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United States Coast Guard

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MEMORANDUM

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DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USCG, cn=WEAVER.JAMES.D.1238863178
Date: 2016.08.15 10:19:00 -04'00'

13 JUL 2016

From: J.D. Weaver, CDR
Executive Director, Interagency Coordinating Committee on Oil Pollution Research

Reply to (202) 372-2259
Attn of: LT Rebecca Brooks

To: Members, Interagency Coordinating Committee on Oil Pollution Research (ICCOPR)

Subj: MINUTES FOR FY 2016 THIRD QUARTER ICCOPR MEETING

1. General: The Interagency Committee held its FY 2016 third quarter meeting at the CSRA Arlington Center office in Arlington, VA on July 6, 2016. CDR James Weaver called the meeting to order on July 6, 2016 at 9:15 a.m. and it continued until 3:00 p.m. The agenda can be found in Enclosure (9). Representatives of ICCOPR agencies in attendance or on the phone were:

CAPT Joseph Loring, Chair, U.S. Coast Guard (USCG)
Dr. Robyn Conmy, Vice Chair, Environmental Protection Agency (EPA)
CDR James Weaver, ICCOPR Executive Director, USCG
LT Rebecca Brooks, USCG
Ms. Monica Maghini, USCG
Mr. Kurt Hansen, USCG Research & Development Center (USCG RDC)
Mr. Shannon Jenkins, USCG
Mr. Steve Lehmann, National Oceanic and Atmospheric Administration (NOAA)
Dr. Greg Wilson, EPA
Ms. Vanessa Principe, EPA
Mr. Walter Johnson, Bureau of Ocean Energy Management (BOEM)
Dr. Jeff Ji, BOEM
Mr. Brian Zelenke, BOEM
Ms. Lori Medley – Bureau of Safety and Environmental Enforcement (BSEE)
Ms. Stephanie Bocek, U.S. Navy
Mr. Dan Eldredge, U.S. Navy
Mr. Robert Smith, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA)
Mr. James Merritt, PHMSA
Ms. Erica Folio, Department of Energy (DOE)
Mr. Barry Forsythe, U.S. Fish and Wildlife Service (USFWS)
Mr. Tom Thompson, U.S. Maritime Administration (MARAD)
Mr. Wayne Yoder, U.S. Fire Administration
Ms. Ruth Cooper, U.S. Arctic Research Commission (USARC) Intern

Guests:

Mr. Jon Turban, USCG RDC
Dr. Susan Roberts, National Academy of Sciences (NAS), Ocean Studies Board (OSB)
Mr. Alessandro Vagata, Fototerra
Dr. Theo Hengstermann, Optimare
Mr. Matthew Mulrennan, XPRIZE

2. Opening Remarks: The following opening remarks were made:

a. CDR James Weaver (USCG)
- CDR Weaver welcomed the meeting participants and thanked them for attending.

b. CAPT Joseph Loring (USCG)
- CAPT Loring thanked attendees for the great turnout and stated that he was looking forward to discussing all of the topics on the agenda.

c. Dr. Robyn Conmy (EPA)
- Dr. Conmy welcomed the attendees and apologized for not being able to attend the meeting in person due to travel difficulties.

3. General Updates: CDR Weaver provided general updates on the following three topics:

a. ICCOPR Biennial Report to Congress:
- The ICCOPR Biennial Report to Congress was approved by the Office of Management and Budget (OMB) and signed by CAPT Loring on June 1, 2016. CDR Weaver thanked the ICCOPR members for their work on compiling and editing information for the report.

b. ICCOPR Executive Director Position Update:
- USCG Office of Marine Environmental Response (CG-MER) has conducted its final candidate interviews for the ICCOPR Executive Director position, with Dr. Conmy participating on the hiring panel. The deadline for submitting the hiring recommendation to USCG Human Resources is Friday, July 8. USCG will inform ICCOPR members once the offer goes out and is accepted.

