MARINE WELL CONTAINMENT COMPANY

Effects of Water Depth on Offshore Equipment and Operations Workshop

Session #4 MWCC Presentation

November 2, 2011

Agenda

- **Company Overview**
- How MWCC Responds
- MWCC Emergency Preparedness
- Conclusions

Marine Well Containment Company

Company Background

- Independent, not-for-profit organization
- Consists of 10 members, each with an equal share & vote
- Represents an industry investment of over $1 billion
- Mission: Be continuously ready to respond to a deepwater well control incident

Interim Containment System

- The Interim Containment System (ICS) consists of equipment to contain and capture hydrocarbon release from a deepwater well control incident
- MWCC will support its customer by preparing and mobilizing requested equipment to the designated shorebase location
- Following equipment mobilization, MWCC's Response Team will transition into the RP's IMT to assist & advise in the use of MWCC's equipment as needed
- The RP will direct all activities from quayside to the incident site, including offshore installation, operational oversight, and decontamination

Agenda

- Company Overview
- **How MWCC Responds**
- MWCC Emergency Preparedness
- Conclusions

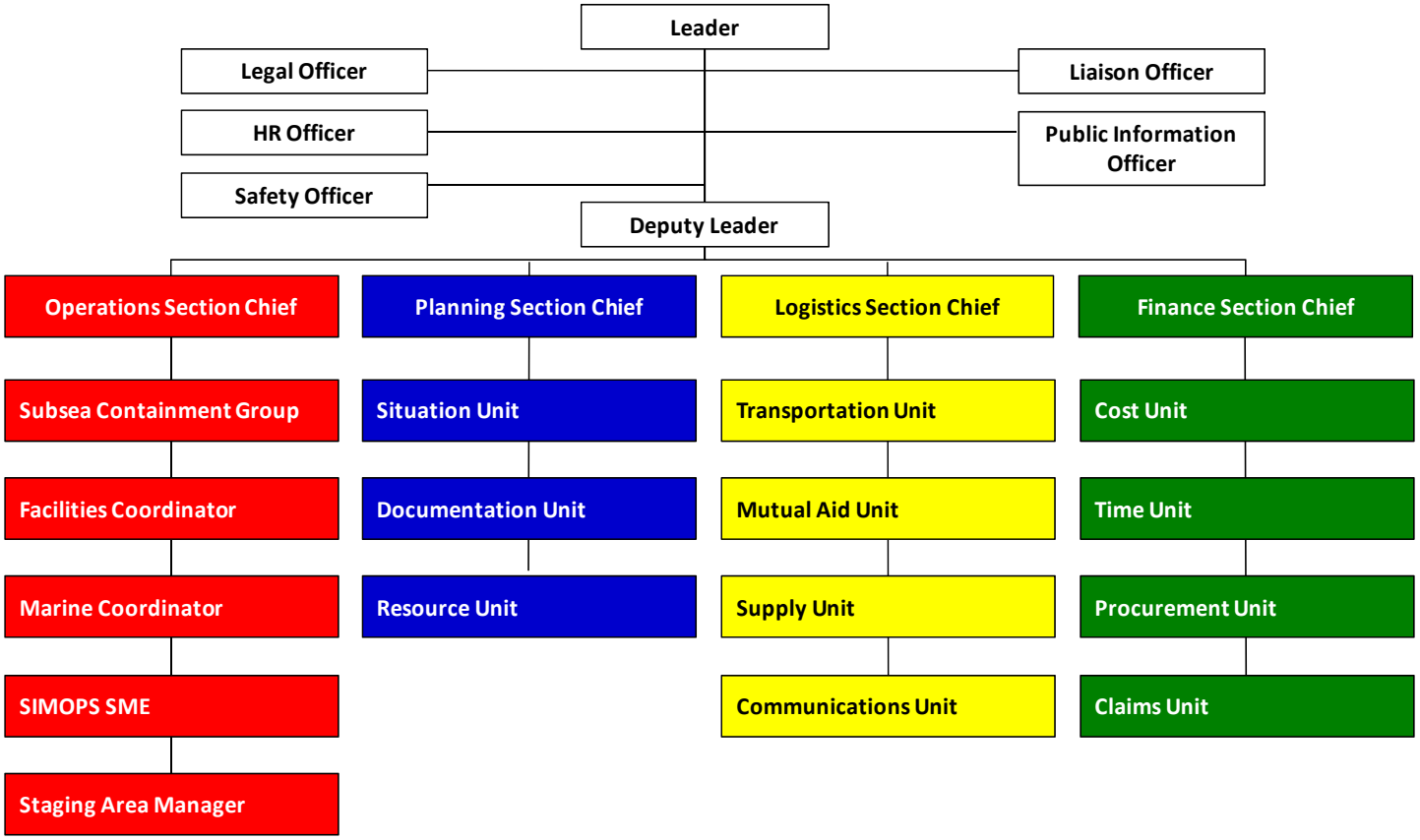
MWCC Day One Response

While the Responsible Party is managing the early stages of the emergency, MWCC will assemble its team and begin system mobilization based on available information about the incident

MWCC Reactive Phase Activities – Day One	
Initial Response	▪ **Mobilization of requested equipment** to RP's shorebase location • Engage contractors to test, load-out, and transport equipment • Complete ICS documentation for MWCC mobilization resources & activities ▪ **Prepare for transition to RP's IMT** and Proactive Phase • Operations SMEs prepare to support RP for equipment installation & operation ▪ Communicate with member companies and other stakeholders as needed
