Acquisition Directorate

Research & Development Center

U.S. Coast Guard Arctic Response Workshop

April 23, 2010

RDC | Kurt Hansen

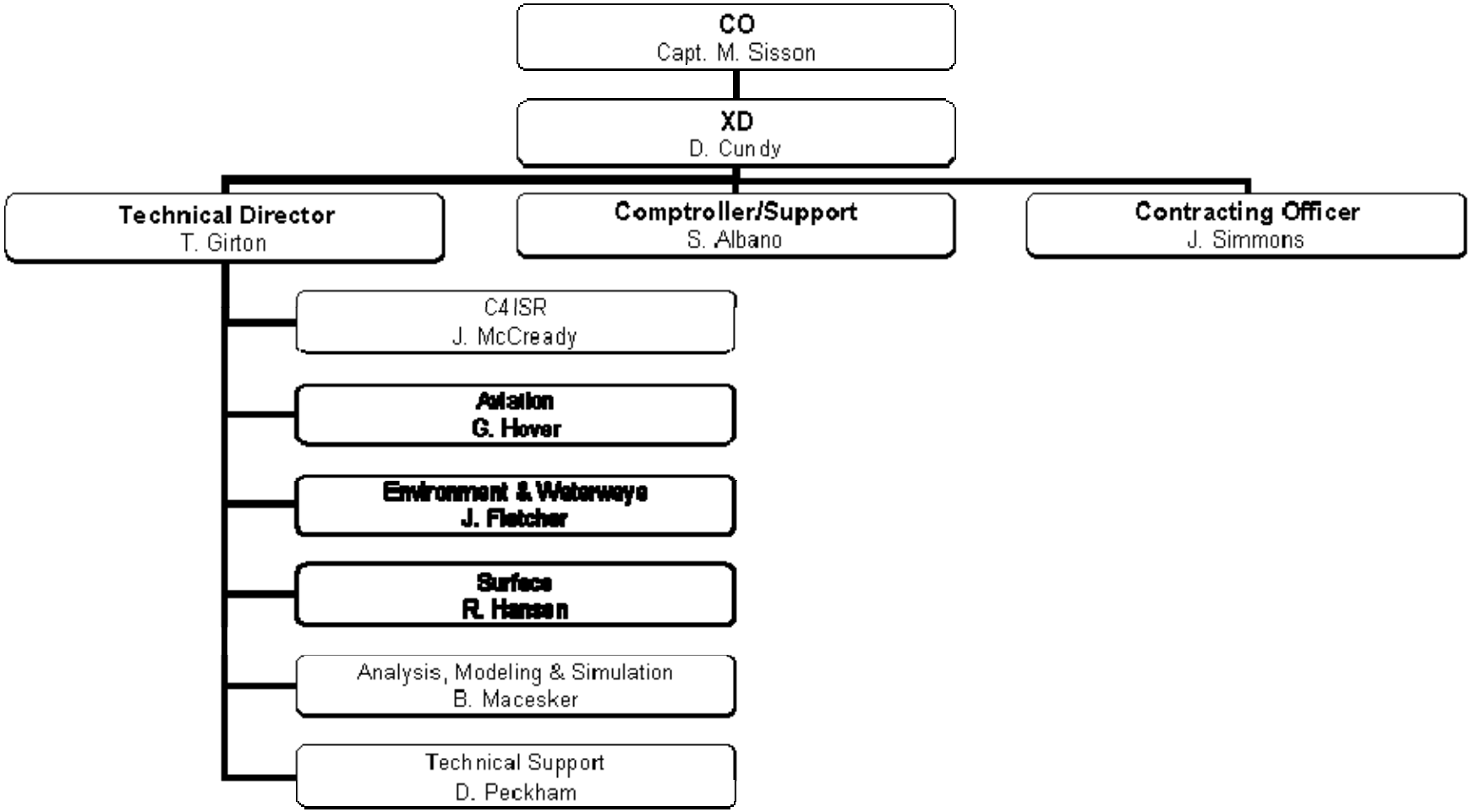
Outline

- CG R&D Center
- Great Lakes Restoration Initiative (GLRI)
- Lessons learned from ISB
- Anchorage Workshop
- Future

RDC History

- **Started in 1972, Groton, CT**
  - Reorganized within CG multiple times
  - 2007, move into Acquisition Directorate
  - Reorganized based on A-76 review, 1 April 2008
- **Moved, February, 2009, New London**
- **About 100 personnel**
  - 2/3 personnel involved in projects

Organization



Great Lakes Restoration Initiative (GLRI)
http://www.epa.gov/glnpo/glri/

Environmental Protection Agency-led, interagency Great Lakes Restoration Initiative, which will target the most significant problems in the region, including invasive aquatic species, non-point source pollution, and contaminated sediment.