c. Departures and Arrivals:
- Mr. Craig Matthiessen (EPA), director of the Regulatory Implementation Development (RID) office within the Office of Emergency Management (OEM), will retire at the end of September 2016.
- Mr. Dan Eldredge (U.S. Navy) has joined the Navy's SUPSALV office as its lawyer.
- Mr. Shannon Jenkins (USCG) has returned to USCG Headquarters in the Office of Research, Development, Test & Evaluation (CG-926).
- Ms. Ruth Cooper (USARC) is an intern for the U.S. Arctic Research Commission attending the ICCOPR meeting on behalf of Dr. John Farrell (USARC).

4. Presentation 1 – Mobile Asset Tracking during an Incident of National Significance (IONS): Mr. Jon Turban (USCG RDC) provided a presentation on NICS (Next-Generation Incident Command System), an Incident Command System (ICS)/National Incident Management System (NIMS)-based situational awareness tools for first responders.

a. Presentation:

- NICS is a web-based, ICS/NIMS-based collaborative situational awareness tool for first responders.
- The tool was funded and developed by the U.S. Department of Homeland Security (DHS) Science and Technology (S&T) First Responders Group (FRG), with additional funding provided by the USCG Research and Development Center (RDC) from a Congressional earmark for oil cleanup issued after the Deepwater Horizon (DWH) event.
    - The DHS S&T FRG was responsible for developing the base system, while USCG RDC worked on the mobile portion of the tool and developed additional capabilities.
    - NICS was originally used by CALFIRE starting in 2009 for over 200 forest fires. DHS S&T FRG and USCG then began to demo the tool, and in 2014 CALFIRE began use of the mobile portion of the tool developed by USCG RDC.
- A demo version of the tool will be available on the Homeland Security Information Network (HSIN) in September 2016, which can be accessed by USCG and other DHS Components.
- NICS Mobile, which collects, stores and transports information, operates with mobile clients and can interface with multiple external systems (e.g., public, state, federal). NICS Mobile is largely intended for use by field teams and has the capability to take photos and geo tag them, send live imagery, request resources, chat with colleagues at the Incident Command Post (ICP), and integrate with external sensors.
    - NICS Web, which can run on a laptop and be used in an ICP, has a geographic display with layers for accessing information. It has the capability to set up virtual rooms to correlate with the ICS organization in order to streamline communication between the ICP and the field.
- Interoperability was part of the NICS system design from the outset, and the tool has successfully exchanged information with the Environmental Response Management Application (ERMA).
- NICS was successfully used at a National Preparedness for Response Exercise Program (PREP) exercise in Cape Cod, where field teams used NICS Mobile to send Shoreline Cleanup Assessment Technique (SCAT) data back to the ICP.
    - In August 2016 NICS will be used in the USCG Arctic full-scale exercise in order to test ways of using the system in areas without communications infrastructure in place.
    - The goal of the exercise is to demonstrate the use of NICS in the Arctic, establish voice, video and network connections to a remote area without the use of satellite communications or existing infrastructure, and to test line of sight and beyond line of sight communications capabilities using NICS tools.
    - During the exercise involving a capsized ship with passengers, participants will rely on radios and troposcatter technology instead of using mobile phones.
- Currently, the NICS source code is available in GitHub within the DHS-sponsored repository.

b. Discussion:

- NICS can be used on both Android and Apple mobile devices on any internet browser.

Action Item

- Mr. Kurt Hansen and Mr. Shannon Jenkins (USCG) will determine how non-DHS agencies can access NICS through HSIN.

