



MOIG TECHNICAL SESSION

21-24 November 2010

MALTA

"Oil Spill Issues from Offshore Operations-Lessons for the Mediterranean Basin"



Attendees

First Name	Last Name	Company	Job Title
Henne	Hennis	Shell	Marine Advisor
Funda	Gurcuoglu	Meke Marine	Certified Public Accountant-CPA
M.Kerem	Kemerli	Meke Marine	Civil Engineer
Sonja	Stiglic	Janaf	Environment Dpt. Manager
Bahadir	Ekizer	Tpao	Env. Prot Manager
Andrew	Nicoll	OSRL	Operations Team Manager
Rob	James	OSRL	Regional Director
Polla	Matiot	Eni	
Richard	Hill	Vikoma	Sales Manager
Ben	Farugia	Vikoma	Local Agent
Tahar	Naily	Lundin	Chief Officer
Yvette	Osikilo	IPIECA	Project Manager
Ahmed	Osman	Statoil	HSE & CRS Manager
Zouhair	Sassi	ETAP	HSE Manager
Colleen	O'Hagan	ITOPF	Senior Technical Advisor
Ridha	Dhoui	MOIG	Director
Christophe	Rousseau	Cedre	Deputy Manager
Jassem	Tissaoui	BG Tunisia	Operations HSE Manager
George James	Franklin	Shell (IPIECA presenter)	Global Maritime Services Projects.
Roberto	Patruno	COSTALIA ECOLMAR	Consultant
Malek	Kallel	SEREPT	Engineer
Andy	Nash	DESMI	BUSINESS MANAGER
Frederick	Hebert	REMPEC	Director
Gabino	Gonzalez	REMPEC	Programme Officer
Raymond	Bartolo	TUG Malta	
Capt. Joseph	Brincat	Malta Marine	
Capt. John. M	Dalli	Malta Marine Pilots	

Dr. Charles	Galea	Malta Resources authority	
Hon. George	Pullicino	Minister of Resources and rural affairs	
Dr. Maurizio	Re		
Albert	Tabone	Civil Protection Dpt	
Paul	Xiradakis	Mega Tugs Greece	
Micheal	Zammit	TUG Malta	
Sophie	Martin	REMPEC	Junior Programme Officer
Capt. D.	Buggo	Transport Malta	

INTRODUCTION

The Mediterranean Oil Industry Group (MOIG) held its 2010 Annual Technical Session in Malta on November 22nd and 23rd. The session was hosted by ALPHA BRIGGS. In response to the Deepwater Horizon and Montara incidents, the general theme of session was:

"Oil Spill Issues from Offshore Operations-Lessons for the Mediterranean Basin"

The objectives of this Session were:

- To explore whether the Mediterranean area is exposed to similar risks
- To consider the level of preparedness in the region. What lessons can be learnt and are transferable from the Macondo – DWH spill in the Gulf of Mexico and the Montara spill in Australia;
- To provide a platform for discussion and stimulate the exchange of views and knowledge among Members, Technical Partners and International Agencies and Organizations in this field;
- To present and discuss with Members experts existing status of Oil Spill Response and Remediation;
- To identify the gaps in the Response planning and different Techniques of Remediation at Local and Mediterranean level.

The technical session was mainly animated by high level oil spill experts from different international organizations and departments such as IPIECA, REMPEC, OSRL, ITOPF, CEDRE ...

In the report hereafter you will find abstracts of the different interventions of the Session as well as the main points discussed during the panel sessions.

Introduction and Official Opening Session

Mr. Ridha Dhaoui, MOIG Director welcomed Honour George Pullicino, the Maltese Minister of Resources and Rural affaires, reminding the assistance of the importance of the role played by Malta in developing MOIG since its inception saying that we started by sticking to the REMPEC Focal Points Meetings to organize our previous first sessions.



