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2017 INTERNATIONAL OIL SPILL CONFERENCE

TITLE

Benefits of Arctic Planning and Response International Coordination: 2015 Engagement by Norwegian Coastal Administration (NCA) and U.S.C.G. Office of Marine Environmental Response Policy (MER)

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The objective of this paper is to highlight Arctic planning and response collaboration initiative between the Norwegian Coastal Administration (NCA) and United States Coast Guard (USCG) Office of Marine Environmental Response (MER) Policy on numerous spill preparedness and response topics. The paper focuses on engagement efforts between NCA and USCG MER on IOSC's 2017 overarching themes of Prevent, Prepare, Respond, and Restore. The NCA and USCG MER signed a Letter of Intent to Cooperate in 2014 on spill preparedness and response topics. These collaboration efforts include sharing of exercise lessons learned during joint workshops, training opportunities, and response equipment testing. As a result of these collaboration efforts, USCG MER representatives attended the 2015 Norwegian Clean Seas Association (NOFO)/NCA annual test of new spill technologies and procedures. The exercise was hosted by NOFO/NCA and was held offshore in the North Sea approximately 140 miles northwest of Stavanger, Norway. The exercise was held June 9-11, 2015, at the abandoned Frigg Oilfield and included verification of the Marine Oil Spill (MOS) Sweeper I, Desmi Forlense, MOS Sweeper II, NorLense Oiltrawl, Current Buster 6, and NASA remote sensing equipment. Another result of this collaboration is that NCA will evaluate its present Incident Command System (ELS). As part of this evaluation, NCA sent two senior staff members to Yorktown in September 2015 to participate in two USCG courses: 1) OSC Crises Management, and 2) ICS-410 Advanced Incident Command.

INTRODUCTION

The Norwegian Coastal Administration (NCA) and United States Coast Guard (USCG), Office of Marine Environmental Response (MER) Policy signed a Letter of Intent (LOI) to cooperate in 2014 on spill preparedness and response topics. NCA and USCG MER worked for approval of the LOI by both countries' governmental origination structures. The LOI indicated numerous opportunities for joint collaboration between both agencies. Several workshops between NCA and USCG MER between 2014 and 2016 have yielded numerous benefits to both agencies. A joint exercise observation of the 2015 Norwegian Clean Seas Association (NOFO)/NCA annual test of new spill technologies and procedures was completed in 2015. Both agencies have participated in joint training opportunities in crisis response and the incident command system. USCG MER facilitated the attendance of NCA representatives at scientific course presented by a partner agency, the National Oceanographic Atmospheric Administration (NOAA).

ORGANIZATION OF US AND NORWAY SPILL RESPONSE

The organization of both the USCG and NCA that will be described are during peace time operations. While the USCG MER has changed names numerous times over the last 15 years during several reorganizations, its fundamental oversight of spill response and policy has remained the same during this modernization. The USCG MER Office Chief is led by a USCG Captain who reports to another USCG Captain, Deputy, Incident Response and Management Directorate (Figure 1). After Deepwater Horizon, a Senior Executive Service (SES) position was created and the position was recently filled by Ms. Dana Tulis. The SES reports to the Assistant Commandant for Response Policy, which is a flag officer position. The Assistant Commandant for Response Policy reports to the Deputy Commandant of Operations, another flag officer

position, who reports to the Deputy Commandant of Operations. The Deputy Commandant of Operations is a three star flag officer position. The Deputy Commandant of Operations reports to the Vice Commandant of the Coast Guard. The Vice Commandant reports to the senior member of the Coast Guard, the Commandant of the Coast Guard.