5. Presentation 2 – Aerial Oil Spill Monitoring - MEDUSA: Mr. Alessandro Vagata (FotoTerra) and Dr. Theo Hengstermann (Optimare) presented on MEDUSA, an aerial oil spill monitoring tool operated by FotoTerra.

a. Presentation:

- MEDUSA was developed out of a partnership between FotoTerra and Optimare and is a platform for oil spill remote sensing.
- MEDUSA will be used at the Oil and Hazardous Materials Simulated Environmental Test Tank (Ohmsett) facility in July 2016 for a two-week test organized by the Bureau of Safety and Environmental Enforcement (BSEE) and the National Oceanic and Atmospheric Administration (NOAA).
- Mr. Alessandro discussed airborne surveillance, noting that there is widespread agreement that aerial observation is the only way to obtain a clear, realistic picture of an oil spill and that it is the first link in a chain of decision-making for crisis management and responders (both industry and government).
  - Industry and government have identified several recommendations for improving airborne surveillance related to sensor technology, sensor integration and planning.
- Mr. Alessandro described the state of airborne surveillance in Europe, which is dictated by the Bonn Agreement. Nine European governments are party to the Bonn Agreement, which is a mechanism for cooperation for addressing pollution in the North Sea.
  - Components of the Bonn Agreement include routine aerial surveillance, coordinated aerial surveillance, and exercises.
  - The purpose of routine aerial surveillance is to increase the opportunity for early warning in the case of spill, and also to deter vessels from spilling. Coordinate aerial surveillance is activated to coordinate missions for a specific reason.
- Mr. Alessandro then discussed "intelligence on the scene" and the benefits of the quantitative approach used by MEDUSA. Intelligence on the scene (i.e., specific data related to spill position, area, thickness, volume, etc.) allows responders to understand the scenario and better manage the tactical response. Good information is based on accurate, processed data, not on impressions of raw data.
  - The quantitative approach is based on three main building blocks: sensors (far range and near range), real time analysis and communication.
  - Far range sensors allow for wide coverage oil spill detection. Near range sensors allow for accurate analysis of the spill, with each sensor detecting specific features of the spill.
  - Near range sensors can provide spill mapping and determine relative thickness, as well as identify hotspots where vessels should be sent for spill recovery.
  - The MEDUSA near range sensors can identify approximately 15 different oil types based on fluorescence, as well as chlorophyll.
  - Near range sensors also have electro-optical surveillance capabilities, which is useful for evidence collection in case of illegal discharges. Sensors are capable of taking nighttime pictures.
  - The MEDUSA system also integrates direction finder capabilities to assist in search-and-rescue missions.
- The MEDUSA system has the capability to collect data from sensors and perform real time analysis through its mission control system onboard the aircraft. The system's

common operating picture includes satellite as well as broadband radio communication to connect aircrafts, vessels and command centers which allows the system to carry a diverse array of operational information.

- Benefits of the MEDUSA system include quantification of spill area, position, thickness distribution, volume, hot spots, and drifting/spreading; continuous reporting and data transmission, a dedicated website, a common operating picture, mission management, and an interface to common oil drift models. These capabilities help to provide improved response and preparedness.
- The MEDUSA sensor platform is installed in an Embraer EMB 110 P1 which has a dispatch time of two hours and a total mission time of five and a half hours. The aircraft will be fully operational in Houston in July 2016.

b. Discussion:

- The MEDUSA system can interface with all existing geographic information system (GIS) platforms, which means that aircraft platforms from different nations should be able to send data back and forth.
- Regarding standards for surveillance systems under the Bonn Agreement, there is a minimum requirement for systems needed on board. For example, far range detection is always mandatory, but near range detection requirements vary by country. Some countries have more comprehensive systems than others.
  - In addition, there is still a lack of joint operations in Europe due to the low occurrence of accidents.
- Dr. Hengstermann stated that the MEDUSA system has been tested in a variety of environmental conditions and sea states. However, he noted that if the sea state becomes too high, the quality of the data will decrease.
  - Dr. Hengstermann also noted that data from aerial surveillance systems can be used to update oil drift models and that as more data is added to these models the more accurate they become.
  - Mr. Alessandro stressed the importance of the system's ability to operate at night, when vessels are more likely to engage in illegal discharges.
- FotoTerra has not yet signed an agreement with any U.S. entities but has been holding discussions with several oil spill response organizations (OSROs).
- Ms. Lori Medley (BSEE) thanked FotoTerra for attending the meeting and for the presentation, noting that BSEE is looking forward to FotoTerra participating in the remote sensing project at Ohmsett.

