

U.S. Department of
Homeland Security

United States
Coast Guard



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United States Coast Guard

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MEMORANDUM

From: Ms. Kirsten Trego *KR Trego*
Executive Director, Interagency Coordinating
Committee on Oil Pollution Research

Reply to: 202-372-2269
Attn of: Ms. Kirsten Trego

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

Subj: MINUTES OF THE FY 2017 SECOND QUARTER ICCOPR MEETING

1. General: The Interagency Committee held its FY 2017 second quarter meeting at the CSRA Arlington Center office in Arlington, VA on March 8, 2017. Ms. Kirsten Trego called the meeting to order at 9:15 a.m. and it continued until 3:45 p.m. The agenda can be found in Enclosure (8). Representatives of ICCOPR agencies in attendance or on the phone were:

CAPT Joseph Loring, Chair, U.S. Coast Guard – Headquarters (USCG)
Dr. Robyn Conmy, Vice Chair, Environmental Protection Agency (EPA)
Ms. Kirsten Trego, ICCOPR Executive Director, USCG
CDR James Weaver, USCG
LT Rebecca Brooks, USCG
Mr. Curtis Catanach, USCG
Mr. Jim Fletcher, USCG
Mr. Kurt Hansen, USCG
Ms. Monica Maghini, USCG
Mr. Kevin Sligh, USCG
Mr. Scott Lundgren, National Oceanic and Atmospheric Administration (NOAA)
Mr. Dave Westerholm, NOAA
Dr. Greg Wilson, EPA
Ms. Vanessa Principe, EPA
Dr. Walter Johnson, Bureau of Ocean Energy Management (BOEM)
Mr. Brian Zelenke, BOEM
Dr. Jeff Ji, BOEM
Dr. Zhen Li, BOEM
Ms. Lori Medley, Bureau of Safety and Environmental Enforcement (BSEE)
Mr. Timothy Steffek, BSEE
Ms. Erica Folio, Department of Energy (DOE)
Mr. Robert Smith, U.S. Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA)
Dr. Barry Forsyth, U.S. Fish and Wildlife Service (FWS)

Mr. Tom Thompson, U.S. Maritime Administration (MARAD)
 Ms. Stephanie Bocek, U.S. Navy
 Mr. John Kucklick, National Institute of Standards and Technology (NIST)

Guests:

Dr. Steve Sempier, Mississippi-Alabama Sea Grant/ Gulf of Mexico Sea Grant
 Major General Randy Kee, Arctic Domain Awareness Center

2. Welcome and Introductions/Opening Remarks: The following opening remarks were made:

a. CAPT Joseph Loring (USCG)

- CAPT Loring thanked attendees for their participation.
- CAPT Loring noted that U.S. Coast Guard (USCG) Office of Marine Environmental Response Policy (CG-MER) is currently conducting several pieces of international work.
 - On January 9, 2017, USCG and the government of Cuba signed a bi-national pollution agreement, which is pending entry into force by Cuba. The agreement is binding, and states that the U.S. and Cuba will work on developing a joint contingency plan (JCP).
 - MER has reinvigorated its discussions with Russia on U.S.-Russia efforts to update the Russia/US JCP. A meeting took place in Anchorage during the week of February 20, 2017 with Russia to determine next steps regarding the approval of a 2-year work plan, and begin planning for a JCP exercise. Another meeting is scheduled to take place in June 2017 in Russia.
 - MER finalized a draft two-year work plan under a letter of intent with Norway. The Bureau of Safety and Environmental Enforcement (BSEE) has also been involved in this work.
- USCG and BSEE recently updated and signed their Response Workgroup memorandum of agreement (MOA) which outlines how the two agencies respond to oil spills. Discussions are being held to clarify Federal On-Scene Coordinator (FOSC) authority as well as BSEE's regulatory authorities in the event of a spill.
- Funding issues have led to USCG consolidating its vessel of opportunity skimming systems in Alaska, Hawaii and Puerto Rico, which are made up of Oil Pollution Act of 1990 (OPA90) funded gear. USCG is currently working with its Strike Teams and the U.S. Navy Supervisor of Salvage and Diving (SUPSALV) to allow USCG to access SUPSALV gear (e.g., skimmers) when needed for exercises or responses. A test operation will take place in Norfolk, VA in May 2017.

b. Dr. Robyn Conmy (EPA)

- Dr. Conmy welcomed the attendees.
- Dr. Conmy stated that she had a discussion with Ken Lee of Fisheries and Oceans Canada (DFO Canada) regarding his interest in international opportunities for collaborative research. He is interested in potentially attending the 3rd Quarter ICCOPR meeting and discussing collaboration opportunities as an agenda topic.

