



Review of Joint Industry Projects

Delivering fit for purpose Oil Spill Response – the OSR-JIP

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The April 2010 Gulf of Mexico (Macondo) oil spill incident, and other similar incidents, such as the Montara incident in Australia which preceded it have had far-reaching consequences in prompting the re-examination by industry not only of operational aspects of offshore operations, but also of an operator’s ability to respond in the event of an oil spill incident or well blowout. While the response to the Gulf of Mexico spill is widely recognised to have been successful, there are a number of lessons that can be learned from the response effort which provide an opportunity to inform and further strengthen future preparedness and response initiatives for E&P operations and the maritime (shipping) community.

In response to the Macondo incident the International Association of Oil and Gas Producers (OGP, now IOGP) formed the Global Industry Response Group (GIRG), tasked with identifying the key questions to prevent recurrence of such an incident and identify learning opportunities on prevention, intervention and response. Three sub-groups were set up (see Figure 1) on Prevention, Capping and Containment, and Oil Spill Response. These groups were comprised of appropriate nominees from OGP member companies, from the IPIECA Oil Spill Working Group, from Oil Spill Response Limited (OSRL), and from other industry organizations, associations, and spill response cooperatives as appropriate.

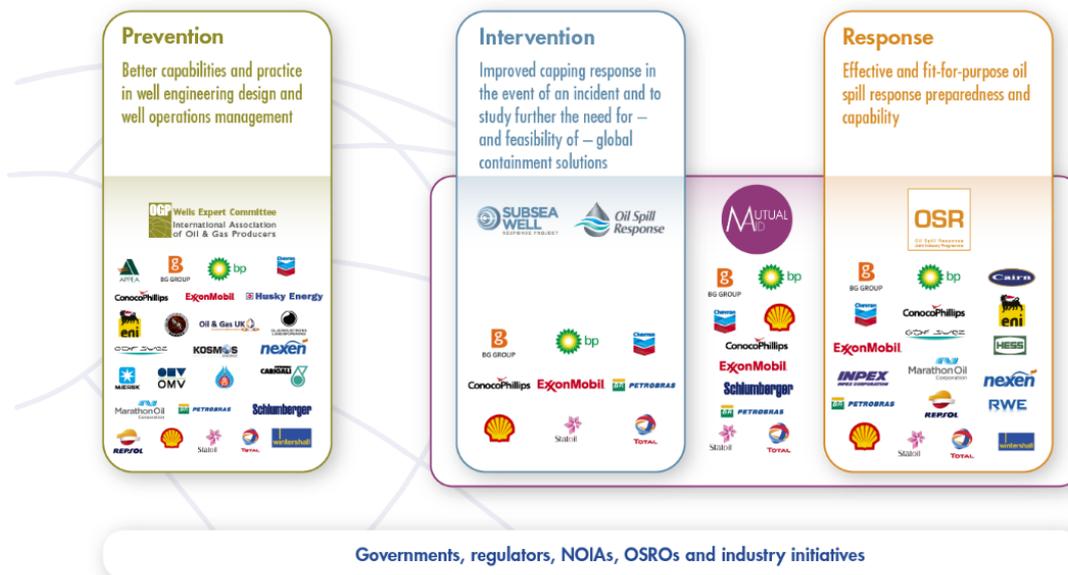


Figure 1: The Global Industry Response Group (GIRG)

The OGP GIRG-OSR task force reported on its findings to both the OGP Management Committee and the IPIECA Executive Committee at a joint session in February 2011. Subsequent work was conducted by a joint board-level team to examine the implications of the recommendations of the GIRG-OSR work and develop a recommended structure for the execution of that work. While certain actions recommended by the GIRG-OSR report fell within the remit of existing organisations, it was recognized that the most efficient way to execute the resultant work was for the industry to establish a limited duration Joint Industry Project (JIP), governed by the nineteen funding companies that had expressed interest. This JIP, which was officially formed in December 2011, executed the recommendations from the report over a three year period.