Response Team Meeting	▪ **Assemble MWCC Response Team** at MWCC's ERC (Liaison Officer to RP command) ▪ Provide team with basic information regarding the incident situation and resources activated utilizing the **ICS 201 Brief** ▪ Conduct Response Team **leadership meeting** to determine Objectives, Issues, Actions, and Worst Case Scenario
Notification & Assessment	▪ **RP notifies MWCC** of incident and requests activation ▪ **Gather information** from the RP on the incident & identify response needs (including required equipment) ▪ **Activate MWCC Response Team** ▪ **Establish communications** link with the Customer and continue gathering additional information
Incident / Event	▪ Incident occurs

MWCC Response Organization

MWCC Response Team



- The Response Team aligns to the Incident Command System (ICS) organization structure for integration into a Unified Command
- There are 40 primary roles on the Response Team that are staffed up to 3 levels deep for sufficient coverage in prolonged response efforts
- Response Team resources have been contributed by MWCC, Members, and contractors, which allows for a flexible & scalable organization that can integrate into any of the Responsible Party incident management teams

MWCC Integration with the RP

MWCC

Responsible Party

Proactive Phase

MWCC will integrate into the RP's IMT once the initial response objective of system mobilization is complete

Reactive Phase

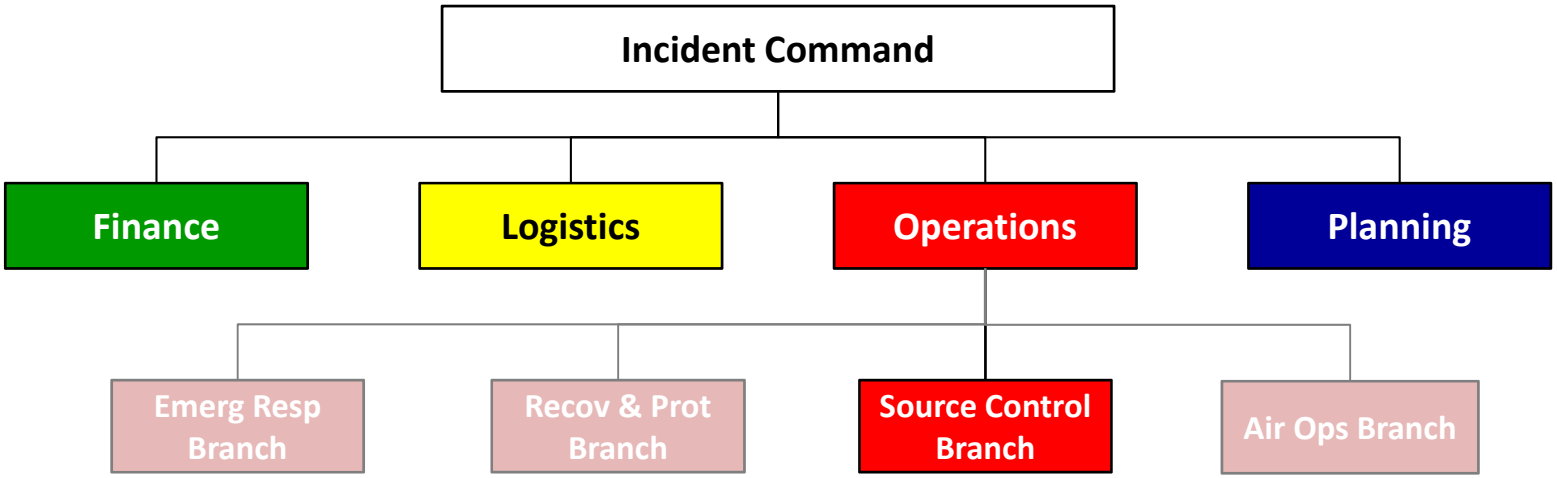
- Initial Response
- Response Team Meeting
- Notifications & Assessment
- Incident / Event