3. General Updates/Announcements: General updates were provided on several topics:

a. Upcoming Meetings:

- Ms. Kirsten Trego (USCG) stated that the Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) has requested an audience with ICCOPR.

- The PWSRCAC meeting will be held at USCG Headquarters on March 29, 2017 from 1:00 to 2:00 PM. All ICCOPR members are invited to attend the meeting in person; in addition, call-in information will be made available. Ms. Trego will provide a meeting invitation.
 - The National Academy of Sciences (NAS) Gulf Research Program has invited Ms. Trego and any ICCOPR principals who would like to attend their advisory board meeting on June 28, 2017. Ms. Trego will distribute details once they become available.
- b. 2017 International Oil Spill Conference (IOSC) Update:
- CDR James Weaver (USCG) provided an update on the next IOSC, which is scheduled to take place May 15-18, 2017 at the Long Beach Convention Center (<http://iosc.org/>).
 - The IOSC Program Committee is in the final stage of planning the conference program. The deadline for final paper submission is March 15, 2017, and deadline for film submissions is April 3, 2017. The early bird registration deadline is March 17, 2017.
 - Data on paper reviews is currently being collected. Final paper submissions will be accepted in electronic form only.
- c. Congressional Updates:
- Ms. Trego and CDR Weaver were asked to speak with Senator Maria Cantwell's (D-WA) office again after her staff attended the ICCOPR 1st Quarter meeting in December 2016. Staff members asked questions regarding public participation in ICCOPR processes as well as whether ICCOPR has an oversight committee. Ms. Trego and CDR Weaver explained that ICCOPR is the research and development (R&D) oversight committee for oil spill research conducted within agency-specific R&D programs.
 - Senator Cantwell's staff is aware of the challenges related to obtaining test oils and is committed to drafting legislation regarding this issue.
- d. 2017 Gulf of Mexico Oil Spill and Ecosystem Science (GoMOSES) Conference:
- Mr. Scott Lundgren (NOAA) provided a recap of the 2017 GoMOSES Conference, which took place February 6-9, 2017 in New Orleans, LA and was attended by over 1,000 participants. Mr. Dave Westerholm (NOAA) was the conference chair.
 - The conference had a distinct research and response theme over its 23 scientific sessions and 220 oral presentations, recognizing the need to make the half billion dollars in research from Gulf of Mexico Research Initiative (GoMRI) funding usable for people in the response community. Panel discussions focused on helping research scientists better appreciate the factors facing those who are in the "hot seat" during a response.
 - Key issues emanating from the plenary included: the importance of two-way communications between researchers, responders, and industry; calls for earlier data availability after a response; greater public participation; and leveraging connections from existing structures (e.g., Area Committees).
 - A final summary report reflecting the conference content and a report out from the final session on major themes will be made available. In addition, most of the research presented will end up in the peer reviewed literature.
 - Mr. Westerholm noted that looking ahead to 2018, the GoMOSES Conference will likely take a different direction. The idea will be for the executive committee to identify themes for the conference as opposed to issuing a general call for abstracts, similarly to the IOSC model. In addition, the conference will be looking to include presentations outside of GoMRI funded research.

- Ultimately, the 2018 conference will continue sparking discussions related to how research relates to decisions regarding planning, preparedness, and response.
 - Mr. Westerholm noted that there are efforts going in multiple forums to connect academics and planning and preparedness personnel to address the following: 1) academics who want to take advantage of spill events to conduct research; 2) how to integrate academics who want to potentially add value to responses; and 3) the restrictions of the Natural Resources Damages Assessment (NRDA) process by which scientists are subject to non-disclosure agreements and agree to present research in court.
 - Dr. Lisa DiPinto (NOAA) is leading discussion within NOAA regarding these issues and the duplication of research before and after a response.
- e. Departures and Arrivals
- Mr. Curtis Catanach (USCG) has replaced Mr. Shannon Jenkins in USCG’s R&DT&E program (CG-926). Mr. Jenkins is now the USCG Senior Arctic Policy Advisor.