Working through a JIP had several clear benefits:

- It promoted credibility through group consensus and collaboration
- It provided a body of information that can now be used to respond proactively to outside agencies
- The existence of a JIP made it easier for national administrations, intergovernmental organisations and willing third parties to participate in the studies and therefore to build their confidence in the results of the commissioned investigations and research.

The OSR JIP initiated discreet projects or provide support to projects initiated by other trade associations (e.g. API) in the nineteen subject areas resulting from the OGP GIRG-OSR project. The OSR JIP was managed by IPIECA on behalf of OGP in recognition of its long-standing experience with Oil Spill Response matters. The nineteen recommendations are summarized below:

The work program

1. Inform decision-makers on the value of dispersants

Given the right conditions, the surface and subsea use of dispersants can substantially improve the efficacy of response, and their use should be considered alongside other response options such as mechanical recovery and “In Situ” Burning. The potential benefits and limitations of dispersant use are not fully understood by stakeholders. It is recommended that an awareness package on the value of dispersants developed for stakeholders. This should include updates to existing industry publications, the publication of an independent reference guide, and a model protocol for pre-approval of dispersants that can be shared with regulators.

2. Efficacy of Dispersants

An extensive body of knowledge already exists with respect to dispersants. However further research should be carried out to inform the development of a standardized protocol for dispersant approvals that could apply globally. There may be a need to work with other groups (OSPRAG, API and others) and the Subsea Well Response Project (SWRP) on dispersant testing protocols for subsea dispersant injection.

3. Dispersant Approval & Supply Chain

Dispersant supply plans should be developed that demonstrate how appropriate supplies of pre-approved dispersants can be accessed, considering dispersant types and approval issues, the

logistics of product delivery and the “ramping-up” of manufacturing capability during an extended event. Industry members should be encouraged to include comprehensive dispersant re-supply plans in their contingency planning processes. Global dispersant supply chains should be catalogued.

4. Dispersant Effectiveness Monitoring

There is no globally applied Recommended Practice for surface dispersant effectiveness monitoring. The SMART protocol has been widely adopted in the USA and is accepted by the regulatory authorities for surface-applied dispersants. However its use is not widespread outside of the USA. It is recommended that the protocol and other post-spill monitoring tools be evaluated for worldwide application, and if found suitable, implemented through incorporation in a good practice document.

5. In Situ Burning (ISB)

Globally, there is considered to be relatively limited information available on ISB applicability as well as the practices and techniques employed during ISB deployment. Given the recent success of this technique, a range of documents, approval protocols, and standard methodologies should be developed, to optimise its deployment in the future.

6. Assessing Response Preparedness

Industry spill response and risk/hazard assessment models are not always well understood by stakeholders. These models should be developed and disseminated in order to assist regulatory authorities and other stakeholders to understand and quantify risk and confirm that realistic response capability is put in place to respond to a potential hazard. When these models are completed, a Recommended Practice should be developed and communicated to regulators and other stakeholders. A communication package on this subject should also be developed.

7. Effective exercises

Exercises should be planned with the objective of comprehensively testing all aspects of oil spill response capability. This includes notification, assessment, communications, personnel availability, resource mobilisation and equipment deployment, cross-border movement of equipment and personnel, as well as testing an overall command and control structure. While some guidance exists, a consistent standard has not been adopted globally. A Recommended Practice on response exercises should be developed and inculcated in member companies via the IPIECA report series.

8. Surveillance of Oil Spills

Current practices for the surveillance and tracking of oil spills appear to be region specific and may not fully capitalize on the range of emerging technologies. Given the cross-functional nature of imagery and geospatial data in any oil spill response, a task force or committee should be formed to develop a Recommended Practice on the Surveillance and Tracking of Oil Spills. Tasks would include the development of an RP in cooperation with existing OGP Geomatics, Environment, Metocean and Safety Committees and the IPIECA OSWG and IPIECA Global Initiative (GI).

9. Tier 2 and Tier 3 Capability

The present model of Tier 3 response organisations and their location should be reviewed to confirm continued fitness for purpose and consider whether there could be an increase in Tier 2 locations closer to areas of perceived risk with the ability to respond more quickly before the arrival of the Tier 3 resources. It is recommended that an assessment of potential industry exposure is conducted based on current Tier 2, Tier 3 and commercial response bases to help inform the potential location of any additional resources.

