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## Welcome

Welcome to the first API Joint Industry Task Force (JITF) Oil Spill Preparedness and Response (OSPR) newsletter. Previously, the API JITF provided yearly progress reports on our efforts, beginning with our initial recommendations from the Fall of 2010. This year, many of our projects were completed, while other projects continue. API and its members continue to advance the JITF program in collaboration with key stakeholders - including federal and state agencies, academia, and NGO's - in order to improve spill preparedness and response. We have assembled this update to apprise you on JITF project activity as well as additional issues and developments germane to oil spill prevention, preparedness and response. For more details regarding all of our projects, such as background information, goals and even the final reports themselves, please see API's Oil Spill Prevention website at [oilspillprevention.org](http://oilspillprevention.org).

As we have highlighted in past API JITF annual reports, the oil and gas industry maintains its commitment to coordinating across industry, government, and local stakeholder lines to ensure that if a response is necessary, we have developed actionable information through targeted research and have cultivated the relationships required to effectively and efficiently respond to an incident should one occur.

## UPCOMING EVENTS OF INTEREST

**Gulf of Mexico Oil Spill and Ecosystem Science Conference**  
 Mobile, AL  
 January 26-29, 2014

**International Oil Spill Conference (IOSC)**  
 Savannah, GA  
 May 5-8, 2014

**37th Arctic and Marine Oilspill Program (AMOP)**  
 Technical Seminar on Environmental Contamination and Response  
 Canmore, Alberta  
 Canada  
 June 3-5, 2014

**24th Clean Gulf Conference**  
 San Antonio, TX  
 December 2-4, 2014

[Learn more at API.org](http://API.org)

## Planning

### Planning Guidelines for Offshore Oil Spill Response Plans

To address several of the original response planning recommendations, a Project Team was formed to develop a guidance document on preparing more functional and effective Oil Spill Response Plans (OSRPs). The Planning Guidelines for OSRPs underwent some revision in 2013 in response to the Bureau of Safety and Environmental Enforcement's (BSEE) recent Notice to Lessees (NTL) for oil spill response plans (NTL 2012-N06). An updated draft of the guidelines was resubmitted to BSEE and the US Coast Guard (USCG) for review. The document was finalized in September 2013 and is available on [API's Oil Spill Prevention website](http://API's Oil Spill Prevention website).



Offshore Oil Rig

### Deepwater Horizon (DWH) Technology Evaluation

A team was formed to develop and implement a process for evaluating new, or new applications of, mechanical recovery technologies or systems used in the DWH response. The objective was to identify technologies or systems that were most effective in mechanical oil recovery as well as identifying the associated optimum range of operating conditions. An interim report was prepared in September 2013 and is available on the [API website](http://API website).

### Improvements to Training and Exercise

Industry members are developing an API Training and Exercise (T&E) Guide for oil spill response. The current draft has suggested several practices for consideration in the development of T&E programs, including guidelines on how to develop multi-year T&E classes that support scientific and technical response positions as well as team development. Great effort was taken to ensure that the content of the guide aligned with existing exercise guides including the *National Preparedness for Response Exercise Program (PREP)*, *Homeland Security Exercise and Evaluation Program (HSEEP)* and the *USCG's Spill Planning, Exercise, and Response System (SPEARS)*. The industry also anticipates the government's release of a revised set of PREP Guidelines in 2014. After its release, the API T&E Workgroup will conduct a review of this latest version. API expects to complete its T&E Guide by mid-2014.



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## **Area Contingency Plan Enhancements**

Industry members continue to volunteer their time and expertise to Area Contingency Plan (ACP) enhancements efforts through their participation in Area Committee. Two of the more active committees where industry representatives are actively involved are the Houston/Galveston AC and the Sector New Orleans AC. Recent activities of these committees are summarized below.

Committee members worked on revising the organization for the USCG Incident Management Assistance Teams. Also, the Houston/Galveston ACP committee is currently updating its Training Calendar. The final product will be available on the [Central Texas Coastal Area Committee \(CTCAC\) website](#). Additionally the 2014 Tool Kits for the Texas General Land Offices were distributed during the 2013 Clean Gulf conference in Tampa, FL.