The Norwegian Coastal Administration (NCA) is an agency of The Ministry of Transport and Communication. NCA has responsibility for acute pollution for both onshore and at sea offshore. Any pollution from trucks, gas stations, skips or oil rig are within NCA responsibility (Bergstrom, 2014). The Norwegian spill response system is made up of three key elements which include private companies, municipalities, and the government (Ly, 2001). According to (Ly, Bergstrøm, and Dragsund, 2014) Norwegian spill response is guided by the Pollution Control Act which states “Anyone operating an enterprise which could cause acute pollution shall provide for the necessary emergency response system to prevent, detect, stop, remove, and limit the impact of the pollution.” (p.1). Johan Marius Ly as Director of Department for Emergency Response has the overall responsibility in NCA for response against acute pollution in Norway (Figure 2). In 2012 the Emergency Response Department was divided into a department that is responsible for the policies and strategic questions regarding overall acute pollution. The Emergency Response Department is a part of the NCA main office. The Centre for Emergency Response (CER) was established in 2012 to perform national first response and preparedness for acute pollution. Helge Munkås Andersen is the head of CER. There are four sections within CER which include section for operations, sections for Environment and planning, section for technology and logistics and section for analyses and statistics. The Emergency Response area within NCA works closely together with Inter Municipalities, Fire

Departments in the municipalities, the Norwegian Coast Guard and the oil and gas industry regarding handling of any acute pollution onshore and in the Norwegian waters.

LETTER OF INTENT TO COOPERATE PROCESS

NCA and USCG MER worked with their respective country's governmental organizations to obtain approval to enter into the LOI. USCG MER submitted a draft LOI for review with the USCG's Office of International Affairs which reports to the Deputy Commandant of Operations and to USCG Legal as well. The Norwegian Coastal Administration signed the letter of intent on behalf of the Norwegian Government. Under the LOI, approval was given for potential cooperation in the form of sharing of exercise lessons learned during joint workshops, training opportunities, response equipment testing, and other collaboration opportunities. NCA signed a Letter of Intent (LOI) to cooperate in 2014 on spill preparedness and response topics (Figure 3). The Letter of Intent Signing Ceremony was attended by the Coast Guard, Deputy, International Affairs and other office representatives, Office Chief, Marine Environmental Policy and other representatives, and National Oceanic Atmospheric Administration representatives. The National Oceanic Atmospheric Administration is a critical stakeholder for the USCG in spill response and has had significant engagement with the NCA as part of the LOI.

BENEFITS OF WORKSHOPS BETWEEN NCA AND USCG MER

Workshops between the NCA and USCG MER were held in 2015 and 2016 (Figure 4 and 5). The first of these to occur under the LOI was held in June 2015 in Stavanger, Norway, following the 2015 Norway Oil on Water exercise (Figure 6 and 7). This workshop focused on a framework for further cooperation that focused on the Arctic, discussing observations from the

Oil and Water Exercise and included a presentation on the newly formed Arctic Executive Steering directed by U. S. Presidential Executive order. USCG Captain Joe Gleason, from the Office of Contingency Exercise and Planning Policy, presented information regarding joint cooperation opportunities for the Incident Command System.

The 2016 workshop was held in Washington, D. C., (Figure 5) and was also attended by NOAA representatives (Office of Response and Restoration, 2016). Furthermore, Canadian Coast Guard representatives were invited to observe the workshop (Lundgren, 2016). Some of the topics discussed were the further development of NOAA's Emergency Response Management Application (ERMA) as a common operation picture for spill response management and dispersant utilization in spill response (Lundgren, 2016). The Arctic Dispersant State of Science effort, led by NOAA's Coastal Research Center, was discussed along with NOAA's efforts in leading the Deepwater Horizon Natural Resource Damage Assessment (Lundgren, 2016). The Norwegian representatives, Johan Marius Ly, Ole Kristian Bjerkemo, Hanne Solem Holt, Rune Bergstrom, Helge M. Andersen from NCA and Petter Meyer, Elisabeth Guttormsen, from Ministry of Transport and Communications gave several presentations on general Arctic activities, research and development updates, shared cross training and exercise opportunities, and ICS implementation. The benefits of these workshops continue to be invaluable to NCA and USCG MER, as well as to observing agencies such as the Canadian Coast Guard.