10. Oil Spill Trajectory and Subsea Plume Modelling

During the operational phase of a spill there is a risk that a lack of adequate real time and model data at sufficient temporal and spatial resolution may impede initializing and running the models to an optimal level of accuracy. Existing methodologies and models for oil spill modelling should be reviewed and improvement areas identified.

11. Communications: forming a “Common Operating Picture”

During the Macondo response effort, there was significant innovation in the use of communications and IT technical tools over a wide range of activities in the management and tracking of the response. The communications tools used in managing the Macondo response effort should be captured and made available as an example of good practice for other organizations/countries.

12. IPIECA Oil Spill Working Group Report Series

In October 2010, the IPIECA Executive Committee recommended that the IPIECA Oil Spill Report Series be updated with some urgency following the Macondo incident to more accurately reflect Oil Spill Preparedness and Response priorities in respect of Exploration and Production (E&P); in recommending this, it is recognized that a decision also has to be made on whether the level of technical detail in the IPIECA Oil Spill Series should be increased, or whether a separate technical report series should be produced.

13. Indemnification of responders, oil spill response equipment and associated materials

There are a range of potential liability issues associated with the secondment of personnel to assist with a major incident which, if not addressed promptly and effectively, could impede efforts in the critical early stages of a response. A Recommended Practice on mutual aid responder indemnification and liability should be developed.

14. Airborne Dispersant Delivery Systems (ADDS)

The high volume airborne surface dispersant application platforms such as the Hercules have a finite life. While in the US there are still many available mid-life airframes, elsewhere many of these airframes are expected to be withdrawn over the next 5 – 10 years. It is recommended that industry look ahead to the replacement of the ADDS pack/Hercules option with other airframes and systems. The Oil Spill Response Organizations (OSROs) should work with airframe manufacturers to define future aerial dispersant platform(s).

15. Mobilizing, managing and integrating responders in-country

There is varied understanding on the use of national guards, military, etc. as responders in various countries around the world. It is recommended that good practice on volunteer management should be formalised. A Recommended Practice and accompanying advocacy package on mobilizing and managing and integrating military and volunteer responders should be produced.

16. Monitoring oil in the water column

Water column monitoring is well accepted in the USA for surface dispersant application (using the SMART protocol) but there is currently no consensus on monitoring the effect of subsea dispersant application and the transport and weathering of oil released at depth. It is recommended that short-term, the methods used on Macondo for tracking oil in the water column are reviewed and a Recommended Practice is developed for international use. Longer-term, technology for sampling and tracking dispersed oil plumes using AUV's should be evaluated.

17. Decanting of Temporary Offshore Storage Devices (TSD's)

There is a need to define good practices for the use of temporary storage devices. In certain jurisdictions, restrictions on discharging separated water during offshore collection and storage may potentially impede efficient response. Educational material on the use of TSD's should be developed and communicated widely.

18. Use of Personal Protective Equipment (PPE) during Spill Response

There is no universal guidance on the use of PPE in various countries around the world and guidance is needed for responding workers and volunteers during oil spill clean-up activities. An industry Recommended Practice on the health and safety of responders and all those involved in response activities should be developed and communicated widely.

19. Responding to different types of oil

There are databases available that document crude oil types versus the properties that are important in oil spill response. However, many of these databases are not current, and some do not sufficiently document the range of oils currently being produced. It is recommended that operators receive guidance on good practices in respect of understanding the oil spill clean-up related properties of oils that they handle, store, and transport.

Additional work

In addition to the above nineteen categories of research and Good Practice implementation, the OSR-JIP also carried out work on defining the characteristics of a Global Oiled Wildlife Response System, writing a Good Practice Guidance document on Incident Management systems (that aligns with ICS) and actively engaging with stakeholders around the world on outreach and communication of the JIP work program.

Completion

It is estimated that the OSR-JIP Phase I will complete in Q1, 2015. A second phase is currently being considered.