Sector New Orleans is in the process of conducting workshops covering site identification and tactical strategy for Regions 1 and 2 Geographic Response Plans. The Science and Technology Committee of the sector is also working on an update to the current waste management plan, Endangered Species Act guidance, surface washing agent pre-approval guidelines, and dispersant materials for use in public affairs.

## **Dispersants**

### **Develop Improved Communication Tools**

The Dispersant Communications Project Team (DCPT) has recognized that beyond the ongoing technical work, there is a critical need to develop materials to effectively communicate facts about dispersant use. As such, the API JITF Oil Spill Preparedness and Response Subcommittee has coordinated with the OGP/IEPCA Oil Spill Response Joint Industry Program to develop a series of communication tools aimed at a variety of audiences. Together, the DCPT is developing ten dispersant fact sheets for the public to use as a quick guide when discussing dispersants. To date, five dispersant fact sheets have been prepared and are available on the website. The final five are in the last stages of review and will be available in early 2014.

In addition to the development of fact sheets or other, more detailed sources of information, the need to communicate oil spill dispersants basics through higher level, overview materials was identified. Therefore, a series of “scan and glance” dispersant-related communications materials were created and will be used as educational tools. The primary goal of this effort was to develop products that can benefit the entire stakeholder community (i.e., private and public sectors as well as academia, the media and general public) by providing a suite of mutually-acceptable materials. The DCPT believes that consistent messages are important in educating the broader public on the value of dispersant use. The end products have been reviewed by representatives from government agencies and industry and have been posted on the website for download and use by interested individuals.

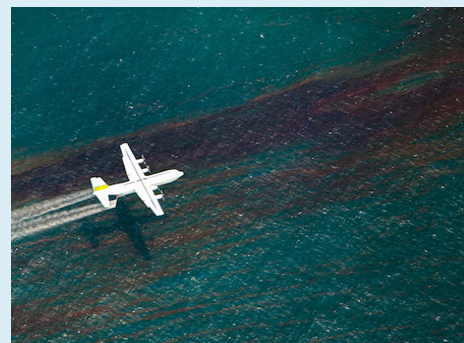
A number of these materials have already been used at various presentations around the world and feedback has been positive. A presentation will be given at the 2014 International Oil Spill Conference (IOSC) taking place in Savannah, GA, in May describing these activities.

The DCPT continually issues individual dispersant fact sheets describing objectives, ongoing efforts, and accomplishments-to-date to support information sharing at workshops and other events. Additionally, the Subsea Dispersants Project Team continues to engage in outreach efforts with broader OSPR and research communities. Team members attended or gave presentations at a variety of conferences in 2013 and will participate in two major conferences in 2014. Because of the extensive and technical nature of this dispersant activity, a newsletter has been created to provide interested individuals more detail as it becomes available. The fourth edition will be published in January 2014.

### **Other Stakeholder Education/Outreach**

A Stakeholder Education/Outreach Project Team was formed to evaluate emerging studies from the Macondo Well release and to suggest and evaluate additional research where appropriate. Two distinct research and development (R&D) needs and assessment activities were identified and include 1) interaction with research entities; and 2) evaluation of published research.

Following Macondo, the Team recognized the need to network and engaged with R&D consortia and other oil spill response-related research groups. In 2012, the API JITF funded its first forum where industry, government and academia could convene to discuss the latest dispersant-related research and activity. This event proved to be extremely successful, and the Team decided to hold another, similar event in 2013 to specifically engage with those groups that were formed in response to the



*A plane releasing dispersants on a surface oil slick; Photo Courtesy of National Commission on the Deepwater Horizon Oil Spill and Offshore Drilling*



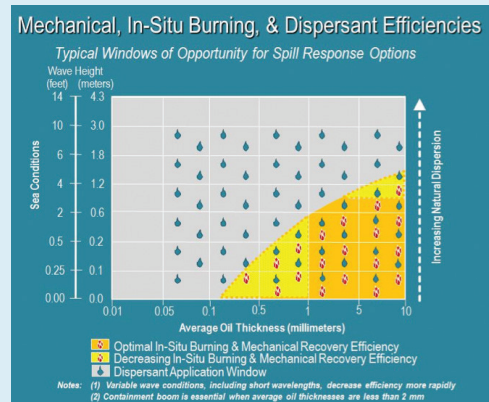
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Gulf of Mexico Research Initiative (GOMRI). This API-sponsored meeting between industry, government and GOMRI consortia researchers was held in March, 2013, in Baton Rouge. Developed in conjunction with the Center for Spills in the Environment (CSE), the meeting served as the second stage of an ongoing dialog aimed at providing input to new oil spill response research and development. As this activity continues into 2014, the team hopes to further their efforts in providing input and technical expertise in these endeavors. In addition, the team is looking to broaden their contact with the wider R&D community, including the National Academy of Sciences Gulf Program.