6. Presentation 3 – Advancing Innovation in Oil Spill Cleanup: Thoughts from XPRIZE: Mr. Matt Mulrennen (XPRIZE) provided a presentation on the XPRIZE organization and its Ocean Initiative.

a. Presentation:

- XPRIZE uses prizes as a style to incentivize "big thinking" innovations; the Spirit of St. Louis, which came about as the result of a prize competition, inspired the CEO of XPRIZE to adopt this style. The purpose of the organization is to design prizes that drive radical breakthroughs that benefit humanity.
  - In 2004, XPRIZE awarded the first private space flight with a $10 million purse which led to changes in regulation and pushed the field of private space flights

forward. XPRIZE is now trying to recreate this idea in other fields, including oceans, through $90 million in active prizes.

- XPRIZE's Ocean Initiative is a 10-year commitment to conduct five ocean XPRIZE competitions by 2020, and engage in thought leadership, outreach and impact. The vision of the initiative is to make the ocean healthy, valued, and understood.
  - The first prize was awarded in 2011 for oil spill cleanup and the second prize was awarded in 2015 for ocean health. Ongoing prizes include the Shell ocean discover prizes, through which XPRIZE hopes to push the bar on autonomous ocean vehicles by looking at all current technologies and trying to make them better, among other goals.
  - The area XPRIZE has engaged in the most is in ocean health, through which one prize led to the development of cutting edge ocean pH sensors. NOAA played a large role in validating this prize and allowed testing in its tanks as well as access to experts.
  - In general, XPRIZE would like to use the ocean prizes to help close some of the significant gaps in basic ocean research.
- Mr. Mulrennen noted that he would like to engage in discussion with ICCOPR members regarding how XPRIZE can better expand the impact of its prizes both during and after competitions. In addition, he would like feedback regarding how XPRIZE can help fill research gaps identified by ICCOPR.

b. Discussion:

- Mr. Mulrennen noted that companies participating in XPRIZE competitions often run into issues testing their products due to regulatory obstacles. For example, there is a lack of incentive for new oil spill cleanup technology innovation because cleanup organizations are required to use the "best available technology." In addition, it is difficult for companies to get access to oil spills on which to test their technology in real world conditions.
  - Mr. Steve Lehmann (NOAA) noted that another issue is that the RP has the responsibility to propose the technology used at a spill response and the government (federal and state) either concur with that proposal or alter it. The government rarely makes direct demands as to bringing certain technology to the field.
  - Dr. Greg Wilson (EPA) suggested that there could be considerations in facility response plan and vessel response plan policies regarding use of innovative technology; for example, language could be developed regarding the possibility of using best available technology during an ongoing spill.
  - Mr. Lehmann added that testing new technology on spills is not just a federal issue, it is a state issue because most of the spills on which testing would be done are inside state waters.
  - Ms. Medley noted that through BSEE Project #1042, Technology Readiness Level (TRL) definitions for oil spill response technologies and equipment have been developed. They are available on the BSEE website: http://www.bsee.gov/Technology-and-Research/Oil-Spill-Response-Research/Projects/Project1042/
- Mr. Lehmann noted that an emergency is the wrong time to test out a new technology, so it would be helpful to have a database containing untested oil spill cleanup products that

can be filtered by various spill parameters in order to determine which products are most appropriate to use in a given situation.