JOINT ON WATER EXERCISE

NCA invited the USCG to observe the 2015 Norwegian Clean Seas Association (NOFO)/NCA's annual test of new spill technologies and procedures. Norway is one of the few countries that conducts on the water oil testing (WorldOil, 2016). The exercise was hosted by

NOFO/NCA and was held offshore in the North Sea approximately 140 miles northwest of Stavanger, Norway. The exercise command and control platform for the exercise was the Norwegian Coast Guard 180 meter KV Harstad (Figure 6). The exercise was held June 9-11, 2015, at the abandoned Frigg Oilfield and included verification of MOS Sweeper I, Desmi Forlense, MOS Sweeper II, NorLense Oiltrawl, Current Buster 6, and NASA remote sensing equipment (Norwegian Coastal Clean Seas, 2015).

USCG MER Technical Advisor, Scott Lundgren, and the MER-2 International Spill Coordination Division Chief, CDR Tim Gunter, attended on behalf of the USCG MER. Both USCG MER representatives were allowed to directly observe spill technology demonstrations from small boats to obtain first hand perspectives on equipment efficiency and to share observations during the entire exercise period (Figure 6 and 7). NCA representatives provided detailed information on the KV Harstad regarding its emergency towing system, lightering equipment, and other pollution response equipment. This exercise is one of the few in the world that permits the use of actual oil for research testing purposes of spill equipment which was of significant benefit to the USCG MER and the National Aeronautics and Space Administration (NASA). NASA was another United States agency that participated in the NCA'S Oil on Water exercise in 2015. NASA'S first time participation was marked by the utilization of a specialized airborne instrument named the Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR) for testing aircraft radar in monitoring oil spills. (Rasmussen, 2015). Located onboard a NASA C-20A research aircraft, the UAVSAR was used to closely monitor oil releases during the exercise (Rasmussen, 2015). NASA worked with the scientific community from Norway before, during, and after the exercise on testing results. Kathleen Jones and Ben Holt

from NASA's Jet Propulsion Laboratory work with other scientists from Norway regarding the monitoring of oil slicks (Rasmussen, 2015).

JOINT AND INDIVIDUAL TRAINING OPPORTUNITIES

The exchange of training and information between the USCG MER and the NCA was a critical element of the newly established relationship formed under the LOI. The first joint training opportunity identified that could be jointly beneficial between USCG MER and NCA focused on incident crisis management. Two NCA members attended the USCG's On-Scene Crisis Management Course and the Incident Command System (ICS-410) Advanced Incident Commander Training, in September of 2015. The two NCA members who attended were Mr. Helge M. Andersen, NCA Head of Department, Centre for Emergency Response, and Mr. Hans P. Mortensholm, NCA Project Manager.

The USCG On-Scene Crisis Management Course is held annually at the USCG Training Center in Yorktown, Virginia conjunction with an ICS-410 Course. The On-Scene Crisis Management course goals are to train command representatives at the rank of Captain and Commander in oil and hazardous substance incidents (U. S. Coast Guard Port Operations Courses, 2016). This course is intended to be a Capstone of training for USCG Captains of the Port Authority involving decision making and public relations for large incidents. NCA representatives and senior USCG officers shared lessons learned and best practices during the course (Figure 8) (U. S. Coast Guard Port Operations Courses, 2016). The Advanced Incident Commanders Course (ICS-410) prepares graduates to complete Type 2 Incident Command qualifications (U. S. Coast Guard C Schools, 2016). Course fundamentals include information processing, agency responsibilities, Incident Commander Responsibilities, transfer of command and control, and the demobilization of an Incident Command Post (U. S. Coast Guard C Schools,

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2016). Both courses gave the opportunity for NCA and USCG members to share lessons learned and best practices in spill response. Two more senior staff members will attend the November/December 2016, course in Yorktown. NCA representative also attended a Science of Spills course held in Mobile, AL from February 23-27, 2015.