All of these efforts build upon previous opportunities to solidify working relationships with government, industry, and academia that will be involved in Gulf of Mexico oil spill-related research in the foreseeable future. It is expected that there will be at least annual meetings of the key research community members coordinated by the Project Team.

In addition, a series of open houses were held for researchers and government agency personnel at the BSEE-managed OHMSETT wave tank test facility in New Jersey. The goal of these three, one-day sessions was to provide an opportunity for researchers, especially those funded by GOMRI, to see first-hand the manner in which dispersants work in a near real-world test setting. Past experience has shown that the ability to observe the action of dispersants in the large scale OHMSETT tank is an effective way to convey their ability to disperse oil slicks in a manner that small-scale, experimental tests cannot. Based on the positive feedback that was received from attendees, these open houses are very valuable so the group will look at scheduling additional events in the future.

In addition to direct interaction between researchers and the resultant exchange of ideas, both the API JITF and the OGP/IIPECA JIP felt that there is a need to review, evaluate, and possibly address published research results in a timely manner. To this end, they have sponsored the formation of an independent panel of international technical experts from academia, government, and industry to: a) review new scientific publications on dispersants; b) identify the contributions of each to operating practices, knowledge of dispersants and understanding of the fate and effects of dispersant and dispersed oil during spills; c) highlight novel avenues of research suggested by results; and d) where appropriate, provide constructive guidance regarding study approaches and methods, as well as interpretation of results. The panel has held an initial teleconference to establish the working fundamentals of the panel and begun its evaluation of published research related to dispersant science. It is expected that outcomes from the panel will result in improved decision-making, planning, models, and tools, as well as promising areas for additional research.



Mechanical, In-Situ Burning and Dispersant Efficiencies chart

**Subsea Injection**

This multi-year, large scale project has been steadily progressing, with project activity occurring in four main areas: Effectiveness, Fate and Effects, Modeling, and Monitoring.

The Effectiveness Team has completed Phase I and II droplet size testing work in SINTEF's 6-meter tower basin test tank. High-pressure testing (Phase III), jointly conducted by SINTEF and Southwest Research Institute, is expected to be completed in March 2014. In addition, the Effectiveness Team, in conjunction with the Modeling Team, continues to investigate new areas of research as they consider information resulting from their phased approach. One project includes a joint effort between the University of Hawaii and SINTEF to investigate dispersed oil droplet breakup latency. This study will enable researchers to evaluate the long-term effects of dispersants on dispersed oil droplet generation with oil treated with dispersants in a realistic manner.

The Fate and Effects Team has begun work on biodegradation research and toxicity testing. The findings from the 2012 Fate & Effects workshop reported previously were accepted for presentation at the 2014 IOOSC in Savannah, GA, in May. In addition to being published in the IOOSC conference proceedings, the findings will also be submitted to the Integrated Environmental Assessment and Management (IEAM) Journal for potential publication. The biodegradation work is expected to be complete by mid-2014 whereas the Phase I toxicity research is just getting underway.

The Modeling Team is compiling the results from Phase I, Task 2 of their research. This task consists of modelers running a series of test cases through their models. These results will then be presented at a second modeling workshop, scheduled for late January 2014 in Houston, TX. In addition, the research team has been contracted to perform a second research phase that will continue the model evaluation, and will publish a peer-reviewed publication that describes the evaluation of the models.



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In 2013, the Monitoring Team also engaged with the National and Regional Response Teams and helped develop the API Technical Report 1152 *Industry Recommended Subsea Dispersant Monitoring Plan - Version 1.0*. This plan was completed in October 2013 and is available on the [API website](#).

The Communications Team continually issues individual team fact sheets describing objectives, ongoing efforts, and accomplishments-to-date to support information sharing at workshops and other events. Additionally, the Subsea Dispersants team continues to engage in outreach efforts with broader OSPR and research communities. Team members attended or gave presentations at a variety of conferences in 2013 and will participate in two major conferences in 2014. As a result of the extensive and technical nature of this dispersant activity, a newsletter has been created to provide interested individuals more detail as it becomes available. The fourth edition will be published in January 2014.