Action Item:

- ICCOPR members with ideas for themes for the 2018 GoMOSES conference or who are interested in sitting on the executive committee should contact Dr. DiPinto (NOAA), Mr. Westerholm, and Mr. Lundgren.
4. Ms. Lori Medley (BSEE) Recognition: Ms. Medley (BSEE) was presented with a public service award for her service to ICCOPR from 2011 to 2017. All ICCOPR members thanked Ms. Medley for her dedication to ICCOPR and moving its priorities forward, and wished her well in her retirement.
5. Presentation 1 – Gulf Oil Spill Research Outreach: Dr. Steve Sempier (Sea Grant) provided a presentation on the Sea Grant and GoMRI oil spill science outreach model.
- a. Presentation:
- Mr. Lundgren noted that NOAA’s Emergency Response Division has been collaborating with Sea Grant to find a commonality of purpose in distributing information on environmental research.
 - Dr. Sempier’s presentation provided an update on work that has been ongoing since Dr. Chuck Wilson (GoMRI) presented on GoMRI to ICCOPR in January 2015.
 - GoMRI supports multiple outreach activities, including Sea Grant-led activities. Sea Grant’s model is built on two-way communications in that there is collaboration with Sea Grant’s customers to ensure that they receive scientific information and results packaged in a way that is useful based on the audience.
 - Two years ago, GoMRI and Sea Grant partnered to determine the best way to distribute GoMRI research information beyond the K-12 and general public audiences to target people whose livelihoods depend on the Gulf of Mexico.
 - Staff were hired around the Gulf of Mexico to work on the pilot phase of the Oil Spill Science Outreach program. Four Sea Grant college programs across the four Gulf states were given a designated Oil Spill Science Agent, with each staff member taking on a different focus.
 - Focus areas include fisheries, tourism and elected officials, public health and social science, and physical oceanography/emergency response.

- Dr. Sempier emphasized the importance of building relationships between Sea Grant and its audiences so that those audiences trust Sea Grant to deliver unbiased scientific information, particularly keeping in mind the adage that “facts are facts but perception is reality” (e.g., during the Green Canyon spill, the fishery industry asked the Sea Grant fisheries specialist to provide clarity on what was being reported in the news).
 - Dr. Sempier addressed several approaches and lessons learned during the pilot phase of the project, including the effectiveness of building personal relationships through Sea Grant’s engagement in its non-advocacy role; the importance of addressing misperceptions early and often (i.e., that the program was not a BP outreach project); and the need to develop diverse outreach products and methods to meet different audience needs, among others.
 - Because of its successes, the Sea Grant Oil Spill Outreach program will be continued and will head into Phase II building on the momentum of its core seminars and publications.
 - As part of Phase II, Sea Grant will be replicating its regional approach to outreach to other parts of the country. For example, a meeting will be held in June 2017 to discuss outreach efforts in the Great Lakes region.
- b. Discussion:
- Ms. Medley addressed Dr. Sempier’s emphasis on leveraging partners and noted the planned technology demonstration at the upcoming IOSC. Because there is a common perception that oil spill cleanup technology hasn’t advanced since Exxon Valdez in 1989, she suggested that it might be helpful if Sea Grant could produce some type of informational publication to show that technology has advanced.
 - Dr. Sempier noted that Sea Grant is currently writing new publications on sea turtles, dolphins, “where did the oil go”, and other topics. He expressed appreciation for the suggestion of cleanup technology as a publication topic and mentioned that a Sea Grant specialist will be attending IOSC and will observe the technology demonstration.
 - Mr. Lundgren added that historically, there has been more emphasis on presenting research to the oil spill community at internal conferences as opposed to in academic journals. It would be helpful if more research, for example on cleanup technology, was published in peer-reviewed publications.
 - Mr. Westerholm noted that for IOSC 2020, there may be an opportunity to conduct a short course with Sea Grant during the day of workshops before the conference begins.
 - Mr. Westerholm discussed the future of the GoMOSES conference, which will likely occur for another four to five years depending on how long residual legacy GoMRI funding lasts. He noted that it is not yet structured as a self-perpetuating machine (i.e., from sponsorships/vendors) and that in the future, even if funding is available for research it may not be available for presenters to get to the conference.
 - One option may be to combine GoMOSES with another conference, such as IOSC. Another option would be to create a brand new format. There will be many coordinating challenges ahead.