Mr George Pullicino, the Maltese Minister of Resources and Rural affaires welcomed the attendees and

opened the conference by congratulating MOIG and Alpha Briggs for organizing such an event and for the choice of the theme which he considers as very appropriate at this delicate stage following The Deepwater Horizon oil spill in the Gulf of Mexico last April. Then, he dealt with the status of Malta's Oil exploration Programme and the related measures to be taken in order to protect the environment and to avoid such an ecological disaster.



Mr. Frederick Hebert, the director of REMPEC, in his turn welcomed the attendees, and made a presentation on the significant

developments which took place in the region since MOIG's last technical session in Istanbul. The director of REMPEC highlighted the progress made towards the adoption of a national contingency plan in Montenegro, Albania and Libya. In these three countries he expressed his confidence that the national contingency plan will be finalized by the end of the year. Regarding

emergency assistance activities, he informed the meeting about the role played by the Centre during the DeepWater Horizon Spill. The director also informed the meeting about the "Mediterranean the Guidelines on shoreline clean up assessment" that the Centre published earlier this year and also on the first "train trainers" course that together with MOIG, the Centre organized last month in Tunisia for 35 participants within the framework of the sub-regional agreement on co-operation with regards to response to accidental marine pollution by oil in the south western Mediterranean (Algeria, morocco, Tunisia). He also announced that the Centre will soon release on its website the "oily waste management decision support tool" that the Centre has been developing at the regional level. He concluded his presentation by drawing the attention of the participants on the entry into force of the Offshore Protocol to the Barcelona Convention following its ratification by Syria. He gave a rapid overview of the main provision of this protocol which inter alia is calling for a general system of authorization for offshore activities, adoption of best practices and their enforcement and also deals with liability and compensation, a subject where the Contracting Parties are requested to adopt a regional system. Finally as regards co-operation in response to offshore spills he outlined that the

Offshore Protocol was referring this matter to the prevention and Emergency Protocol and mentioned that in its Communication to the European Parliament and to the Council issued on the 12th of October, 2010 and entitled “facing the challenges of the safety of offshore oil and gas activities”, the European Commission was envisaging the involvement of REMPEC in prevention and response activities related to offshore activities.



Mr. Paul Pisani, Executive Director of the AOST Group and Alpha Briggs Mediterranean Ltd, delivered a presentation about the

history of the AOST Group and its joint venture Oil Spill Response Company established in 2006: Alpha Briggs Mediterranean Ltd. now operates offices in Malta, Tunis and Tripoli and operational bases in Malta and Sfax, Tunisia.

Paul Pisani made reference to the ever increasing volumes of traffic trading across the Mediterranean which have now reached around 280,000 vessels annually and will continue to increase during the next decade with the increased oil terminal utilisation in the Eastern Mediterranean. All this presents considerable risks, to which one must add the increased oil & gas exploration and production offshore the Mediterranean Coastal States.

Paul Pisani questioned the status of actual preparedness by the Coastal States, albeit that most had ratified the OPRC Convention; the degree of support being given by EMSA to Tier 2 Contractors; the

effects of an incident of the scale of the Deep Water Horizon in the Mediterranean.

The presentation ended with an appeal to Oil Spill Organisations to learn to co-operate more than compete; the large global organisations to utilise the in country expertise and logistics advantages of smaller in-country Tier 2 contractors; the majors to include small OSR Organisations in their plans, MOIG being a good example and finally that exercises to be conducted more frequently, and to simulate more the scenario of real incidents

Captain Richard Gabriele CMILT, FNI Head, pollution and Incident Response, Transport Malta



focused during his presentation, on a major issue none other than the prevention and control of pollution. In this sense Captain Gabriele spoke about OPRC 90 and the measures that have to be taken as far as dealing with pollution incidents on the national scale or in co-operation with other countries that are concerned. He also highlighted the importance of shipboard oil pollution emergency plan and the coordination with national systems for an effective response. Transport Malta as the National Competent Authority was one of the themes discussed during the presentation. The contingency plans have been discussed as well with a main focus on the upcoming projects. Captain Richard Gabriele also focalized on Response and more particularly on the equipment and the type of responses. Captain Gabriele

concluded his presentation by emphasizing the importance of exercises as a very important step in oil spill preparedness.