**Surface Dispersant Application Preparedness and Operations Plan**

A Project Team was formed to evaluate improvements in surface application operations and planning and processes coming out of DWH. Existing Lessons Learned documents from the many participants of the DWH response were reviewed and analyzed in detail. A guidance document was then developed to assist companies in pre-planning for large scale aerial and/or vessel dispersant application programs as well as the preparation of a dispersant operations plan at the time of an incident.

The resultant document titled *Aerial and Vessel Dispersant Operations and Management Plan* will soon be shared with Federal stakeholders for review and comment in early 2014.



*Dispersant Application Preparedness and Operations Plan*

**Shoreline Protection and Cleanup**

**Recommended Practice for Personal Protective Equipment**

The project team has produced a comprehensive recommended practice on Personal Protective Equipment used during shoreline cleanup after a spill response. This Recommended Practice is currently in the process of vigorous balloting and final review, and should be available late spring/early summer.

**Assess Shoreline Protection Technologies**

A technical working group was formed to evaluate a suite of technologies that could be employed for preventing shoreline impacts and cleaning oiled shoreline areas. This large scale, multi-year project involves eight separate projects to evaluate effective technologies and includes members from industry, Federal and state government, and academia. During 2013, the team completed work in the following areas:

- Berms and Tidal Barrier Strategies for Oil Spill Response;
- Improving Sandy Beach Cleanup-Phase I;
- Detecting Subsurface Buried Oil on Beaches-Phase I and II (including a Field Guide);
- Developing a technology review and guidance document on oil spill response measures in coastal wetlands/ salt marshes.
- Research study of Enhancement of Nutrient Enrichment Knowledge & Exploration of Microbe Usage in Bioremediation-Phase I; and
- Research on developing tidal inlet protection strategies (TIPs) & tidal flow baselines

All of these documents can be found on the API Oil Spill Prevention website. During 2014, the following studies are ongoing and planned for completion:

- Completing a research study to develop technologies that detect and recover submerged tar mats in near shore areas;
- Improving Sandy Beach Cleanup Phase II and III;
- Tidal Inlet Protection Strategies (TIPS) Phase II;
- Research study of Enhancement of Nutrient Enrichment Knowledge & Exploration of Microbe Usage in Bioremediation-Phase II; and
- Detecting Subsurface Buried Oil on Beaches-Phase II and III.



*Worker Safety: Protective equipment; Photo: Deepwater Horizon Response/Flickr*



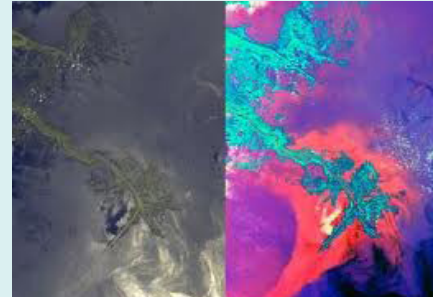
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## Oil Sensing and Tracking

### Assess Remote Sensing Technologies

The Oil Sensing and Tracking technical working group, consisting of members from industry and government, has continued to hold routine meetings throughout 2013. The group's key deliverable, was made available to the public in September 2013 and can be found on the website. In addition, the technical working group is collaborating on a project with NASA to create a user-friendly oil spill response, satellite, selection tool to assist with selecting the most appropriate satellite platform and associated sensor for various tasks. The NASA tool is expected to be developed in late 2014.

During 2014, the technical working group plans to continue to hold their collaborative meetings and work together with other international oil and gas industry groups, commercial vendors, and various governmental agencies to enhance the field of remote sensing specifically in support of oil spill prevention, preparedness and response. The group is also preparing a white paper and a supporting presentation, Recent Advances by the API Remote Sensing Technical Working Group for Oil Spill Preparedness and Response, detailing the group's progress and current achievements. The paper will be presented at the 2014 IOOSC.



Multi sensor view of an oil slick; one of the remote sensing technologies discussed in the guide; Photo Courtesy of NASA

## In-Situ Burning

API created the In-Situ Burn (ISB) Program to encompass all OSPR JITF recommendations made regarding ISB. The overall Program objective is to provide information and tools to encourage industry, responders, regulators, and other stakeholders to consider and use this response tool. This is a large scale, multiple-year program whose team members include industry, state and Federal government, responders, and external experts or advisors. The ISB Program has a number of separate projects.