5. Presentation 2 - Arctic Domain Awareness Center Brief: Major General Randy Kee (ADAC) provided an overview of the capabilities of and ongoing work at the Arctic Domain Awareness Center (ADAC).
- a. Presentation:
- ADAC is one of 10 Department of Homeland Security (DHS) Centers of Excellence across the country. While the other Centers of Excellence focus on certain functional mission sets, ADAC focuses on a specific geographic area. ADAC's principal customer is USCG as it fulfills its mission in the Arctic region in the areas of Arctic search and rescue, humanitarian assistance, disaster response, and security missions.
 - ADAC addresses both short and long term challenges for USCG in the high north.
 - Major General Kee discussed ADAC's main focus areas and initiatives, as well as its numerous partnerships, including other federal agencies, academia, industry, and foreign governments (i.e., Canada). ADAC conducts not only science and technology work, but social science research (i.e., Community-based Observer Network in Arctic Alaska).
 - ADAC leverages student research work from the University of Alaska.
 - ADAC is driven by the Arctic Operator and attempts to take projects across the "valley of death" from research to capability.
 - Major General Kee explained "Domain Awareness" and ADAC's consideration of theater-wide variables (i.e., physical environmental factors) and how they impact operations in order to determine how to help the Arctic Operator in the existing environment. ADAC's main driver is reducing risk.
 - A snapshot of ADAC's current research projects was presented, in addition to a discussion of DHS' return on investment for these projects. ADAC aims to deliver specific capabilities requested by USCG, while also aligning with DHS funding opportunity announcements.
 - Data generated from different ADAC projects has been compiled in an "Arctic Information Fusion" construct with the goal of providing data to decision makers and enabling them to increase their work effectiveness and reduce risk. However, the Arctic Information Fusion project will be disaggregated this year in order to drive specific projects based on definite tasks.
 - Major General Kee provided an overview of ADAC's development of a propeller driven long range autonomous underwater vehicle (LRAUV), a project of specific interest to ICCOPR.
 - ADAC's goal is to use the LRAUV at a spill site to conduct 3D mapping of the scenario. Ideally, the LRAUV will function under ice. The project is underway and it is anticipated that field testing will be conducted in spring 2018.
- b. Discussion:
- Major General Kee addressed another ADAC project on oil spill and plume modeling involving Texas A&M and the university's oil spill calculator, which characterizes oil movement in plumes and works in deep water. The idea of the project is to combine the calculator with sea ice modeling in order to characterize the movement of oil under ice.
 - Mr. Lundgren asked Major General Kee to discuss how recent program changes by DHS have impacted ADAC's focus, particularly related to oil spill preparedness and response.
 - Major General Kee noted that one major change has been the decision to not continue with an integrated approach to the Arctic Information Fusion project, which is

ADAC's core effort. In addition, ADAC is continuing work to advance Arctic ERMA (Environmental Response Management Application) to enhance USCG operator use. He emphasized that there is still very strong interest in the Arctic oil spill calculator and the sea ice detection project.

- Major General Kee discussed ADAC's work with ice breaker operations, noting that ADAC researchers have spent time on the USCG Healey focusing on how to make the ice breaker community more effective. For example, ADAC recently finished a project regarding how to use ice modeling to validate different scenarios for USCG ice breakers. ADAC is also focusing on merchant marines in the Arctic region.

Action Item:

- Any additional questions and feedback regarding ADAC should be directed to Major General Kee. Ms. Trego will compile a list of ICCOPR members who would like to follow up with Major General Kee and will connect them.

6. Member R&D Updates:

a. USCG

- USCG provided information on several recently completed and ongoing projects:
 - #4701: Oil in Ice
 - The final report for this project is being reviewed, which includes an input for the Federal On-Scene Coordinator (FOSC) guide based on lessons learned from demonstrations in the Great Lakes and Arctic as well as the development of three key technologies.
 - The project is scheduled to close in May 2017.
 - The three technologies developed include: 1) decontamination techniques and a shelter technology designed to separate between hot and cold zones on small vessels; 2) an ice management system involving an ice cage with a skimmer stored inside; and 3) temporary storage tanks.
 - Further development of the technology prototypes will take place in FY2018.
 - #4702: Detection and Mitigation of Oil within the Water Column
 - Testing with BSEE at Ohmsett of mitigation technologies was recently conducted. The first technology was a microbubbler and the second was foam materials treated with sorbent developed by Argonne National Laboratory.
 - The final report is due in June 2017 and the project will be completed in July 2017.
 - #4704: Proven In-Situ Burning
 - USCG, including Mr. Kurt Hansen (USCG), conducted herder testing and potential burn tests at the burn pan in Mobile, AL during the week of October 17, 2016.
 - More work at the burn pan with Worcester Polytechnic Institute (WPI) testing will be conducted during the week of March 12, 2017.
 - USCG plans to install a wave maker in April 2017, which will bring the burn pan up to ASTM standards for testing boom and in situ burns.
 - #4705: Response to Oil Sands Products

