

# Appendix 41

## SCIENCE AND TECHNOLOGY ADVISOR

SUPPORTING DOCUMENT FOR THE REGION 6 REGIONAL CONTINGENCY PLAN

### Abstract

This Appendix is intended to address contingency planning and partnership gaps, especially with academia and other external technical specialists. Having the capability to engage with all stakeholder groups will help cultivate a broad capability to understand, monitor, characterize, and model hazards that can inform all levels of preparedness and response decisions.



## Purpose

The aim of this document is to provide an adaptable, scalable means to access and organize Science and Technology advisors (S&T advisors), primarily academia, which will help assure that complex response decisions are informed by the best available science and information. Such advisors represent specialized capabilities to provide knowledge, based on science and other technical experience, to supplement and strengthen that of the incident management team (IMT). This advisory capability may consist of individuals or institutions and may be identified during preparedness or by incident-specific needs. The relationship may be as informal as a list of names and contact information in a directory, or more formal pre-spill relationship defined through letter of agreement.

This document is intended to:

- Support the objectives of the Region 6 Regional Contingency Plan (RCP);
- Support all D8 coastal Area Committees (ACs)/Area Contingency Plans (ACPs) within Regional Response Team 6 (RRT-6);
- Provide guidance to ACs, on ways to engage academia and other technical specialists during oil and/or hazmat spill preparedness and response; and
- Align with related activities of the National Oceanic and Atmospheric Administration (NOAA) Scientific Support Coordinator (SSC) or the designated State technical representative.

## Background

In 2012, USCG Headquarters developed an ACP Process Job Aid <sup>1</sup> to address preparedness gaps. The Job Aid notes that ACs represent the core element of oil spill response planning and preparedness for a local Captain of the Port (COTP) zone. **Discussions and strong partnerships with all stakeholders** during the AC planning process are necessary to ensure that the ACP, when implemented, will be adequate to effectively respond to a worst case discharge (WCD) within that specific COTP zone. Further, it states that the ACP development is a collaborative process; one that requires consensus decision-making among all AC members. Oil spill stakeholders encompass the entities and roles in oil spill decision making as shown in the Table 1<sup>2</sup>.

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<sup>1</sup> Landry, Mary E. Memorandum 3121, Dec.05 2012. Area Contingency Planning Job Aid.

<sup>2</sup> Walker, A. H., Pavia, R., Bostrom, A., Leschine, T. M., & Starbird, K. (2015). Communication practices for oil spills: Stakeholder engagement during preparedness and response. *Human and Ecological Risk Assessment: An International Journal*, 21(3), 667-690. <http://dx.doi.org/10.1080/10807039.2014.947869>

Table 1. Oil spill stakeholders

Stakeholder Group	Examples
<b>Decision makers</b>	<ul style="list-style-type: none"> <li>• Unified Command</li> <li>• Federal, State, Local, and Tribal</li> <li>• Texas General Land Office (TGLO)</li> <li>• Louisiana Oil Spill Coordinator's Office (LOSCO)</li> </ul>
<b>Knowledge sources and advisors</b>	<ul style="list-style-type: none"> <li>• Oil spill practitioners and technical specialists (government and industry)</li> <li>• Resource managers and natural resource trustees</li> <li>• Energy and marine operators</li> <li>• Academia</li> <li>• Occupational Safety and Health Administration (OSHA)</li> <li>• Compensation providers / insurance companies</li> <li>• Public health agencies</li> <li>• Tribal representatives</li> <li>• Others with local/traditional knowledge, e.g., marine pilots (secondary)</li> </ul>
<b>Stakeholders affected by decisions</b>	<ul style="list-style-type: none"> <li>• Local communities</li> <li>• Fishers and seafood industry</li> <li>• American Indians and other indigenous peoples</li> <li>• Tourist industry</li> <li>• Other businesses in the spill area</li> <li>• Oiled property owners</li> <li>• Designated resource managers</li> <li>• Energy/oil, marine, shipping, and chemical manufacturing industries</li> </ul>
<b>Communicators, influencers, and opinion leaders</b>	<ul style="list-style-type: none"> <li>• Media (print, broadcast, and electronic)</li> <li>• Elected officials and community leaders</li> <li>• Academia</li> <li>• Trade associations, e.g., Chemical Manufacturers Association</li> <li>• Non-Governmental Organizations (NGOs)</li> <li>• Community health workers</li> <li>• Social media bloggers/communicators</li> </ul>