Dr Alan Deidun, Marine biologist from Malta made a presentation entitled “the ecological implications on the marine and coastal

domain of a major oil spill in Maltese near shore waters”. He stated that the Central Mediterranean is increasingly witnessing the expansion of offshore oil drilling activities and this in turn has heightened concerns about the ecological implications of a potential massive oil spill in the area. Environmental considerations made vis-à-vis oil spill are normally limited to the putative impacts on water quality, coastal ecosystems and seabirds and marine mammal populations. A vast array of marine and coastal ecological impacts may arise from an oil spill, including the impact on sea grass populations as a result of shading effects on marine biota, which range from reduced reproductive success to carcinogenic effects, with species at the top of marine food chains bearing the greatest brunt as a result of biomagnifications.



In his presentation, **Mr Ridha Dhaoui, Director of MOIG** gave an update on the activities of MOIG during the last year. He started

by talking about the development of MOIG membership during the year 2010 which witnessed the joining of 6 new members

Ridha stated that there have been improvements in regional arrangements due to MOIG activities; and that although many Mediterranean countries have ratified the IMO OPRC 90 Convention, the implementation of this protocol remains an issue.

On the 11th and 12th May 2009, a joint MOIG/REMPEC Workshop was organized in Marseille in order to strengthen cooperation between governments and industry in the Mediterranean region and to provide recommendations for short/medium and long term activities to increase the preparedness and response capacity in the Mediterranean.

Before the workshop, an **Assessment questionnaire** made up of 4 parts: contingency Review, Management Review, Response Review and Expectation Review was sent to MOIG Members and non members. The objectives of the study were mainly to Gather relevant information relating to the status of oil spill preparedness in order to strengthen cooperation between governments and industry in the Mediterranean region and to provide recommendations for short/medium and long term common activities to enhance regional cooperation and increase the preparedness and response capacity in the Mediterranean

Ridha stated that there are 90 facilities handling oil in the Mediterranean. These facilities are divided as follow: 8% offshore platform, 26% oil terminal, 24% ports and 42% refineries.

From the studies it was concluded that there exists a good level of contingency planning development and a good level of training in the analysed sites; it was concluded also that there is Tier 1 equipment and an emergency number in place.

However, it was concluded as well a need to develop further mutual aid agreements to get better access to Tier2 and a need to develop more exercises. It is needed also to include governments and other industries in exercises to develop partnership.

In this context, a joint REMPEC – MOIG Mediterranean Government Industry Cooperation Action Plan (MGICAP) was set up after the Workshop of Marseille 2009. The **MGICAP** is a regional and short - long term program aiming at improving the preparedness and response capacity level and cooperation between Government and oil industry.

The first presentation of Mrs **Colleen O**



Hagan, Senior Technical Advisor in the ITOPF was about two recent cases ITOPF have been involved with, in order to highlight

some of the main issues that arises time and again when responding to oil spill incidents. The incidents were BUNGA KELANA 3 (BK3) in Singapore Straits and MSC CHITRA in Mumbai, India. In relation to BK3, the difficulty in working across national boundaries with different levels of preparedness and response management structures was highlighted.

Another point highlighted was in the use of chemical dispersants. These were used predominately offshore Singapore in response to the oil spill, however some dispersant was also applied near-shore creating response problems which has subsequently prompted the Singapore Maritime and Port Authority (MPA) to develop more robust dispersant application guidelines for all government agencies involved in spill response in Singapore waters. Many issues arose during the MSC CHITRA, namely delays in transport of specialised spill response equipment due to airport security and the Board of Excise and Customs. Safety concerns arising from the loss of canisters of pesticides from containers onboard MSC CHITRA had also to be dealt with prior to responding to the spilled oil. Again, the benefits of good planning and preparedness were emphasised as the key to any successful response.