- Initial bench top testing was conducted using a Cyclops-7 probe. The test used sand, oil, and salt water. Separate tests were done on construction sand and on silt from Narragansett Bay.
- It appears that in lower concentrations the mixing worked; however, in higher concentrations the results were more inconsistent.
- Review of the bench top testing report is ongoing. Dr. Conmy and Mr. Hansen will discuss the test results offline.
- More testing is currently ongoing at Ohmsett with different skimmer configurations. The idea is to compare different configurations as the oil weathers in order to determine which systems work best as viscosity and density change.
- USCG is using Enbridge oil purchased through a Cooperative Research and Development Agreement (CRADA).
- USCG is planning to conduct testing in the Great Lakes in 2018.
- #4707: Shale Oil Preparedness and Response
 - Similarly to #4705, USCG intends to provide oil spill responders with information on shale oil responses and shale waste water.
 - USCG's Research and Development Center (RDC) conducted an assessment and wrote a non-published report containing policy issues for MER. RDC is currently determining the best way to quantify and qualify some of these issues.
- #7609: Airborne Oil Spill Remote Sensing and Reporting
 - In cooperation with BSEE, USCG conducted flights to test its sensors over the oil seeps in Santa Barbara.
 - USCG developed several concept operating procedures.
 - In theory, these USCG planes can substitute for Canadian and Icelandic aircraft used during the Deepwater Horizon spill.
 - This project is completed.
- #8105: Mobile Asset Tracking and Reporting During an Incident of National Significance (IONS)
 - This project involves a flexible ad hoc interoperable communication/information system to enhance USCG's ability to respond to IONS.
 - The system is currently slated to be maintained behind the DHS firewall.
 - This project will conclude in late 2017.
- #7935: Equipment Surge Risk Assessment Tool
 - This project emerged from issues identified during the Deepwater Horizon event related to different Regions receiving requests to give up certain types of response equipment, and especially boom.
 - This project involves development of a quantitative analysis that will allow Regions to conduct their own equipment risk assessments.
 - The contractor for this project has spoken with subject matter experts (SMEs) in the Districts and has developed a conceptual mode.
 - This project will conclude in summer 2017.
- #4708: Oil Spill Response Technology Evaluation Process Research
 - The goal of the project is to determine a better way to evaluate proposed oil spill response technologies for USCG use.
 - This project recently started and concepts are currently being developed.

- #4710: Nearshore and Inland Evaluation of the Effective Recovery System Potential (ERSP) Calculator
 - USCG is evaluating the ERSP calculator to determine if it can be adapted to inland spills.
 - A workshop to develop scenarios for use by GenWest has been delayed until June 2017.
 - #6210: Arctic Operations Support
 - Arctic demonstrations were conducted in 2014, 2015 and 2016 using the USCG Cutter (USCGC) Healey. Similar demonstrations will be held in July or August 2017.
 - USCG RDT&E Program will be hosting its FY18 RDT&E Assessment of Prospective Portfolio (APP) at the end of March 2017 at RDC.
- b. U.S. Maritime Administration (MARAD)
- MARAD had no updates to report.
- c. U.S. Fish and Wildlife Service (USFWS)
- USFWS had no updates to report.
- d. National Institute of Science and Technology (NIST)
- NIST had no updates to report.
- e. U.S. Navy
- Ms. Stephanie Bocek (U.S. Navy) discussed the Prinz Eugen, a sunken German vessel in the Kwajalein Atoll where many high value U.S. assets are located. The vessel has been leaking since it sank post-World War II and had approximately 700,000 gallons of oil onboard.
 - U.S. Pacific Command tasked SUPSALV with investigating the conditions of the vessel and evaluating the risk of offloading.
 - When SUPSALV conducted its survey, it became apparent that the vessel is highly corroded, raising concerns about conducting invasive sampling.
 - More non-invasive sample collection will be conducted the first week of May 2017, during which a non-invasive passive acoustic detection tool will be tested.
 - A report will be released by the end of June.
 - Regarding Ms. Bocek's need for corrosion models for this work, Mr. Lundgren suggested that she contact the marine archaeologists at NOAA Sanctuaries who have expertise on wrecks. Mr. Tim Steffek (BSEE) offered to put Ms. Bocek in touch with his contacts at the University of Tulsa who work on corrosion issues. Finally, Mr. Greg Wilson (EPA) suggested that Ms. Bocek contact the National Association of Corrosion Engineers.
 - Offloading of the U.S.S. Houston in Indonesian waters had been postponed; however, the Navy Historical Heritage Command is starting up efforts again to begin work. A survey is being considered to document pillaging occurring in the area of the ship.
 - SUPSALV is currently working with the United Kingdom's Ministry of Defense (MOD) to assist with their establishment of a "wrecks of the world" program. SUPSALV shared

NOAA's *Remediation of Underwater Legacy Environmental Threats (RULET)* report and the National Response Team's (NRT) *Abandoned Vessel Authorities and Best Practices Guidance* with UK MOD as reference documents.