CONCLUSION

The cooperation between the NCA and USCG has strengthened overall spill preparedness for both agencies. NCA has started to look into the Norwegian system for Incident Command, called ELS (Enhetlig Ledelsessystem, in Norwegian). The information presented at LOI workshops and individual training opportunities utilized by NCA senior personnel has greatly contributed to the further development of ELS. These workshops helped the USCG prepare for the taking over Chairmanship of the Arctic Council based on NCA lessons learned. Valuable feedback from the NCA showed potential gaps in the Arctic Coast Guard Forum based on different countries Coast Guards, authorities, and agency responsibilities. The USCG exposure to oil on water testing of different spill response tools increased the overall knowledge base of science and research. Science and research observations were passed to the USCG Interagency Coordinating Committee on Pollution Research (ICOPR) coordinator. All of these positive contributions from LOI to cooperate between NCA and USCG, plus many ongoing initiatives, have contributed to the improvement of both countries spill response and preparedness programs.

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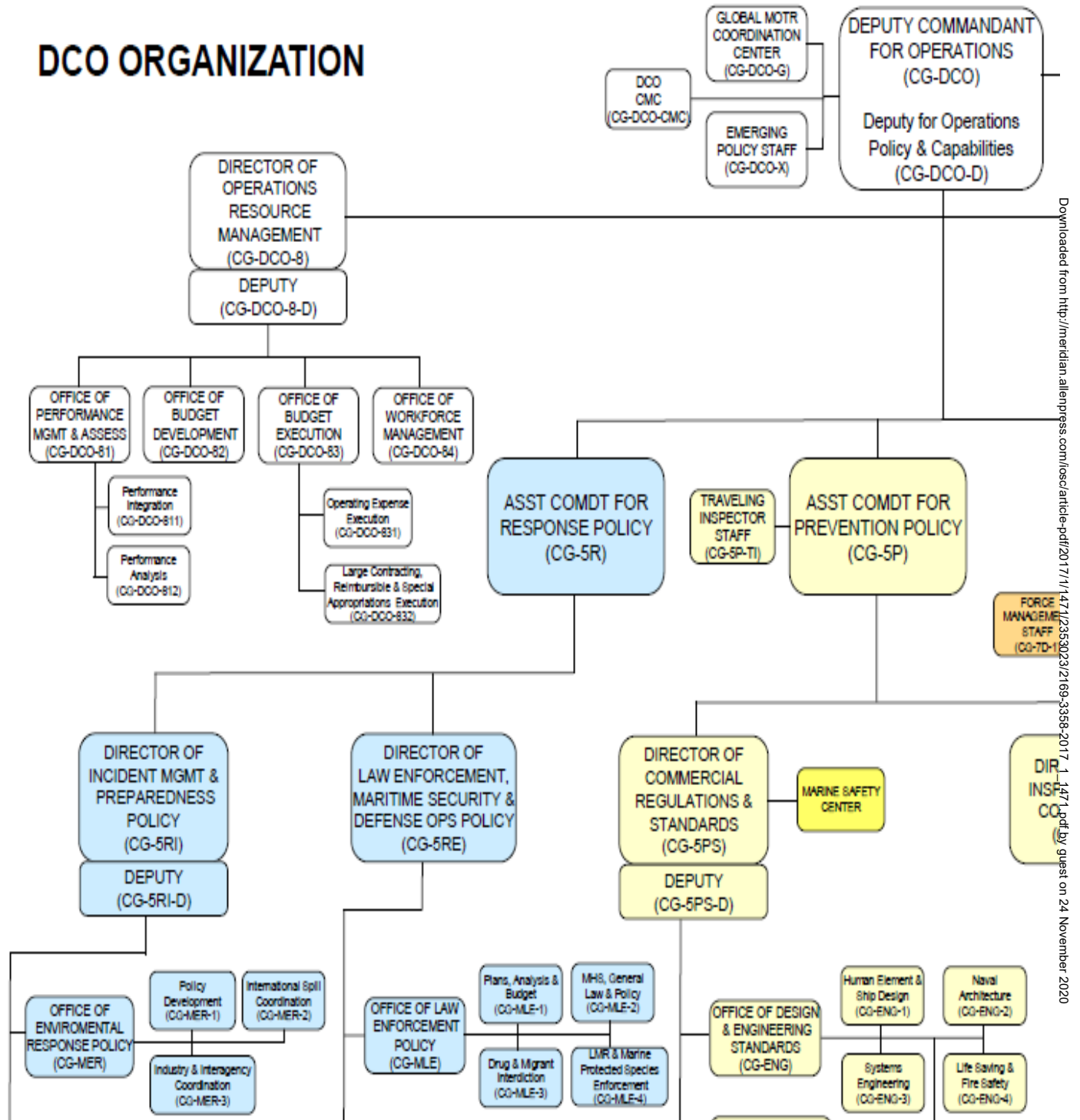
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FIGURES