- It was noted that a portion of spill response that often goes ignored is the human skill needed to apply technologies correctly; when a spill occurs, responders are going to choose the technologies they already know how to use.
  - Instead of solely focusing on new technologies, XPRIZE could look at innovations in methodology and techniques of existing technologies.
- Mr. Jenkins reminded the group that the U.S. government does not own much of the oil spill response technology. The question that should be asked is "how can OSROs be incentivized to use new technology?"
  - The group discussed the possibility of modifying language in area contingency plans to indicate that when possible, On Scene Coordinators (OSCs) will encourage the use of new technologies.
- Mr. Lehmann stated that providing a cost sharing mechanism (public-private) may also incentivize responsible parties to make use of new technologies.
- Mr. Lehmann mentioned that another consideration is the National Resource Damage Assessment (NRDA) process. There would need to be cultural changes within NRDA and NRDA trustees in order to encourage new technologies, which may or may not be successful, to be tested on oil spills.
- ICCOPR members discussed the possibility of testing new technologies on ongoing leaks such as the Taylor Energy spill. Such spills are complex and this possibility needs to be further discussed with the appropriate stakeholders.

Action Item

- ICCOPR members will continue to discuss opportunities for collaboration with XPRIZE during a future meeting. This meeting will also include the National Response Team (NRT) Science and Technology Committee.

7. Presentation 4 – Role of Dispersants in Oil Spill Response: Dr. Susan Roberts (NAS OSB) provided an overview of the National Academies report development process as well as Ocean Studies Board studies relevant to ICCOPR.

a. Presentation:

- Dr. Roberts discussed recent organizational changes in the National Academies, which are an independent (non-profit, non-government) entity with a Congressional charter. The Academies emphasize the importance of having a balance of perspectives and all reports issued by the Academies must be based on consensus and are subject to numerous peer reviews.
- The process of developing a report through the Academies begins with the definition and initiation of a study. Almost all activities are funded externally, usually from federal agencies. Next, a committee is selected through a nomination process and committee members meet to discuss the topic at hand and draft the report. Finally, the report is reviewed by external experts with oversight from the Academies and then released and disseminated.
- OSC has released several reports relevant to ICCOPR areas of interest. The most recent report was *Responding to Oil Spills in the U.S. Arctic Marine Environment*, which

recommended that ICCOPR take the lead on developing a research plan for the Arctic. The report also discussed the issue of intentional spills and recognized the need for responders to have access to all tools in the tool kit.

- OSB is discussing developing a new edition of the *Oil Spill Dispersants Efficacy and Effects* report, which was released in 2005. There has been a large increase in discussion of dispersants in the literature since DWH; since the available research does not all agree, it will be a challenge to develop a coherent message.
- OSB has also proposed a new study, *Evaluation of the Use of Chemical Dispersants in oil Spill Response*. Potential sponsors are the Academies Gulf Research Program, the Gulf of Mexico Research Initiative (GoMRI), API, and Clean Caribbean and Americas. The study is still in need of approximately five hundred thousand in funding.
  - The costs related to the study are relatively high because the study committee will be given the opportunity to look at current models, run the models themselves, and study fate and effects. In addition, there will be an important dissemination component to the study once it is finalized.
  - Mr. Lehmann emphasized the importance of risk communication related to dispersants, especially for states and locals.
- Finally, OSB has discussed an update to *Oil in the Sea III*, specifically to the data related to inputs and sources of oil. OSB will also be looking for funding for this study update.
- Copies of OSB reports can be found here: http://dels.nas.edu/osb

8. Follow up Intentional Release Permitting Workgroup Discussion:

a. Discussion:

- CDR Weaver stated that USCG developed a draft scope of work for the Intentional Release Permitting Workgroup. The scope of work does not have much information yet but is a good start and is likely a more useful document than a charter, which would create more responsibilities.
- As discussed during the March 2016 ICCOPR meeting, the scope of work now outlines two different phases for the workgroup: 1) a gap analysis of research opportunities to identify cases where intentional release is the only mechanism by which legitimate research could be done to answer a specific research question; and 2) an outline of the process and requirements to request permit for conducting intentional release.
- CDR Weaver reminded the group that USCG will not be able to devote much time to this issue until a new ICCOPR Executive Director is in place, but stressed that he wanted to get input from ICCOPR members to ensure that the scope of work is heading in the right direction.
- Mr. Lehmann noted that it will be important to get the right people from the right agencies in the workgroup (e.g., experts on the Endangered Species Act).
- Mr. Jenkins suggested that ICCOPR could request that Dr. Roberts and the OSB include the first phase gap analysis in its update to *Oil and the Sea III*.
- Mr. Eldredge suggested that the language regarding the workgroup's "need" to build a case for intentional release should be softened.
- The group discussed the need to incorporate the NRT into intentional release discussions at a future point.