- SUPSALV is conducting a test on a buoy tender with USCG as a proof of concept for joint equipment sharing of the Current Buster skimmer system during the week of May 22, 2017 in Norfolk, VA.
 - SUPSALV is currently testing Nemo battery-operated underwater hydraulic tools, which leave a light footprint to do invasive survey work. The batteries are being approved for U.S. Department of Defense (DoD) work and the tool will be DoD validated.
 - U.S. Naval Academy seniors are conducting a Capstone project on a drill-bit tool for use in sampling and sealing with a singular motion. Because the market isn't driving the development of this type of thru-hull sampling tool, SUPSALV decided to involve academia.
 - SUPSALV plans to attend IOSC with its booth.
- f. Pipeline and Hazardous Materials Safety Administration (PHMSA)
- A stakeholder-based road-mapping session which was open to the public was held to identify topics related to liquefied pipelines and leak detection. Solicitations for proposals should be posted soon.
 - More information on this project will be reported out at the next ICCOPR meeting.
- g. Department of Energy (DOE)
- DOE released a Request For Information (RFI) that sought input on both onshore and offshore research topic needs. Responses were received from various organizations including research groups, national laboratories, state organizations, and academia.
 - DOE continues its collaboration with the U.S. Department of Transportation (DOT), Transport Canada and the University of North Dakota on crude by rail research (related to the risk of combustion during rail transport).
 - The second task of the study was just completed, which involved evaluating sampling methods for characterizing physical and chemical properties related to the transport of crude oil.
 - The third task of the study has started and involves data collection on combustion experiments during controlled burn scenarios.
 - DOE's field observatories, which are located in the Marcellus Shale, Permian Basin, and Utica Shale are in various stages of development and operation. The Permian Basin project, as the most liquid-rich field observatory, may be of interest to ICCOPR members. Additional information about these sites is available on the NETL website at <https://www.netl.doe.gov/research/oil-and-gas> .
- h. BOEM
- The process for procuring new work for 2017 is approximately 25 percent complete. In preparation for next year, study ideas have been submitted and will undergo an internal review. In June 2017, a select few studies will be presented to BOEM's Committee on Offshore Environment and Assessment, which is part of NAS.

- Over 90 abstracts were received, none of which are related to oil response. Many of the abstracts focus on baseline studies, acoustic impacts of renewable energy, seismic surveying, and air quality issues.
- Mr. Walter Johnson (BOEM) noted that BOEM’s air quality team would be interested in USCG’s burn pan testing projects. The team is working to improve its air quality methodology in the Gulf of Mexico. BOEM is responsible for air quality regulatory requirements in the central and western Gulf of Mexico and part of the North Slope in Alaska.
 - BOEM had been conducting emissions inventories for over 20 years on a three year cycle. BOEM currently has a study planned on “fugitive emissions,” or natural gas leaks on platforms, to determine whether the factors used to estimate the natural gas escaping from valves may be overestimated.

i. BSEE

- BSEE is one vacancy short of being fully staffed; there will be two vacancies when Ms. Medley departs.
- The Ohmsett operation and maintenance contract re-compete is still ongoing. Proposals are being reviewed and it is anticipated that an award will be made in April 2017.
- In February 2017 boom testing occurred at Ohmsett. ASTM F2084 (Standard Guide for Collecting Containment Boom Performance Data in Controlled Environments) does not specify boom length, only width. BSEE wants to determine whether there is any need to specify length of boom in the standard.
- This coming fall Ohmsett will celebrate its 25 year anniversary; BSEE welcomes any ideas of technologies that could be demonstrated at the anniversary event.
- Recently completed projects include:
 - #1070: Developing an Innovative Dispersant Spray Drift Model
 - AMOG presented on this project at the FY2016 4th Quarter ICCOPR meeting.
 - The project’s final report has been posted to the BSEE website.
- Regarding new solicitations, three Broad Agency Announcements (BAAs) have been made this year. The solicitations are related to in situ burning, remote sensing, and mechanical/dispersant topics. White papers have been received for the in situ burning topic, and are due in March 2017 for the remote sensing and mechanical/dispersant topics.
- Newly awarded projects include:
 - #1073: Oil Composition vs. Dispersant Effectiveness
 - This project will kick off on March 9, 2017.
 - The goal is to develop improved statistically-based models to predict dispersant effectiveness.
 - #1078: Development of an Oil Thickness Sensor
 - Thus far, the contractor (American University of Beirut) has determine that it will focus on capacitance in the study.
- BSEE has 37 other ongoing projects, all of which are detailed on the BSEE website (www.bsee.gov).

