Responding to Oil Spills in Arctic Marine Environments

Marine Board Fall Meeting
November 19, 2013

THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine
National Academy of Sciences
National Academy of Engineering
Institute of Medicine
National Research Council

The Study Process

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- **Define and Initiate Study** - discussion with sponsors, approval by NRC governing board
- **Committee Selection** - nominations, NRC approval, public comment, and conflict of interest review
- **Meetings, Deliberations, and Draft Report** - sponsor and stakeholder perspectives, information gathering, consensus report draft
- **Report Review** - external reviewers
- **Response to Review** – must respond to all comments, RRC oversight
- **Report Release and Dissemination** - Briefing for sponsor(s), public release/add'l briefings, report publication, derivative products

AOS Sponsors

- Bureau of Ocean Energy Management
- U.S. Coast Guard
- National Oceanic and Atmospheric Administration
- American Petroleum Institute
- Bureau of Safety and Environmental Enforcement
- Arctic Research Commission
- Marine Mammal Commission
- Oil Spill Recovery Institute

AOS Statement of Task

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Assess current state of the science regarding oil spill response and environmental assessment in the Arctic.

1) **Scenarios**. Identify potential oil spill "hot spots" in U.S., adjacent waters.

2) **Preparedness**.
   - Describe anticipated operating conditions, evaluate the state of hydrographic and charting data for higher risk areas.
   - Assess infrastructure, manpower, training
   - Identify avenues for participation, communication with indigenous communities, regional governmental entities
   - Build on existing agreements, id gaps for international cooperation in establishing locations for incident command management, staffing, supplying oil spill response infrastructure

Statement of Task

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3) **Response and Clean Up**.
   - Assess utility of technologies to detect, map, track and project spill trajectories under anticipated operating conditions
   - Evaluate effectiveness of oil dispersal, removal, and recovery technologies under several criteria
   - Assess the potential response strategies for the separation and recovery of oil from marine waters, on or associated with ice, sediments, and the shore zone, including an assessment of their contributions towards habitat recovery
   - Assess capabilities and constraints for minimizing impacts and enhancing recovery of wildlife through deterrence and rehabilitation

4) **Strategies for Establishing Environmental Baselines for Spill Response Decisions**. Characterize types of baseline information needed, evaluate pre-spill strategies, and identify additional protection measures. Identify sampling and monitoring priorities.

Committee

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Martha Grabowski (Chair) - Le Moyne College/ RPI

Tom Coolbaugh - ExxonMobil Research and Engineering

David Dickins - DF Dickins and Associates, LLC

Richard Glenn - Arctic Slope Regional Corporation

Kenneth Lee - Fisheries and Oceans Canada

Lee Majors - Alaska Clean Seas

Mark Myers - University of Alaska, Fairbanks

Brenda Norcross - University of Alaska, Fairbanks

Mark Reed - SINTEF

Brian Salerno – BIMCO, *resigned June 2013*

Robert Suydam - North Slope Borough

JimTiedje - Michigan State University

Mary-Louise Timmermans - Yale University

Peter Wadhams - Cambridge University

*Liaisons – **Peter Velez** (MB**), Molly McCammon** and **Caryn Rea** (PRB)*

Draft Schedule

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2012

✓ Meeting 1: December 17-18 Washington, DC

2013

✓ Meeting 2: February 4-5 Chicago, IL

✓ Meeting 3: March 19-20 Anchorage, AK

✓ Meeting 4: June 18-19 Seattle, WA

✓ Meeting 5: September 17-18 Irvine, CA

- **Draft report to external review – early Dec**
- Committee response to review – Dec/Jan

2014

- Report delivery – Feb/March
- Dissemination – IOSC, etc.