- The group discussed the idea of approaching the intentional release topic with a net environmental benefit analysis (NEBA) approach.

Action Item:

- Mr. Lehmann will look into the right person from NOAA to participate in the workgroup.
- ICCOPR members to discuss reaching out to Dr. Roberts to discuss the possibility of adding an intentional release gap analysis to the proposed *Oil and the Sea III* update.
- Any additional feedback regarding the scoping document should be sent to CDR Weaver or LT Becca Brooks.

9. Member R&D Updates:

a. USCG

- USCG is working on five direct oil spill projects:
  - Oil in Ice (Project #4701):
    - A final demonstration focusing on decontamination issues for the Arctic will be held in August 2016. The demonstration will use both the ice cage co-funded by BSEE as well as a temporary storage system for buoy tender to see if they work together.
  - Detection and Mitigation of Oil within the Water Column (Project #4702):
    - The second phase of the project is being conducted.
    - BSEE will assist CG RDC with testing at Ohmsett in December 2016.
  - Proven In-Situ Burning (Project #4704):
    - USCG has been conducting work at the burn pan in Mobile, AL and is planning for herder tests in October 2016. WPI may conduct work at the burn pan in March 2017.
    - USCG is discussing six other potential projects BSEE has put together based on issues from DWH. Mr. Hansen is working with Ms. Karen Stone (BSEE) on initiating these projects.
  - Response to Oil Sands Products (Project #4705):
    - USCG is working on conducting skimmer tests in freshwater at Ohmsett using dilbit and is working with Enbridge to secure the oil.
  - Shale Oil Preparedness and Response (Project #4707):
    - A risk assessment is in progress regarding how to handle produced oil. No proprietary information about chemicals is being used.
- Other projects in progress include:
  - Airborne Oil Spill Remote Sensing and Reporting (Project #7609)
    - USCG is using radars acquired over the past several years and will be conducting a sensor field test in July 2016.
  - Mobile Asset Tracking and Reporting During an IONS (Project #8105)
    - See above presentation.
  - Oil Spill Response Emerging Technology Assessment (2017-12)
    - There is a new proposed start date for this project.
    - USCG has contacted BP by e-mail to determine whether USCG can access the ideas that were collected after the DWH event. A literature search will also be conducted.
- Arctic and Marine Oil Spill Program (AMOP) Conference

  - Mr. Hansen attended the AMOP Conference June 7-9, 2016 in Halifax, Nova Scotia. The conference website is https://www.ec.gc.ca/amop/
  - Mr. Hansen reviewed the major topics discussed at the conference, including non-conventional oils and herders.
  - Anyone with questions regarding the conference proceedings should contact Mr. Hansen.
- 2017 RDC Portfolio Development
  - Project Execution Plan (PEP) ramp up has occurred and will be approved in August.
  - Anyone who would like to see any documents should contact Mr. Hansen.
  - Mr. Jenkins noted that the Arctic Domain Awareness Center has submitted several proposed projects that address oil issues and may be relevant to work being conducted by other ICCOPR members.

b. USFWS
- USFWS had no updates to report but noted the U.S. Department of the Interior (DOI) received congressional funding for oil spill preparedness (approximately $2 million over the past two years). Ongoing projects related to this funding will be discussed at the next ICCOPR meeting.

c. U.S. Navy
- U.S. Navy had no updates to report.