The presentation of Mr **Christophe Rousseau, Deputy Manager, CEDRE** was entitled “introduction to the Deepwater Horizon

Oil Spill”. He said that in April, 20th, 2010, 66 km off the coast of Louisiana, the rig Deepwater Horizon suffered a blow out resulting in an explosion and a fire. 17 people were injured in the accident and 11 reported missing. The rig sank two days later, leaving a continuous flow of oil to escape from the well. This was the beginning of the worst spill the US has ever known.

Deepwater Horizon, a semi-submersible offshore drilling rig with a dynamic positioning system, was owned by Transocean, flew the Marshall Islands flag and was leased to BP at the time of the accident. Very rapidly after the accident occurred, the US administration and BP set up a solid command system. A series of attempts to plug the leaking well was implemented and completed 5 months later with the injection of cement into the top reservoir in order to definitively seal the well. In terms of pollution response, the main aim was to prevent the oil from reaching the coastline, in particular the sensitive areas of Louisiana. Three main techniques were deployed: recovery at sea, chemical dispersion and controlled burning. It is too early to have an accurate appreciation of the environmental impact of this huge spill. Thousands of samples taken from the atmosphere, water, sediment, flora and fauna must now be analyzed to assess these impacts.



The presentation of Mr **George Franklin, Global Maritime Services Projects at Shell and IPIECA representative**

covered the OGP (International Association of Oil and Gas Producers) initiatives on the follow up and response to the BP Gulf of Mexico incident, with particular reference to the Oil Spill

Response Issues GIRG (Global Industry Response Group.)

In his presentation he went through the OGP/GIRG objectives, the work carried out on expanding risk assessment in line with the Tiered Response Model to incorporate Exploration activities and issues to be addressed when considering containment systems. Then he finished with giving a summary of the “Gaps” already identified.

Andy Nash, Business Manager, DESMI Ro-Clean



started his presentation by saying that the recent BP Deepwater

Horizon incident saw in situ-burning oil was removed with this process than conventional skimming. The authorities had the view that it would be better to remove hydrocarbons at sea than have the expense of shore-line and beach cleanup. The latter can be up to 100 times more expensive than the offshore operations.

There are two basic booms that are used for in-situ burning and these can be simply split into those with a ‘fail safe’ design and those that are not. The PyroBoom is fail safe and does not require power packs, inflators, water pumps or indeed any other support device or equipment to operate. It is a unique fence boom design with special silicon coated refractory top barrier fabric reinforced with inconnel. Floatation is achieved with hemispherical stainless steel float shells that are filled with glass foam. These floats have in excess of 150 hours of burn time with no damage. Repair & maintenance kits can also be supplied and

can be easily in-field fitted using only common hand tools.

The first operation with in situ-burning is to coral the oil to a sufficient thickness to support combustion. Typically this would be + 2mm. Therefore the boom is towed and maneuvered in much the same way as conventional booming operations. The tow bridles were set at some 100 meters in an attempt to keep the towing vessels a safe distance from the boom and be up wind when ignition occurred.

An emergency plan exists should the burn go out of control and there was a 5 nautical mile safety zone from other vessels and platforms. The boat crews are issued and trained with the correct personal protection equipment (PPE) including fireproof clothing. Before and after each burn, oil samples were taken to ascertain the level of combustion and any residue that was left.

There is more work to be done with regards atmospheric effects of in-situ burning but the fail safe design of Pyro-Boom is now a tried, tested and acceptable alternative to traditional skimming operations. In the right conditions and with the correct training, Pyro-Boom is another proven tool for the toolbox of oil spill response.