j. EPA

- EPA is in the middle of completing several projects and starting new ones.
- Ongoing projects include the following:
 - National Contingency Plan (NCP) Product Schedule-related research: EPA Office of Research and Development has developed working protocols for both surface washing agents and solidifiers and has conducted reproducibility and repeatability studies. However, these studies have all been done with existing reference oils; new reference oils are still needed before the protocols can be finalized.
 - EPA is waiting on a shipment of one gallon samples from Alaska to determine if the oil meetings EPA's requirements.
 - Oil Toxicity: EPA has been targeting a series of studies with Mace Baron (EPA) as the technical lead. Studies have been done on oil alone (with dilbits and a variety of crudes), as well as with dispersant mixed in. Testing with a solidifier and a bioremediation agent is also being considered.
 - Crude Oil Simulant Development: EPA is making progress on this project.
 - Dispersion Effectiveness in Hypersaline Waters: This project is now in data synthesis mode; the data will be used in the JETLAG model and work should be complete in July 2017.
 - Diluted Bitumen Report: The report is due out in 2017. Dr. Conmy noted that the dilbit data is ready to be put into CAFE if NOAA would like it.
- Potential projects include the following:
 - Oil detection at Taylor spill site using the Remus Autonomous Underwater Vehicles (AUV) (with Woods Hole Oceanographic Institution (WHOI), BSEE and NOAA)
 - Oil thickness project at Taylor spill site using Lidar (with NRL and BSEE)
 - In situ burning air emissions and burn pan residue project at Joint Maritime Testing Facility (JMTF) in Mobile, AL (with USCG and BSEE)

k. NOAA

- NOAA continues to work on the General NOAA Operational Modeling Environment Suite (GNOME). GNOME is being broadly used by beta testers; finalization and roll out are targeted for IOSC in May 2017.
- Three papers are in the final stages of review as part of the Arctic Dispersant State of the Science effort, which should be completed in summer 2017.
- George Graettinger (NOAA) and Dr. DiPinto are working on the remote sensing synoptic studies, including working on lab tests of three approaches for in situ measurements validation. NOAA is using Ohmsett and the Taylor site as test beds.
- NOAA is partnering with BSEE on Baleen studies; work is ongoing at Ohmsett.
- A successful meeting was held on advertising and gaining buy in on the new Shoreline Cleanup and Assessment Technique (SCAT) data standard.
- NOAA is working on the final stages of its Sea Turtle Biology Planning and Response Guide; the Cetaceans guide will be updated next.
- NOAA is in the beginning stages of several other projects, including further modeling of weathering information and the best manner in which to display it; a NRDA data mining project; additional oil and dispersant toxicity data for CAFE; and building an inter-species comparison estimator.

1. The National Aeronautical and Space Administration (NASA), U.S. Army Corp of Engineers (USACE), and the U.S. Fire Administration (USFA) were not in attendance and did not provide updates.

Action Item:

- Any ICCOPR member interested in attending the PWI testing at Little Sand Island should contact Karen Stone (BSEE). Mr. Steffek will send an e-mail to ICCOPR members with details.
- Any ICCOPR member with ideas regarding technology demonstrations for Ohmsett's 25 year anniversary should contact Mr. Steffek.

7. ICCOPR vs. NRT Discussion:

a. Discussion:

- Ms. Trego reminded participants that the roles of ICCOPR and the NRT Science and Technology (S&T) Committee were discussed during the FY2016 1st Quarter ICCOPR meeting in December 2016. Specifically, the nexus between research and response and where ICCOPR's and S&T's roles overlap. Ultimately, it needs to be determined whether ICCOPR and the S&T Committee have any duplicative actions or responsibilities.
- Ms. Trego provided several questions to further guide the conversation based on comments from the last meeting, including: What are the roles of each organization? What is the overlap, if any? How do ICCOPR and NRT S&T engage (current state)? Should this be modified; and if so, how? To what end? How does academia get woven in?
- Several ICCOPR members noted that another discussion about this issue may need to be held again when Mr. Steve Lehman (NOAA, S&T Committee Chair) is present, as he was unable to attend the current ICCOPR meeting.
- In order to provide an explanation of potential duplicative activities between the two groups, Mr. Lundgren suggested that it is important to understand the history of each. ICCOPR was created out of the OPA90 legislation, was active for several years, and then became somewhat dormant. The current version of the S&T Committee charter was written when ICCOPR was not active, which may explain some of the duplications.
 - Mr. Lundgren emphasized that the NRT, and therefore the S&T Committee, exists to serve the FOOSC. ICCOPR, on the other hand, exists to coordinate and align how federal research dollars are invested.
- Ms. Medley stated that another important distinction between the two groups is that the NRT addresses both oil and hazardous substances, whereas ICCOPR only addresses oil.
- ICCOPR members discussed the need for broader engagement with academia and industry.
- Dr. Conmy noted that while S&T Committee conference calls are slated to occur quarterly, they usually end up happening on a more ad hoc basis. In addition, the agency report outs given at S&T meetings and ICCOPR meetings are very similar. Dr. Conmy suggested that perhaps ICCOPR agency report outs could suffice to meet the needs of S&T report outs, and S&T calls could occur less frequently or be used to discuss other matters.