d. PHMSA
- PHMSA had no updates to report.

e. DOE
- DOE's portfolio in conjunction with the Research Partnership to Secure Energy for America (RPSEA) will come to an end in September 2016. A conference will be held in Galveston, TX to highlight some of the results of the portfolio, with a focus on where some of the research has potential for commercialization.
- DOE is conducting onshore research in several field labs, including at the Marcellus Shale Energy and Environment Laboratory (MSEEL) and in the Permian Basin. Both wells have been drilled and most of the data collection has been completed.
- DOE is currently evaluating proposals for its methane hydrates research program.

f. BOEM
- BOEM is in the middle of its annual planning process. The Environmental Studies Development Plan (FY17-FY19) is available online for review.
- The next phase will involve regional office management ranking their priorities in order to create a National Studies List to be approved by upper management.
- The National Studies List generally contains more research projects than are possible to fund. If one project falls through, another can be moved up the list.
- BOEM is currently focusing more on biological bench studies as opposed to oil.

g. BSEE

- The R41 warehouse at the OHMSETT facility, which was damaged during Superstorm Sandy in 2012, is now occupied with more equipment to be moved in soon.
- ARA has been working on implementing the system it started two projects ago regarding dispersant effectiveness. The system is now in a remotely operated underwater vehicle (ROV) and is being tank tested.
- BSEE is working on American Society for Testing and Material (ASTM) standards and looking at how oil thickness impacts skimmer performance; the data suggests that when thickness decreases, there is a negative impact on performance.
- Recently completed projects include:
  - #1016: Comparative Testing of Corexit EC9500A, Finasol OSR 52, Accell Clean DWD, and ZI 400 at Ohmsett in a Simulated Arctic Environment
    - The peer review is completed and the report is posted online.
  - #1039: Oil Leak Detections with a Combined Fluorescence Polarization Instrument and a Wide Band MultiBeam Sonar
    - This project was based on work previously done by USCG. While the technology worked, there is still progress to be made before it goes commercial.
  - #1053: Development of Universal Submersible Skimmer Delivery System
    - This project seeks to develop an autonomous skimmer that would provide information on oil thickness and other information.
  - #1054: Development of Double Helix Oil/Water Separation Skimmer Technology
    - This proof of concept project did not work so it will not be moving forward.
  - #1057: Development of a Planning Standard for In-Situ Burning Operations
- New projects include:
  - #1079: Deepwater Horizon Lessons Learned - Methodology and Operational Tools to Assess Future Oil Spills
    - The project will involve remote sensors mounted on various platforms to detect/measure emulsified oil at Ohmsett. A second phase will be conducted at an offshore location.

h. EPA

- The EPA Office of Research and Development (ORD) Oil Research Program reported several ongoing or completed research projects.
- ORD is continuing work on National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Product Schedule effectiveness protocol and reference oil testing.
- ORD completed its DWH NRDA air emissions study, which was conducted with the Office of Air and Radiation (OAR) in North Carolina. The study is out for review and ORD hopes to publish the results.
- The crude oil simulant project is ongoing. Phase two involves taking nanometer scale droplets and increasing them to micrometer scale. ORD plans to have some of the product tested this summer.
- ORD recently completed a big round of biodegradation projects using two types of diluted bitumen in fresh water cultures as well as crude oil in both freshwater and Gulf of Mexico cultures. This work was done under ORD's partnership with the University of Cincinnati.

- As part of this study, ORD has found that cultures taken from sediment and not from water behave differently.