- Prepare for UC Objectives Meeting
- Situation Status Update
- Initial UC Meeting
- ICS 201 Briefing
- Initial Response & Assessment
- Notifications
- Incident / Event

- Tactics Meeting
- Prepare for the Planning Meeting
- Planning Meeting
- Prepare for the Tactics Meeting
- IAP Prep & Approval
- Command & General Staff Meeting
- Operations Briefing
- IC/UC Develop/Update Objectives Meeting
- Execute Plan & Assess Progress (New Period Begins)

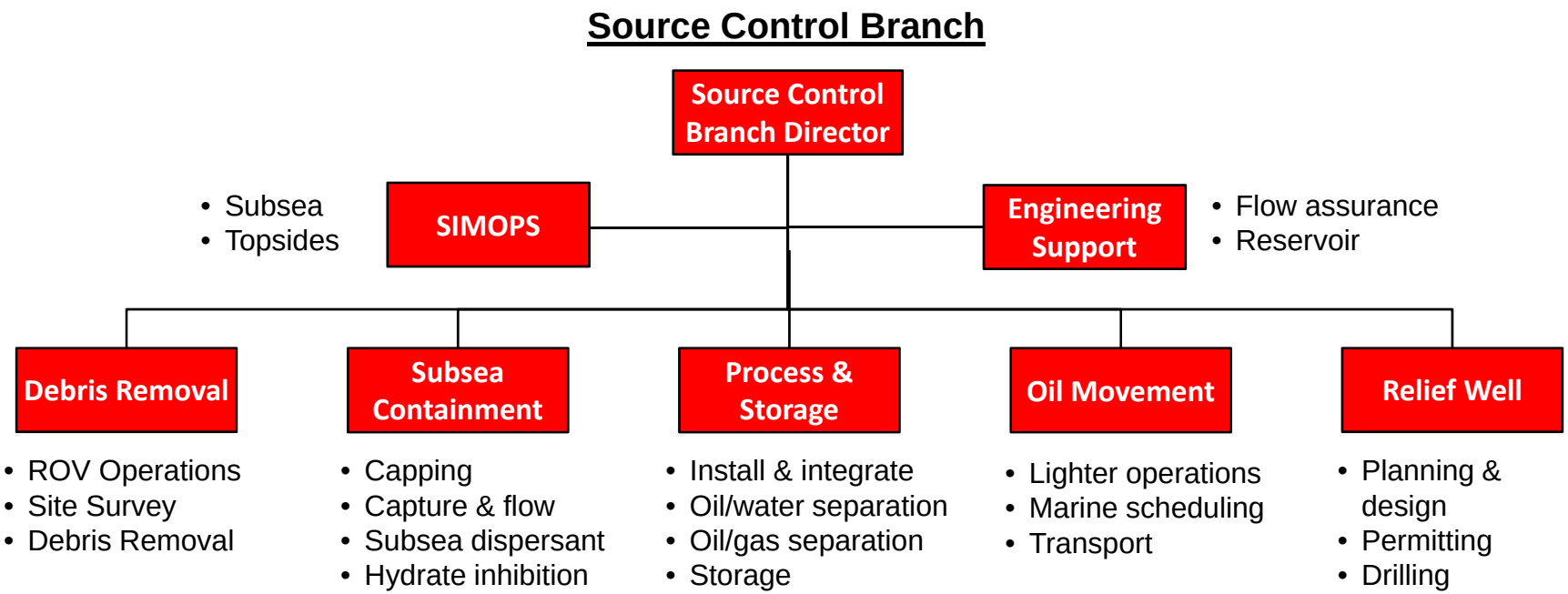
Source Control Organization Approach

Incident Command Organization



- Source Control as a branch under Operations ensures there is alignment of activities among land, air, and subsea operations
- With Source Control as a branch, resource needs and SIMOPS among operations activities will be reconciled through the existing Incident Command System processes
- Source Control as an additional section would require adjustments to the “Planning P” process to address overall operations coordination

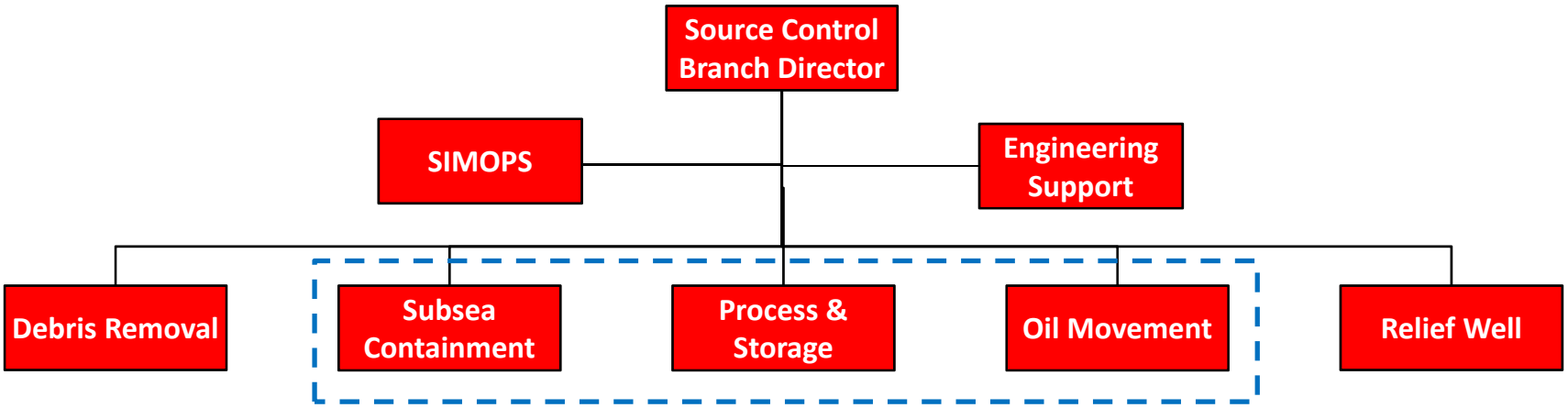
Source Control Approach



- SIMOPS and Engineering Support are support groups for the branch with resources participating in each of the activity-based groups as needed
- The critical path to source control begins with the Debris Removal group – an initial site survey is a key input to the Containment group to determine the appropriate equipment and the immediate area must be clear for safe subsea operations
- The Subsea Containment, Process & Storage, and Oil Movement groups represent the three activities that are critical to a successful well containment operation – these groups are interdependent and collectively succeed in containment
- The relief well is an alternative solution for source control and is an independent activity

MWCC's Role in Source Control

Source Control Branch



Interim Containment System
▪ Mobilize subsea containment equipment to the designated shorebase ▪ Support the Containment group in modifying generic installation & operation procedures for MWCC equipment ▪ Support the Process & Storage group in operation of the mutual aid vessel(s) ▪ Provide lightering kit and support the lightering operation