DCO ORGANIZATION



Retrieved from <https://www.uscg.mil/hq/dco/docs/ORGANIZATION%20CHART%20May%202012.pdf>

Figure 1. U.S. Coast Guard Deputy Commandant (DCO) for Operations Organizational Chart

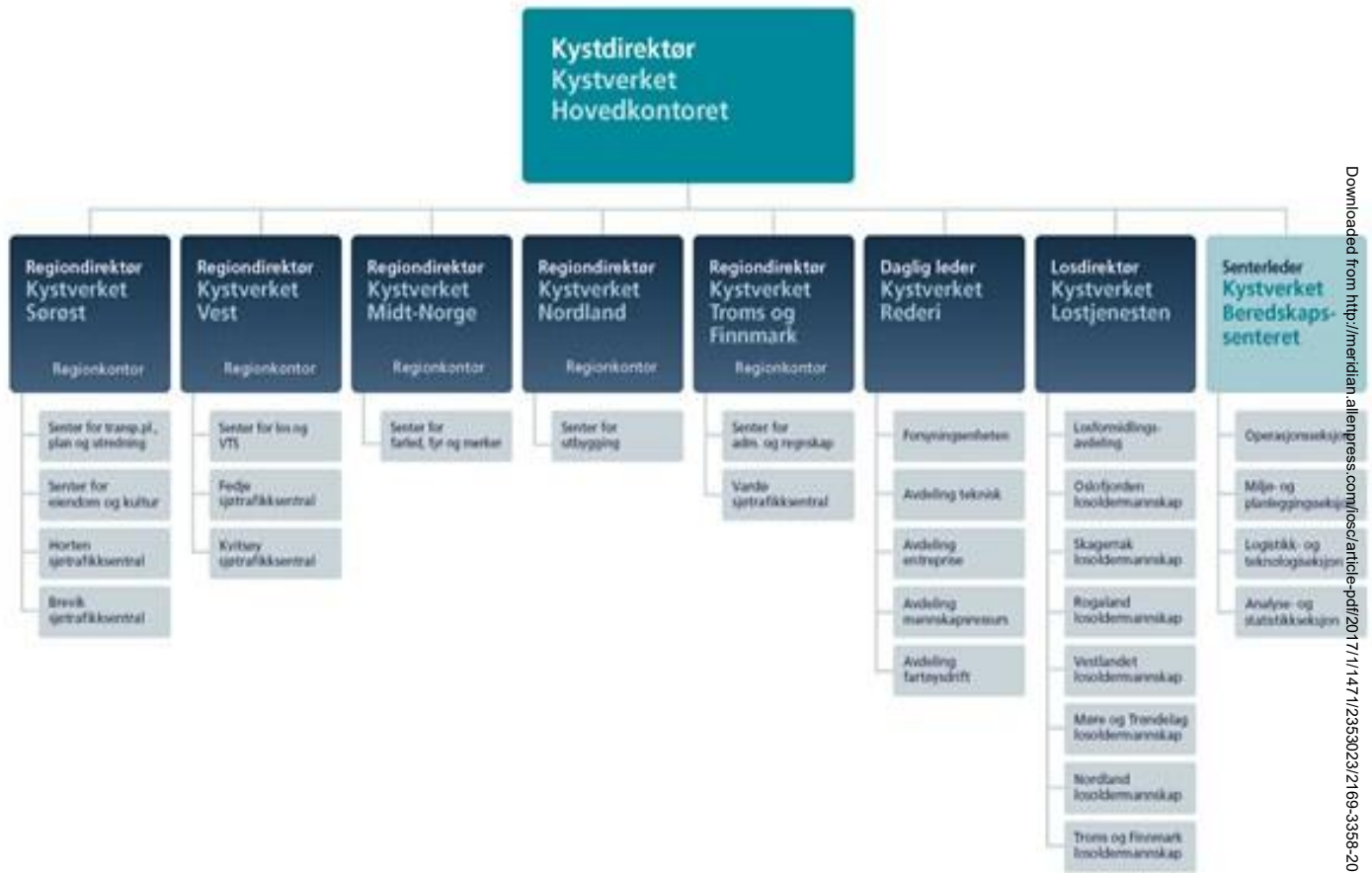


Figure 2. Norwegian Coastal Administration Organizational Chart

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Figure 3. 2014 Letter of Intent Signing Ceremony



Figure 4. 2015 Workshop