The presentation of Mr **Andy Nicoll**, **Operations Team Manager** from **OSRL** was introduced with a

number of key facts surrounding the Deepwater Horizon incident which occurred in the Gulf of Mexico on April 20th. Following the initial explosion, the MC252 well continued to release oil for 87

days and the oil spill response mitigation employed during this period were discussed using the “pyramid of response” model, beginning at the centre of the pyramid with the innovative use of sub-surface injection of dispersant at the wellhead. On the sea surface, response activities took place in delineated concentric zones, with SIMOPS (Dispersant spraying from vessels to suppress VOCs), in-situ burning, containment and recovery and aerial dispersant operations taking place in the offshore zones. Nearer to shore, 8000 vessels of opportunity were employed doing localised clean-up operations whilst onshore a comprehensive SCAT operation was in place well in advance of the first oil impact.

The presenter considered the Command and Control aspects of managing such a large and multi-faceted incident response over several months and presented some startling statistics to put the scale of the response effort into context.

BP, together with a number of industry and governmental groups are already disseminating lessons-learned from this landmark incident. The lessons pertaining to oil spill preparedness and response technology were discussed in highlight detail. The learnings are of interest, and have relevance to industry groups and governmental regulators, not only in the Mediterranean region but throughout the world.

Session 1 Summary, discussion and conclusions

Although the first session of the meeting focussed on the Management of the response itself during the Deepwater Horizon Incident, the discussion turned mainly around the use of dispersant and the impact of such a method of treating the oil spill in the Mediterranean region. It was agreed to report such a discussion on the dispersant at the end of the second session of the next day.

Also the impact of such a big incident on the oil industry itself and the way of better setting up the impact assessment studies and the oil spill emergency plan have been deeply discussed in order to be better prepared for the management of a major oil spill taking into account the different aspects of the incident management.

Gabino Gonzales, Programme Officer, REMPEC introduced

a presentation on the “Use of Dispersants in the Mediterranean Region”. The



revision of the “Guidelines for the Use of Dispersants for Combating Oil Pollution at Sea in the Mediterranean Region”, 1998, in the framework of the Mediterranean Technical Working Group’s program of activities 2010-2011, was first introduced to the participants. IPIECA proposed to circulate the draft document to its members for comments and contribution. It was also proposed to REMPEC to include in the revision process the outcome of the

analysis of Deepwater Horizon. The situation concerning the use of dispersants in the Mediterranean region from a regional, national, strategic, legal and operational point of view was then presented. Reference was made to the regional assessment on the level of preparedness and response, carried out in 2009, which is reported in REMPEC’s Country Profiles (www.rempec.org/country.asp). The Centre concluded its presentation on the lessons learnt from the Deepwater Horizon incident and informed the participants that the Centre will endeavor to further detail the country profile’s section on the equipments inventory in view of disseminating promptly relevant and updated data in case of regional or international requested of assistance. REMPEC invited MOIG to support this initiative and to establish an inventory of equipment amongst its members and associates.

The second presentation of **Mr Cristophe Rousseau, Deputy Manager, CEDRE** was “Investigation of dispersant use in coastal and Estuarine waters”. He stated that dispersants are known to be an appropriate solution for offshore spill response when dilution conditions are high and dispersed oil concentrations decrease rapidly below levels that could potentially harm the environment. In coastal areas, however, where dilution can be restricted due to limited depth and vicinity to various coastal resources, dispersant use should be limited. In contrast, for certain cases, the use of dispersants could be beneficial to these regions. In response to these situations, it is necessary to analyze and assess the advantages and potential risks of

dispersing oil in these sensitive regions.

The Discobiol work program aims to acquire comparable and robust information on the impact of mechanically and chemically dispersed oil on different habitats and resources, most notably estuaries and/or close bays. Information regarding lethal and sub-lethal effects will be analyzed for several organisms in the water column, mudflats, and salt marsh communities. The information gathered in this work program will be used to make recommendations for the use of dispersants in such areas.

Rob James,
Regional
Director, Oil
Spill Response
Ltd started his
presentation by
giving a summary



of the main technical issues arising from the Joint Industry Task Force (API), OSPRAG (UK Oil & Gas) and GIRG (OGP study groups was presented. Priority issues identified by the various groups related to the scientific data to underpin the monitoring of dispersant effectiveness, both surface applied and sub-surface. The key role of Fluorometry as a SMART protocol was highlighted. Data from a number of in-situ burning operations needs to be collected and analysed in order to develop the best practice guidelines. The need to review high volume oil recovery equipment which can achieve high encounter rates was another topic of interest as was the potential application of the US Incident Command Structure around the world.