MWCC's Initial Response Strategy

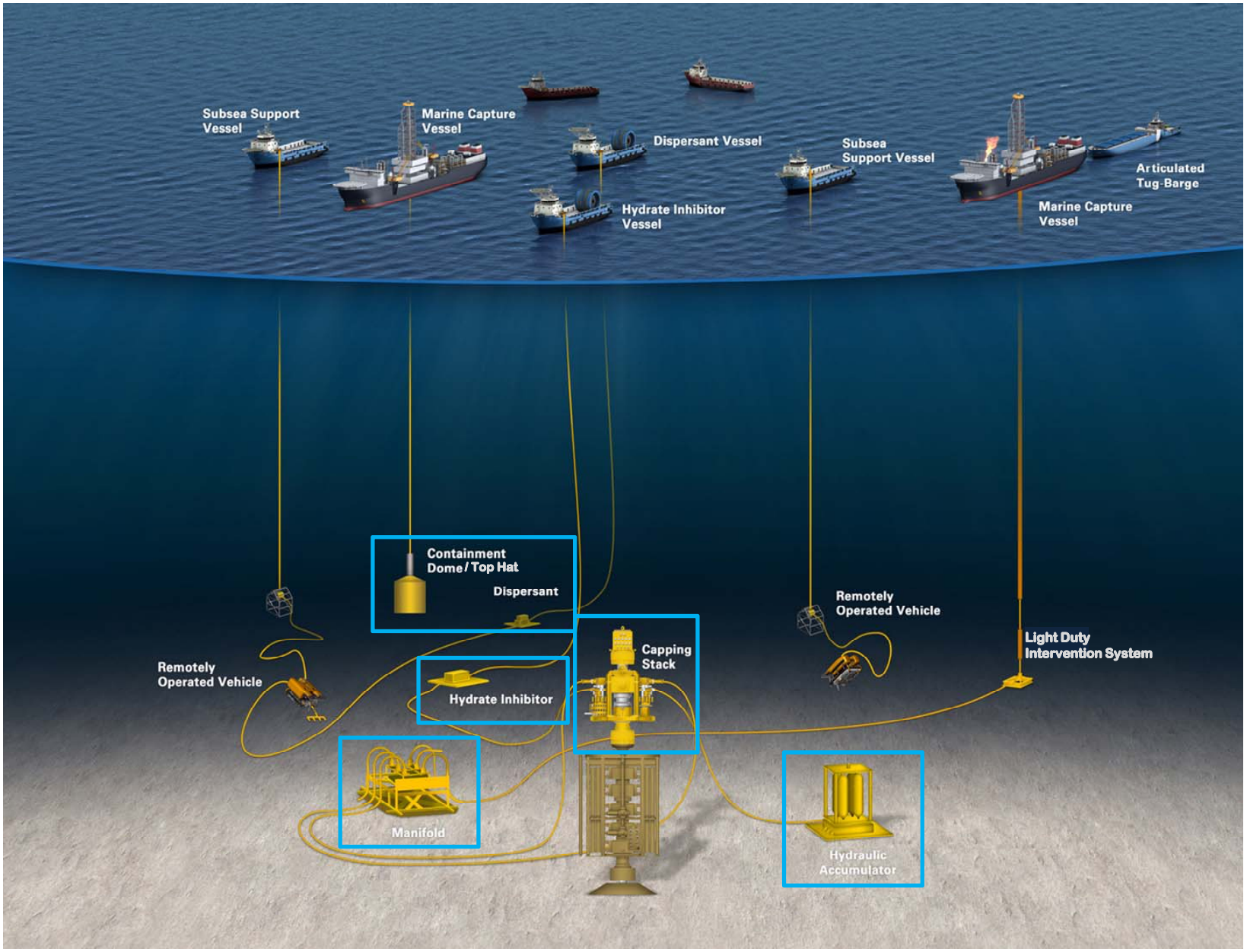
Initial Response Objective

Mobilize the equipment requested by the RP to the designated shorebase

Initial Response Activities by MWCC Response Team

Command	Planning	Operations	Logistics	Finance
• Ensure contractual requirements are satisfied • Provide Liaison to assist RP with coordination & communication • Prepare Member, media, & government communications • Ensure site safety & security plans are in place	• Establish Situation Status Board • Track people & equipment in the response • Collect incident data and complete ICS documents	• Initiate mobilization of requested equipment • Facilitate pre-mobilization preparation • Prepare to support RP's installation & operation of the equipment	• Facilitate equipment mobilization & transport to RP shorebase • Determine ETAs of equipment to delivery point • Support RP's identification of Mutual Aid • Support MWCC's IT needs	• Set up MWCC incident cost code • Establish ordering process with MWCC Logistics • Begin tracking MWCC's daily costs