In most incidents, not all stakeholder groups are needed or engaged; however, their interests and knowledge may be relevant in planning for an effective response to a WCD of oil in the coastal zone. For example, some academic scientists possess detailed field knowledge about coastal habitats and resources, which could be at risk during a specific spill. Local knowledge, research and experience of academic scientists may contribute new information and strengthen incident-specific response decisions.

The effective implementation of a S&T advisory capability during response could be strengthened by procedures developed during preparedness. S&T advisors, when identified in advance, could provide value to RRT-6 and ACs during preparedness. Organizations which could provide S&T advisors are encouraged to coordinate with federal and state representatives, e.g., SSC, during preparedness by participating in the ACs and/or RRT-6.

## Overview

The S&T advisor position is primarily focused within the coastal zone; however, its value and use is not precluded within the inland zone. Under the National Incident Management System (NIMS) Incident Command System (ICS), S&T advisors are technical specialists who could be assigned to any part of the IMT based on incident needs. Academic organizations and others who possess relevant, specialized knowledge could become S&T advisors, along with other specialists from industry (e.g., source control), Non-Governmental Organizations (NGOs), and/or trade organizations. S&T advisors could contribute their knowledge to help appropriately plan response actions in support of response operations. For example, S&T advisors could share knowledge about local currents affecting the movement, distribution, and entrainment areas of floating oil or local knowledge about the distribution of resources at risk, e.g., area, seasonal, and life stage distribution of marine life.

S&T advisors also could include agency representatives who are assigned specific functions in the IMT, but have broader knowledge to contribute to strategic assessment and planning of response actions beyond their assigned ICS function.<sup>3</sup>

The RRT-6 Science and Technology (S&T) committee and the Eighth Coast Guard District Response Advisory Team will work with various RRT member agencies during preparedness to develop a Job-Aid to help facilitate establishing S&T advisor opportunities within RRT-6. The Job-Aid could include the following:

- Directory or network of interested scientists and technical specialists.
- Process for coordinating meetings among organizations interested in participating in S&T advisor activities to exchange information on research, new activities, etc.
- Coordinating with S&T advisor personnel pre-spill in RRT-6 or AC meetings, drills, projects, etc.
- Practicing rapid access to the university assets during spills.

Another collaborative activity with academia, which could occur during preparedness, is participating in review boards on proposed research, and when mutually beneficial, or becoming

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<sup>3</sup>For example, during the DWH response, several response specialists assigned to the Houma ICP formed a Dispersant Science Support Committee to provide information and guidance to the Unified Command (UC) on the use of aerial dispersants. Committee members consisted of members from the following entities: NOAA SSC, NOAA Scientific Support Team (SST), U.S. Environmental Protection Agency (USEPA), U.S. Department of the Interior (DOI), BP Industrial Hygiene, sample tracking and modelling contractors, U.S. Air Force (USAF) Spray Task Force, wildlife operations, and natural resource damage assessment (NRDA) personnel.

members of the research team to define a realistic operational context for their studies. If employed, this would occur within the RRT-6 S&T committee. Collaboration between academic researchers and the oil spill planning and response community would be valuable to researchers in addressing the potential for broader impacts<sup>4</sup> of their work.

This S&T advisor capability is intended to be readily adaptable and scalable to meet incident needs. During response, the NOAA SSC or designated State representative may recommend activating specific S&T advisors. For example, an S&T advisor might be assigned to the Environmental Unit (EU) of the IMT to provide supplementary capabilities and expertise to address response needs. In this case, S&T advisors would likely coordinate with the NOAA SSC or State designated representative to identify response needs and address any question that may arise, such as, but not limited to, sampling, environmental predictions, public health, injury minimization, and research coordination.

