO	Gulf of Mannar	MT Jayabola
10	14/11/1991	40000/Crude	Bombay High	MT Zakir Hussain
11	22/2/1992	Tanker wash	40 NM S of New Moore Is	Unknown
12	2/4/1992	1000/Crude	54 NM west of Kochi	MT Homi Bhabha
13	16/8/1992	1060/SKO	Madras Harbour	MT Albert Ekka
14	17/11/1992	300/FO	Bombay Harbour	MV Moon River
15	21/1/1993	40000	Off Nicobar Islands	Maersk Navigator
16	28/3/1993	NK/Crude	Off Narsapur	ONGC shore rig at Kumarada
17	29/4/1993	110/Crude	Bombay Harbour	MT Nand Shivchand
18	10/5/1993	90/FO	Bhavnagar	MV Celelia
19	17/5/1993	6000/Crude	Bombay High	BHN Riser pipe rupture
20	02/8/1993	260/FO	Off New Mangalore	MV Challenge
21	01/10/1993	90/Crude	Cochin Harbour	MT Nand Shiv Chand
22	12/5/1994	1600/Crude	Off Sacramento Pt.	Innovative-1
23	12/5/1994	Not Assessed/FO	360 NM SW of Porbandar	MV Stolidi
24	05/6/1994	1025/Crude	Off Aguada Lt	MV Sea Transporter
25	20/7/1994	100/FO	Bombay Harbour	MV Maharshi Dayanand
26	27/11/1994	288/HO	Off Madras	MV Sagar
27	26/3/1995	200/Diesel	Off Vizag	Dredger Mandovi-2
28	24/9/1995	Not Assessed/FO	Off Dwaka	MC Pearl
29	13/11/1995	Tanker wash	Eliot beach, Madras	Unknown
30	21/5/1996	370 FO	Hooghly River	MV Prem Tista

S. No.	Date	Qty and Type of Spill (Tonnes)	Location	Spilled by
31	16/6/1996	120 /FO	Off Prongs, Mumbai	MV Tupi Buzios
32	18/6/1996	132 /FO	Off Bandra, Mumbai	MV Zhen Don
33	18/6/1996	128 /FO	Off Karanja, Mumbai	MV Indian Prosperity
34	23/6/1996	110/FO	Off Worli, Mumbai	MV Romanska
35	16/8/1996	124/FO	Malabar Coast	MV Al-Hadi
36	25/1/1997	Tank wash	Kakinada Coast	Unknown
37	19/6/1997	210/FO	Off Prongs Lt, Mumbai	MV Arcadia Pride
38	19/6/1997	Not Assessed	Hooghly river	MV Green Opal
39	14/9/1997	Naptha, DieselPetrol	Vizag	HPC refinery
40	02/8/1997	70/FO	Off Mumbai	MV Sea Empress
41	10/3/1998	Gas leak	Bombay High	Drill Rig Noble
42	12/5/1998	Gas Leak	Bombay High	Bombay High platform
43	01/6/1998	20/Crude	Off Vadinar	Vadinar,SBM
44	09/6/1998	Not Assessed	Off Porbandar	Ocean Barge
45	09/6/1998	Not Assessed	Off Veraval	Ocean Pacific
46	08/7/1999	500/FO	Mul Dwarka	MV Pacific Acadian
47	19/7/2000	Not Assessed	Off Sagar Island	MV Prime Value
48	8/9/2000	Not Assessed	Off Fort Aguada	MV River Princess
49	17/12/2000	1/FO	Bombay Harbour	MV STonnesewall Jackson
50	08/6/2001	Not Assessed	Vadinar Gulf of kutch	Not known
51	10/7/2001	1305/Diesel Oil	Hooghly river	MV Lucnam
52	23/09/2002	Not Assessed	Off Pt Calimare 220 NM	MV HIDERBAHY
53	29/04/2003	2000 Ltrs of Arab light crude oil	O5 miles off Kochi	MT BR AMBEDKAR
54	09/05/2003	2000/Naphtha	Mumbai harbour (sw of west Colaba Pt.)	MT UPCO_III
55	18/05/2003	145/FFO	Off Haldia	MV SEGITEGA BIRU
56	10/08/2003	300/Crude Oil	ONGC Rig (BHN)	URAN Pipe Line
57	28/02/2004	01/Crude Oil	36 inches ONGC pipe line at MPT Oil Jetty (Tata Jetty -OPL PIRPAU)	During Cruide oil trasfer from Jawahar Dweep to ONGC -Trombay through 36 ` pipe
58	01/10/2004	500 to 600 Ltrs	Berth – MPT – 8 Goa	During oil transfer

S. No.	Date	Qty and Type of Spill (Tonnes)	Location	Spilled by
59	23/03/2005	110	Off Goa (Aguada Lt)	MV Maritime Wisdom off Aguada Lt.
60	27/07/2005	80	Fire taken place on oil platform off Bombay high	BHN Platform Bombay High
61	30/08/2005	08	Sunken Ship off Tuticorin	MV IIDA
62	21/04/2006	90	Sunken Ship off Goa	INS Prahar
63	06/05/2006	Minor spill (less than 100 ltrs)	Sunken Tug off Pt. Calimer Tamilnadu	DCI Tug-IV
64	30/05/2006	70 tons of Furnace Fuel Oil	Grounded off Karawar Port	MV Ocean Seraya
65	14/08/2006	4500	Outside Indian EEZ near A&N Islands	MV Bright Artemis & MV Amar
66	15/10/2007	13.9/FO	Off Jakhau	MV Star Leikanger & barge Dhan Lakshmi due to collision
67	17/10/2007	Not assessed Kakinada	S Yanam Beach, oil rigs	Oil drifted to shore from
68	19/07/2009	50 litres	Off Mangalore	MV Asian Forest
69	06/08/2009 to 13/08/2009	Approx 200 tons (oil debris wash-off on the shorelines)	South Gujarat and Maharashtra Coast (Western India)	Not established
70	09/09/2009	200-500 litres	Paradip Port Anchorage	MV Black Rose
71.	02/01/2010	05 tons	Off South Chennai	Not known
72.	12/04/2010	08-10 tons	Gopalpur (Orissa)	MV Malvika
73.	20/07/2010	80 tons	Panna Offshore, Near Panna SBM	PMT Joint Venture
74.	07/08/2010	700 tons (approx)	Mumbai Harbour	MC Chitra
75.	15/08/2010	20 KL oil removed for the ship	Eastern side of Kavaratti Island	MV Nanda Aprajita
76.	23/11/2010	12 tons	Off Hugli Point	Collission between MV Tiger Spring & MV Green Valley

... the updates will continue ...

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