Interim Containment System



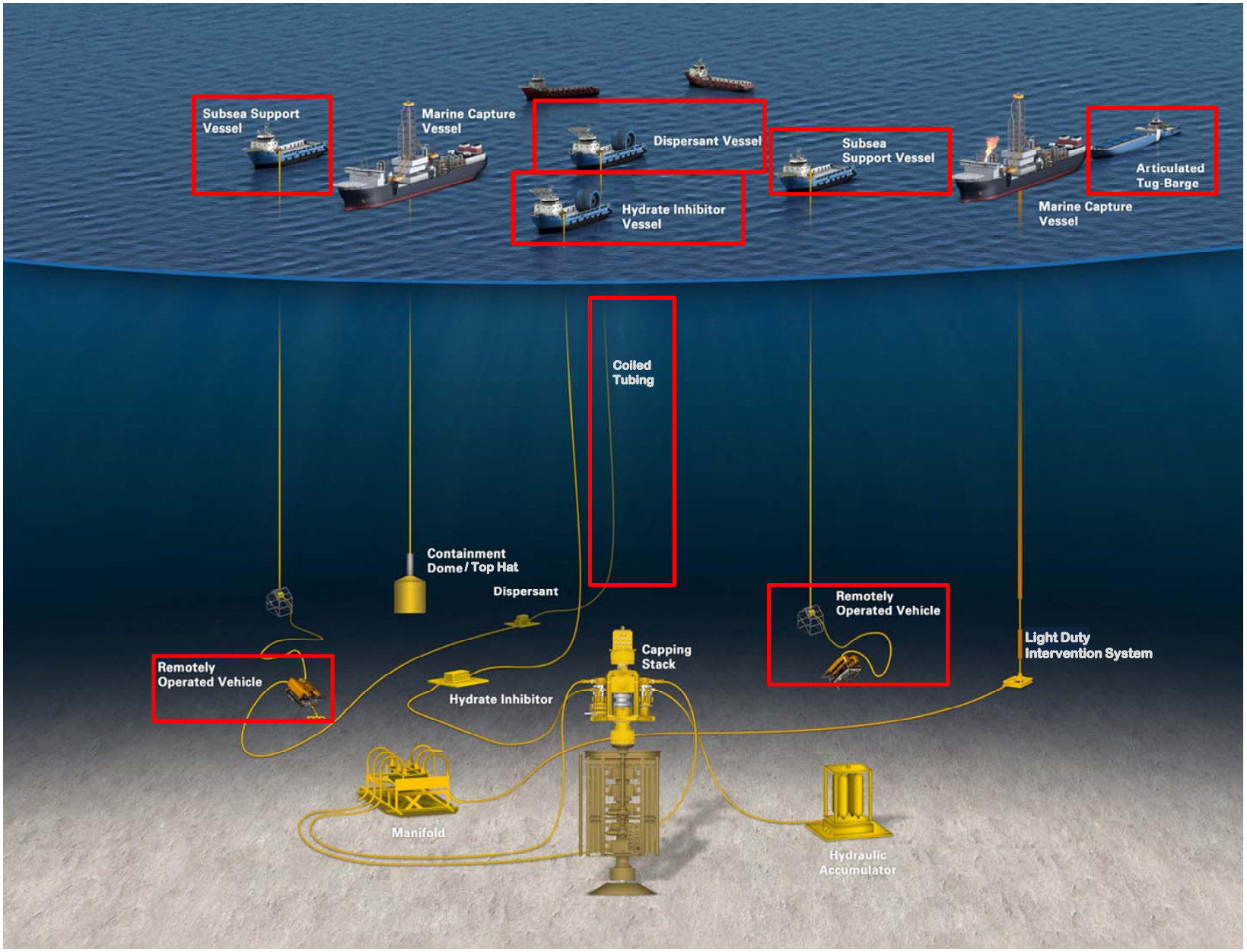
Key

MWCC

RP

Mutual Aid

Interim Containment System



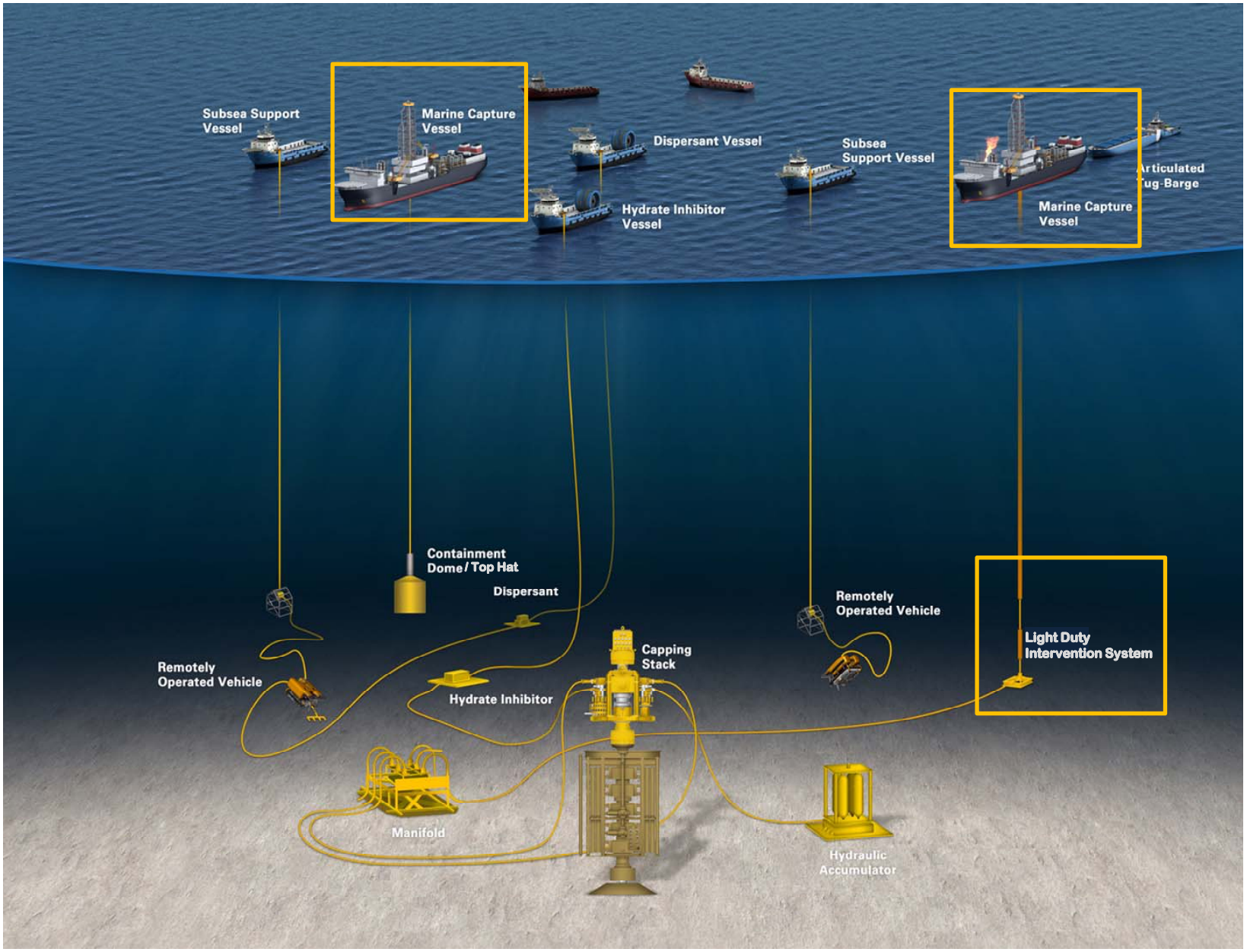
Key

MWCC

RP

Mutual Aid

Interim Containment System



Key

MWCC

RP

Mutual Aid

Agenda

- Company Overview
- How MWCC Responds
- **MWCC Emergency Preparedness**
- Conclusions

Emergency Preparedness

MWCC's Emergency Preparedness efforts help the industry be ready to respond to a deepwater well control incident

MWCC Readiness

- Defined Response Team organization and roles & responsibilities
- Developed tactical action plans for equipment mobilization & transfer
- Response Team training on ICS, roles & responsibilities, IAP, and other critical competencies
- Participation in emergency response drills

RP Preparedness

- Support in development of Source Control organization
- Training for RP IMTs on MWCC response capabilities
- Participation in emergency response drills