### Revision of two 2005 API Publications: In-Situ Burning: A Decision Maker's Guide to In-Situ Burning (#4740) and In-Situ Burning: The Fate of Burned Oil (#4735)

These documents are under technical and editorial review and are expected to be released second quarter, 2014.

### Soil Heating from Inland/Upland Burns

Triplicate, wide diameter core burns are being conducted to measure soil heating with a variety of soils, moisture conditions, and a few petroleum products. Initial data alignment with Campbell's soil burn model was published in the Arctic and Marine Oilspill Program (AMOP) 2013. This project activity will continue in 2014.

### Ignition Enhancement Evaluation

The objective of this project is to evaluate ignition devices and aircraft to improve their safety, burn reliability, targeting precision and accuracy. Two advisory groups were established and include burn experts as well as aviation experts from both industry and U.S. Fire Services. A formal liaison has been established with the OGP Aviation Subcommittee (ASC), which is the international group for the industry's aviation guidance and expertise. Work under a Cooperative Research and Development Agreement has begun. Ignition devices will be evaluated for their performance with a variety of oils in small and lab-scale tests in advance of meso-scale tests with different launching platform options. This OSPRS project will be conducted in coordination with a related international R&D project under the OGP. The combined scope is intended to address the use of fixed and rotary wing platforms; potential development of new or modified igniters; meso-scale trials; and possibly, field-scale testing. All reports are expected to be completed by 2015.



In-situ burn on Gulf of Mexico; Photo Courtesy of NOAA

### Operations Manuals

The objective of this project is to provide basic operational information and checklists for responders to better plan for, train for, and execute safe and successful burns. There will be two manuals, one each for inland and for offshore burn operations. Both will be formatted for field use. The Inland Operations Guide is under review. Work on the companion offshore Guide has begun and is expected to be complete by the third quarter of 2014. Publication of the Inland Operations Guide and the Offshore Operations Guide are expected by mid-2014 and early 2015, respectively.



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**Guideline Development for Safety Officers and Industrial Hygienists**

Identification of burn scenarios that have the greatest safety and industrial hygiene concerns is complete, and provides context for the development of broader safety guidance on the desired experience/knowledge for a Safety Officer. A presentation on the work status was made at the Clean Gulf Conference in 2013. Next, a safety guide for open water burns including air monitoring from vessels will be prepared with completion targeted for late 2014.

**Develop Guidelines for Selection and Training of Key In-Situ Burning Personnel**

Existing training guidance and curricula regarding wildfire control and prescribed burning for firefighters was reviewed to determine its application to oil spill responders conducting ISB operations. Operational-style scenarios have been selected against which to prepare guidelines for open water, terrestrial, and oil in/on ice burns. The selection and training guide will be produced in 2014 along with a public-outreach flyer, and a presentation that can be used for outreach. The Project Team is also developing consensus on selection and training of responders for ISB operations for the preparation of job guides.

**Mechanical Recovery**

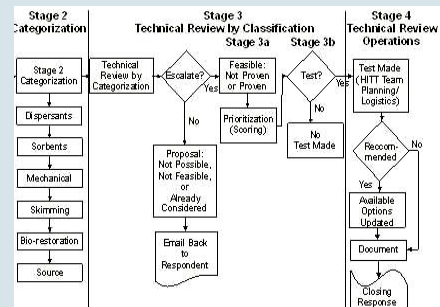
**Research & Development (R&D) and Technology Tracking Program**

The Project Team has made good progress over the past year by building upon a number of activities initiated in 2012. Principally, a database has been constructed to log R&D activities relating to alternative response technologies, shoreline protection, mechanical recovery, in-situ burning, dispersants, oil sensing and tracking and oil spill response planning. The database is being updated with input from members of industry, government, and academia. The updated database will be reviewed in early 2014 for accuracy/completeness and to assess the most appropriate means for sharing the database with all interested stakeholders.