- ORD is still working on its dispersant effectiveness in various salinity regimes project and hopes to finish up the lab work in September 2016 and move on to tank work in October.
- ORD has been providing support to the Arctic Council and put together a list of EPA Arctic-related projects. ORD has also been involved with National Aeronautic and Space Administration (NASA) on the Arctic Campaign Project looking at baseline monitoring studies.
- Ms. Vanessa Principe (EPA) noted that it has been very difficult to find reference oils for the Subpart J Rule effort. EPA is in need of five barrels of IFO120.
  - Mr. Lehmann, Ms. Principe and Dr. Wilson will further discuss obtaining reference oils offline.
  - Ms. Principe added that the publication date for the final Subpart J Rule has been shifted to 2018.

i. NOAA

- An updated version of the Chemical Aquatic Fate and Effects (CAFE) database was released in June 2016. CAFÉ is a software program used to estimate the fate and effects of thousands of chemicals, oils and dispersants. Enhancements include new eco-toxicity data from EPA and updated modeling.
  - The updated database is distributable and is available on the NOAA website.
- ICCOPR members received notice of the availability of DWH Damage Assessment sample availability in May 2016. More samples will be made available for researchers who need marine mammal samples.
  - Any federal agencies interested in obtaining samples should contact NOAA.
- The NOAA/National Ocean Service (NOS) 5-year plan for operational forecast systems (OFS) upgrade continues. NOAA's plan is to rebuild and redistribute the OFS models.
- The Office of Response and Restoration (OR&R) DWH NRDA Lessons Learned Study will begin in July 2016 in order to understand how remote sensing data can and cannot be used appropriately and enhance OR&R's ability to better utilize remote sensing methods developed in the DWH NRDA.
  - The first phase will involve characterization of the detection of known oil thicknesses and oil-emulsions in a controlled environment, performing multiple tests and calibrations for thermal, optical and microwave sensors at the Ohmsett test tank.
  - The second phase will involve measurement of the open water oil thicknesses and oil-emulsions at the damaged Taylor Energy well field surface oiling site, performing multiple tests and calibrations for thermal, optical and microwave sensors in August/September 2016.
    - The third phase will involve development of operational methods and procedures for processing, interpreting, and delivering each of the sensors products evaluated during the experiments for future response and assessment in early 2017.
- Other current discussions include topics for the GoMRI conference and thinking through the biggest questions that need to be answered from DWH to be proposed up the chain.
- OR&R's Emergency Response Division will be hosting several upcoming trainings (see presentation slides for more information).

j. NASA, U.S. Army Corp of Engineers (USACE), National Institute of Science and Technology (NIST) and U.S. Fire Administration (USFA) were not in attendance and did not provide updates.

10. New Business:
- Ms. Medley noted that she was recently invited to speak to the Senate Committee on Energy and Natural Resources. Committee members were very interested in gaining information regarding how federal agencies procure oil for research purposes and they are considering a legislative fix for this matter.
  - Ms. Medley will be providing the Committee with information regarding how BSEE obtains test oil. It is still difficult for BSEE to obtain oil for research.
- The Committee is interested in Oil Pollution Act of 1990 (OPA 90) language regarding Ohmsett.
- In addition, Congress is considering eliminating the ICCOPR Biennial report from its list of required reports. Ms. Medley suggested to the Committee that the report not be eliminated.
  - ICCOPR members discussed whether the format of the report could be streamlined to make it more useful to readers (e.g., move information from the appendices up front).

Action Item:
- Ms. Erica Folio (DOE) will look into how DOE obtained oil for its crude oil characterization study.

11. Closing:
- CAPT Loring, Dr. Conmy and CDR Weaver thanked the ICCOPR members for participating in the ICCOPR meeting.
- CDR Weaver adjourned the meeting at 3:00 pm.

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Enclosures: (1) Mobile Asset Tracking & Reporting Device (NICS – Next Generation Incident Command System)
(2) Optimized Operational Airborne Oil Spill Remote Sensing: MEDUSA a Quantitative Approach
(3) Advancing Innovation in Oil Spill Cleanup: Thoughts from XPRIZE
(4) Revisiting the National Academies' Reports on Oil in the Sea and Oil Spill Dispersants
(5) USCG Update
(6) BSEE Update
(7) NOAA Update
(8) EPA Update
(9) Meeting invitation and agenda for July 6, 2016