The work of the Industry Technical Advisory Committee (ITAC) was presented. The purpose of ITAC is to act as a focal point for technical issues and as a forum for information exchange in the areas of preparedness, oil spill response operations, response technology, and response training. His role is undertaken on behalf of the response community and the oil company shareholders of the industry owned response organisations. It has been in existence since 1996, working to increase co-operation between industries sponsored response organisations and benchmark standards in Response, Training and Personnel competence levels. It acts as a forum to share equipment performance criteria and provides a centralised source of oil spill technical information, reducing duplication of effort and increasing communication between industry personnel. It has a particular role in providing technical support to IPIECA's Oil Spill Working Group (OSWG).

Finally a novel use of dispersant as an Occupational Safety tool on the Deepwater Horizon response was presented. High levels of VOCs, which included Benzene, had been detected above the well-head where many operations were focused. These critical operations such as relief well drilling, capping and containment etc could not be undertaken wearing full Breathing Apparatus but could not be subject to regular shut-downs due to the high VOC levels. Dispersants act to disperse the oil into the water column. Once in the water column the oil does not evaporate and so VOC are not produced. Consequently a protocol for the use of vessel-mounted dispersant application was developed to allow these crucial operations to continue uninterrupted.

In her second presentation, **Colleen O Hagan, Senior Technical Advisor, ITOPF** presented various statistics and maps to demonstrate that, although the risk of large spill incidents from ships are decreasing, risks of future occurrences in the Mediterranean remain. Implications for response could mean that less large spills results in less relevant spill experience amongst both industry and government. It was noted that following Deep Water Horizon, there has been increased interest and attention given to the spill response field and in addition to new developments in response that may arise from this; however consideration should also been given to getting the basics right, namely the planning, preparedness and government/industry cooperation; the importance in preparedness for shoreline response was also highlighted, as it is often found this area receives much less attention than at sea response in planning and exercises. Various areas of spill response were discussed inclusive of the use of chemical dispersants. It was highlighted that although a wealth of literature exists as to the use of chemical dispersants in response to oil spills many countries in the Mediterranean region would not consider it a primary response technique. Furthermore, past cases worldwide reveal that during incidents were dispersants may have been approved for use; they were not always used appropriately. In general, the issues discussed demonstrated the need for continued education programs on effective spill response.

Session 2 Summary, discussion and closure of the conference

The panel discussion of this session focussed mainly on the use of dispersant and its eventual impact on a region like the Mediterranean.

It was agreed that the Mediterranean region should be seriously and deeply taken into consideration by the different countries and the international organizations and a more important involvement and support should be given by the oil companies especially the major companies to support MOIG and REMPEC in achieving the Mediterranean Government-Industry Cooperation Action Plan MGICAP's recommendations for the coming four years.

MOIG should be more active and achieve more activities in the region in order to enhance the level of the oil industry sector in the Mediterranean in terms of prevention, preparedness and response to oil spill.

Concerning the aspect of using dispersant, it was agreed that the application of chemical dispersant in the seas can give effective results and be considered as an effective mean of accelerating the dispersion of oil from the sea surface into the water column; This when it is judiciously used in the right circumstances.

After the presentation of REMPEC on their study on the use of dispersant in the Mediterranean, it was mainly recommended to circulate this study within the Oil Spill Working Group members OSWG in order to be taken into

consideration and discussed in light of the different meetings and discussions planned by IPIECA, IMO, and OGP during the coming weeks.

Visit of ALPHA BRIGGS Oil Spill Response Base

During the last day the participants made a visit to the tier 2 oil spill response base of ALPHA BRIGGS in Malta; where they've been showed the different parts of the base including training, storage of equipment and response emergency rooms.