Retrieved from <http://response.restoration.noaa.gov/about/media/norway-canada-united-states-spill-response-meeting.html>

Figure 5. 2016 Workshop

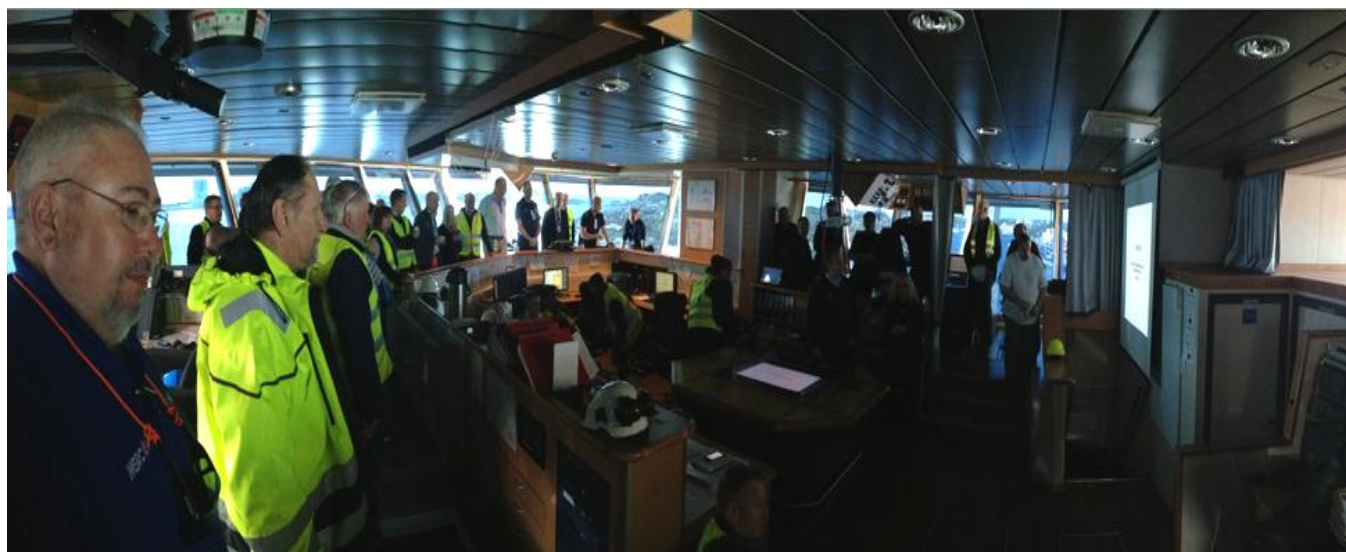


Figure 6. 2015 Norwegian Oil on Water Exercise Pictures



Figure 7. 2015 Norwegian Oil on Water Exercise Pictures



Figure 8. 2015 Norwegian Coastal Administration participating in ICS-410 Advanced Incident Commander training at Yorktown, U.S. Coast Guard Joint Training Center.