- Ms. Vanessa Principe (EPA) stated that while ICCOPR generates big idea coordination and is a guiding action group, S&T in the past has acted as an operational group and generated concrete products such as NRT fact sheets.
 - ICCOPR members suggested that perhaps a discussion related to re-invigorating the S&T Committee and how it can be used to help bridge the gap between research and operations to benefit FOSCs would be beneficial. To this end, the S&T Committee may want to consider revisiting its charter.
 - ICCOPR can be thought of as “Phase I” (focusing on R&D), while the S&T Committee can be thought of as “Phase II” (operationalizing research to make it usable in the field).
- CAPT Loring suggested that one or several joint ICCOPR-S&T meetings be held to discuss delineating responsibilities as well as areas for collaboration.

Action Item:

- Mr. Lundgren will follow up with Mr. Lehman to discuss adding the same discussion item to the next S&T Committee conference call agenda. The outcome will be reported out at the next ICCOPR meeting.

7. Biennial Report Discussion:

- Ms. Trego kicked off the discussion on the ICCOPR Biennial Report framework by presenting several slides on the increasing length of the report since its inception as well as the current framework.
 - The report has grown to 150 pages, which has reduced the number of people who read it to the end, and also lengthens the time of the approval process.
- Ms. Trego has spoken with the CG-8 (External Coordination) about streamlining the report. She proposed three Courses of Action (COAs): a status quo COA, and two options for revamping the report framework.
- The primary content in the current report is Section IV - Interagency Committee Activities, which discusses formal collaboration mechanisms such as MOAs. Currently, the report appendices contain lists and descriptions of relevant completed projects and research papers.
- It was suggested that regardless of the report format, a cap should be set on project descriptions (e.g., only objectives and key results). More details on project information can be maintained on the ICCOPR website, which can be linked to in the Biennial Report.
- The OPA 90 law specifies that the report will include ICCOPR activities from the previous two fiscal years, as well as activities anticipated to be carried out over the subsequent two fiscal years.
- Dr. Conmy stated that the report should be thought of as an opportunity to express why ICCOPR is important and should include the “so what?” of ICCOPR’s work (i.e., how is the research being conducted useful?)
 - Ms. Trego suggested that there is an avenue to tie current projects back to the Research and Technology Plan, ICCOPR’s priorities, and the Standing Research Areas (SRAs) and sub-SRAs.

- Ms. Trego has designed a spreadsheet that allows for projects to be input and categorized by research class, SRA, and priority question. This spreadsheet could be used to provide a “dashboard” of numbers for the Biennial Report.
- Ms. Trego noted that she is also working with USCG’s public affairs team to revamp the ICCOPR website.
- Regarding deadlines, the Biennial Report is scheduled to be delivered internally by July 31, 2017. However, USCG is willing to provide an extension on this date. The final due date to Congress is December 2017, which allows time for work on the website.
- Dr. Conmy suggested that one option for the report might be to produce a longer file with more details as well as a shorter overview document to accompany it.
- ICCOPR members discussed whether there are certain sections of the report that can be eliminated altogether, such as the listing of each ICCOPR member agency and its mission.
- ICCOPR members discussed the importance of keeping a list of relevant projects either in the report or on the ICCOPR website. However, moving forward the projects should be presented in the context of the Research and Technology Plan and should have shorter descriptions, along with a link to more information online and/or a point of contact.

8. New Business:

- No new business was discussed.

9. Closing Comments:

- CAPT Loring, Dr. Conmy and Ms. Trego thanked the ICCOPR members for participating in the ICCOPR meeting.
- Ms. Trego adjourned the meeting at 3:45 pm. The next quarterly meeting will take place in June or July 2017, exact date and location to be determined. The tentative date of June 14, 2017 will not work due to multiple conflicts.

Action Item

- Ms. Trego will send a Doodle poll to ICCOPR members to determine the best date for the FY2017 3rd Quarter meeting.

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- Enclosures: (1) Oil Spill Science Outreach: The Sea Grant/GoMRI Model Presentation
 (2) Arctic Domain Awareness Center Briefing
 (3) NOAA Update
 (4) USCG Update
 (5) EPA Update
 (6) BSEE Update
 (7) Biennial Report Framework
 (8) Meeting invitation and agenda for March 8, 2017