CG R&D Efforts

- Aquatic Nuisance Species
- Submerged Oil
- Oil in Ice

Great Lakes Oil-in-Ice Issues

- **Past Concerned about spills originating on land**
- **Future issues due to climate change**
  - Reduced water levels
  - Operators trying to push out shoulder seasons
  - AS of April 1, 32 US flag vessels (Only 17 last year)
- **Great Lakes Response**
  - Primarily mechanical response
  - In-situ Burn in Plans
  - No freshwater dispersants
  - Logistics support generally available

Oil-in-ice Response

- **Arctic research started back in late 1960s early 1970s**
- **RDC involved before pipeline built**
- **Many other projects in US, Canada and International**
  - Some intentional spills (covered in later talk)
- **Multiple summaries/ state-of-the-art papers since 2000**
  - Caught most of previous research
  - Developed in guides including but not limited to:
    - EPPR from Arctic Council
    - STAR from State of Alaska
    - Alaska Clean Seas
- **Multiple Research Efforts by US and International organizations**

DOES FOSC HAVE WHAT IS NEEDED?

Gulf of Mexico ISB Experience

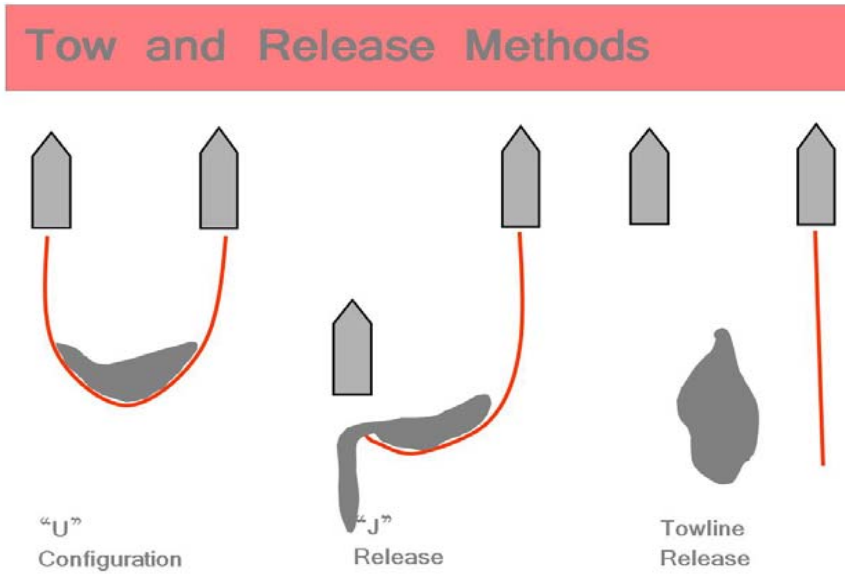
- **By early 1990s some ISB techniques had been developed**
- **Questions concerning equipment and feasibility still existed**
  - Lack of ISB Equipment
  - Lack of Trained Personnel
  - Lack of Detailed Op Plan
  - Confusion about Cost & Benefits
- **Development into Tool**
  - Equipment – multiple agencies embarked on standards development through ASTM
  - Techniques – Individual methods had been tested and evaluated but limited full-scale implementations
  - RDC worked with experts and industry for series of exercises