## Specific Guidance

### Preparedness:

- RRT-6 leads the preparedness efforts (coastal ACs encouraged to participate; results will be shared). The RRT-6 Science and Technology committee, an existing standing committee within RRT-6, and the Eighth Coast Guard District Response Advisory Team, will be the primary focal point for all things related to S&T advisors and will work closely with and share all relevant info with ACs.
- The RRT-6 S&T committee and the Eighth District Response Advisory Team will work with ACs to ensure S&T advisor issues are reflected within their respective ACPs (incorporated by reference) and components are exercised during scheduled PREP exercises.

### Training

When S&T advisors are predesignated during preparedness and could work in the incident command post, the following document review and training is recommended before participating in a spill response.

- National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR part 300):  
<https://nrt.org/Main/Resources.aspx?ResourceType=Regulations&ResourceSection=1>  
*Note: In accordance with the NCP, the SLS should not participate in the physical removal or clean-up activities during the oil spill response and should be limited to non-hazardous activities; they should not be deployed in exclusionary hot zones.*
- Region 6 Regional Contingency Plan:  
[https://response.epa.gov/site/doc\\_list.aspx?site\\_id=5083](https://response.epa.gov/site/doc_list.aspx?site_id=5083)
- Incident Command System online or instructor-led training, e.g., Introduction to ICS  
<https://training.fema.gov/is/courseoverview.aspx?code=IS-100.c>

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<sup>4</sup> <https://www.nsf.gov/pubs/2007/nsf07046/nsf07046.jsp> and <https://broaderimpacts.net/about/>

### Response:

- **Requests or activation:** The FOSC, NOAA SSC, or State designated representative may identify the need for S&T advisors from the academic community or other organization. As appropriate, requests or activation of S&T advisors will be targeted to the needs of the specific incident or issue and indicate the potential level of support needed.
- **Pre-deployment briefing:** S&T advisors will receive briefing as per the Incident Management Handbook (IMH) Common Responsibilities (Chapter 2).
- **Funding:** **Written authorization must be received prior to incurring out-of-pocket expenses** for which reimbursement is expected, e.g., remote travel.
- **Tasking:** S&T advisors might also be asked to provide scientific advice on:
  - Investigate issues of importance to response, mitigation, injury, and recovery, but may not be immediately relevant to the current emergency, providing funding from within or outside the response is available.

### Situational Awareness & Safety

- S&T advisors should be familiar with the NIMS ICS management protocols.
- Any S&T advisory field activities will be subject to response safety and health protocols, as appropriate; coordinated through both the Planning and Operations Sections.
- Safety training for field responders will be determined by the Safety Officer and will be appropriate for the proposed task.

### Information Sharing

If S&T advisors are invited to work inside the ICP, they may see sensitive security or liability information. Especially in this case, S&T advisors **shall not** release incident-specific information to the public without approval by the Unified Command. S&T advisor-generated information will be subject to the Freedom of Information Act (FOIA) process.

S&T advisors will be subject to a Data Sharing Agreement making most data and findings available to members of the UC. Actionable data and findings (information that could lead to greater mitigation of the injuries to resources, etc.) will be shared prior to publication to the established incident-specific Scientific Support Team with the understanding that such data and findings will not be shared to the broader scientific and academic community in advance of peer review and publication. The specific make-up of an incident-specific Scientific Support Team can vary based on the desires/need of the Unified Command.

The S&T advisors will receive defined boundaries of information disclosure, which clarifies what information can be shared outside of the incident command post.

### Response Funding

As provided in the Oil Pollution Act of 1990 (OPA 90) and the Oil Spill Liability Trust Fund (OSLTF), the National Pollution Funds Center (NPFC) assures adequate funding for the FOSC to respond and that the polluter pays for the response. When authorized by the FOSC, response expenses can be reimbursed, in accordance with procedures specified by the NPFC.