**Alternative Technologies**

**Alternative Technology Evaluation (Concurrent Incident Evaluation and Non-Incident Evaluation)**

Recently, this Project Team finalized its study on optimizing the process developed during Deepwater Horizon to evaluate alternative technologies that are offered at the time of a spill. This comprehensive study, which includes recommendations for documenting Interagency Alternative Technology Assessment Program lessons learned, among others, can be found on the [API website](#). This study will be presented to government agencies at RRT meetings to consider for future spill responses. A review with the NRT is pending.



**Educational Materials**

One of the most misunderstood components of oil spill response is the method by which response technologies are chosen and used during a response to an oil spill. It is critical that this process of Net Environmental Benefit Assessment (NEBA) be communicated effectively so that there is confidence in the process and the systematic approach that all stakeholders, private sector, public sector, academia and others, employ to ensure an effective and efficient oil spill response. As such, communications materials have been developed to effectively convey this NEBA process. These materials have been turned into both a presentation and animation and are available for download and use at the website.

The API OSPR JITF continues to believe that the most effective spill response is to prevent the incident from ever happening in the first place. With this in mind, the industry takes great efforts to make certain that its products reach their destinations safely. However, in the rare case where an incident does occur, the industry is prepared to respond rapidly and effectively. Nonetheless, there is also the recognition that every response can be better and to this end, great effort has been made and continues to be made on both conducting research to advance response capabilities and in communicating the latest and greatest information on the subject. In an effort to strive for transparency and open engagement on these projects, the final reports any information associated with these efforts have been posted on the website. This site serves as a repository for all the important work the API JITF and OSPRS has conducted over the past few years and provides any interested individual with the ability to download as much of these materials as desired.



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Understanding complex concepts such as NEBA and misunderstood technologies such as dispersants or ISB is critical to an effective response. With a firmer grasp of this information, we are confident that all stakeholders involved in spill response can work cooperatively to ensure that an incident can be effectively addressed and the risk to human health and the environment can be kept to a minimum.

### Documents Available on the Website:

[Guidelines for Offshore Oil Spill Response Plans: Guidance for Offshore Oil and Gas Exploration, Production and Pipeline Facility Operators](#)

**API TECHNICAL REPORT 1145**  
SEPTEMBER 2013

[Deepwater Horizon Mechanical Recovery System Evaluation \(Interim Report\)](#)

**API TECHNICAL REPORT 1143**  
SEPTEMBER 2013

[Industry Recommended Subsea Dispersant Monitoring Plan Version 1.0](#)

**API TECHNICAL REPORT 1152**  
SEPTEMBER 2013

### Dispersant Fact Sheets

1. [Introduction to Dispersants](#)
2. [Dispersants – Human Health and Safety](#)
3. [Fate of Oil and Weathering](#)
4. [Toxicity and Dispersants](#)
5. [Dispersant Use Approvals in the United States](#)



### Shoreline Protection

[Oil Spills in Marshes Planning and Response Considerations](#)

**API TECHNICAL REPORT 1146**  
SEPTEMBER 2013

[Subsurface Oil Detection and Delineation in Shoreline Sediments Phase 1—Final Report](#)

**API TECHNICAL REPORT 1149-1**  
SEPTEMBER 2013

[Subsurface Oil Detection and Delineation in Shoreline Sediments Phase 2—Field Guide](#)

**API TECHNICAL REPORT 1149-2**  
SEPTEMBER 2013

[Shoreline Protection on Sand Beaches Phase 1—Final Report](#)

**API TECHNICAL REPORT 1150-1**  
SEPTEMBER 2013



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[Shoreline Protection on Sand Beaches Phase 2—Field Guide](#)

**API TECHNICAL REPORT 1150-2**  
SEPTEMBER 2013

[Improvements for the Mechanized Cleanup of Oiled Sand Beaches Phase 1—Final Report](#)

**API TECHNICAL REPORT 1151-1**  
SEPTEMBER 2013

[Remote Sensing in Support of Oil Spill Response Planning Guidance](#)

**API TECHNICAL REPORT 1144**  
SEPTEMBER 2013

[An Evaluation of the Alternative Response Technology Evaluation System \(ARTES\) Based on the Deepwater Horizon Experience](#)

**API TECHNICAL REPORT 1142**  
SEPTEMBER 2013

[Net Environmental Benefit Analysis for Effective Oil Spill Preparedness and Response](#)

[The Role of Dispersants in Oil Spill Response](#)

[Personal Protective Equipment Selection for Oil Spill Responders](#)