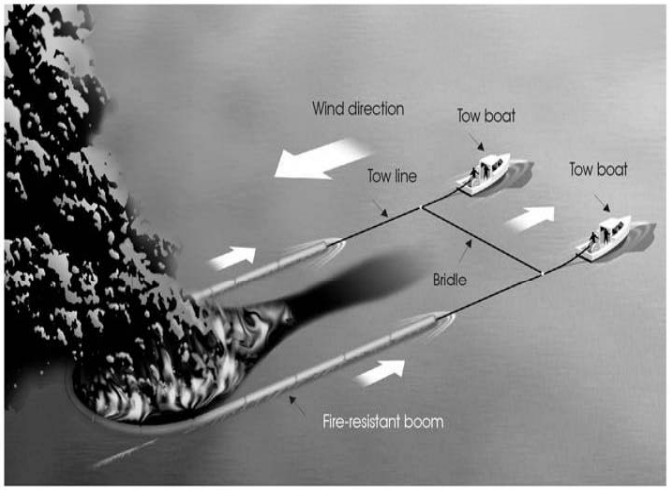
Galveston Exercises

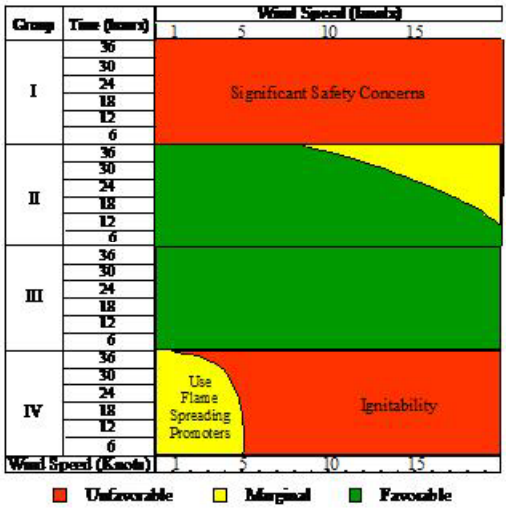
- **Progressive Approach**
  - April 1999 – ISB Vessel OPS
  - November 1999 - Vessel OPS plus Helo Torch
  - September 2000 – Full ISB/ICS Rehearsal

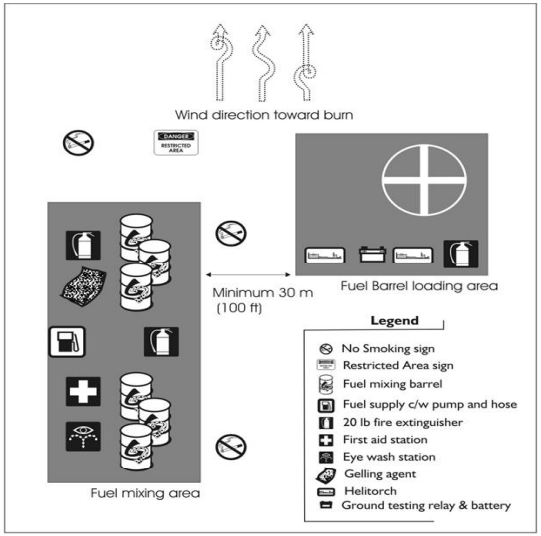
Result – ISB Offshore Operations Manual

- **Decision Guide**
- **Operating Procedures**
- **Reference Materials**









Implications for Oil-in-ice

Overall Objective: How to Provide FOSC with enough details to make decisions and implement response

- **Equipment – many types are out there**
- **Training – being supplied**
- **Detailed Operations Plan – not clear if fully developed**
- **Trade-Offs and benefits – API and IPEICA Effort**

Develop a plan that steps through increasing harder exercises

This workshop is one input into that plan

Future Efforts

- **June 2010 Great Lakes Workshop**
  - Similar to this one
- **Requested GLRI Initiative for FY2011 funding**
  - Simple mechanical-based exercise
  - Identify future efforts
- **Expand to Arctic**
  - Identify southern areas where ice and wildlife conditions are useful and acceptable
  - Move further North depending upon funding

For This Workshop

Brainstorming – keep all ideas

Prevention not a topic

Build partnerships

Learn

Questions

Non-Attribution Policy

Opinions or assertions expressed in this paper are solely those of the author and do not necessarily represent the views of the U.S. Government. The use of manufacturer names and product names are included for descriptive purposes only and do not reflect endorsement by the author or the U. S. Coast Guard of any manufacturer or product.