Industry Awareness

- Outreach to industry, regulators, and contractors on how MWCC responds
- Participation in industry forums to educate and provide thought leadership on subsea containment

Emergency Response Training

MWCC offers several training sessions for RP Incident Management Teams to educate on MWCC's response activities and the RP's responsibilities

MWCC Response Overview

- 1-2 hour presentation by MWCC for RP IMT members, regulators, contractors, and other industry support personnel
- MWCC company background, response organization, activation, MWCC & RP response roles, Interim Containment System component summary

Source Control Workshop

- Pre-requisite: MWCC Response Overview
- 1-2 hour session facilitated by MWCC with RP IMT & Source Control leadership
- Customizable facilitated discussion on the RP's Source Control Organization, alignment of RP Checklist activities, definition of roles & responsibilities, and integration with MWCC

Interim System Technical Workshops

- 6 hour session facilitated by MWCC with RP source control technical SMEs
- Technical review of the Interim Containment System components, RP requirements, and equipment procedures

Emergency Response Exercises

MWCC conducts several types of exercises to build and maintain the competency of MWCC's Response Team and RP IMTs

Tabletop

- Classroom emergency response exercise with MWCC's Response Team only or with Responsible Party IMT
- Tests execution of tactical plans for notification of MWCC, initial mobilization activities, and IMT integration and support

Simulation

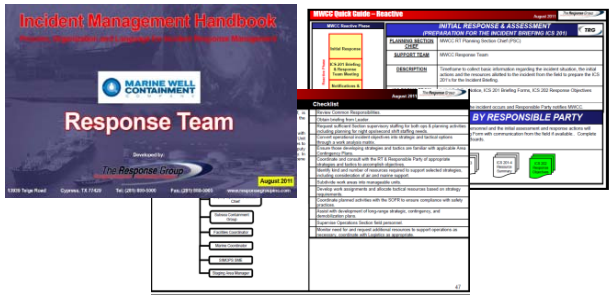
- Mid- to large-scale emergency response exercise with MWCC and Responsible Party IMT
- Role players and dynamic scenarios test responders' ability to execute tactical plans while adapting to a changing environment

Equipment Demonstration

- Field demonstrations hosted by MWCC with RP source control teams
- Supports understanding of the system's capabilities and application of plans & procedures
- Demonstrates system operability and functionality

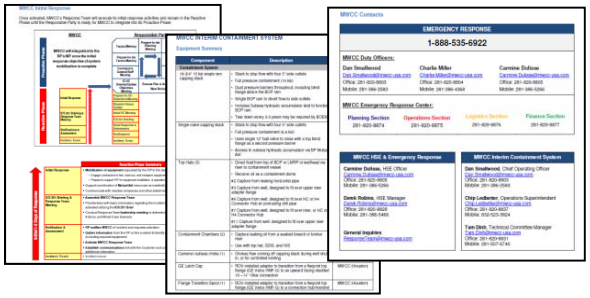
Emergency Response Resources

Incident Mgmt. Handbook



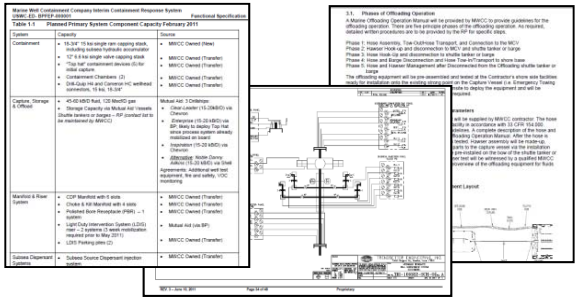
MWCC Reactive Phase process & response organization

RP Reference Guide



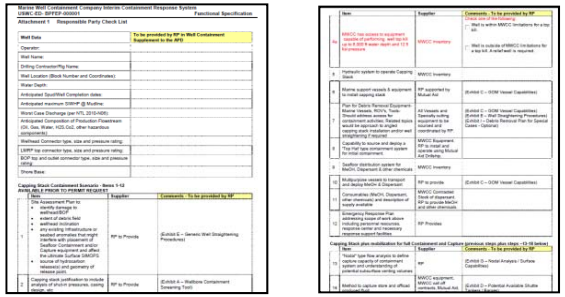
Summary of MWCC activation, response organization, containment system, contacts

Functional Specification



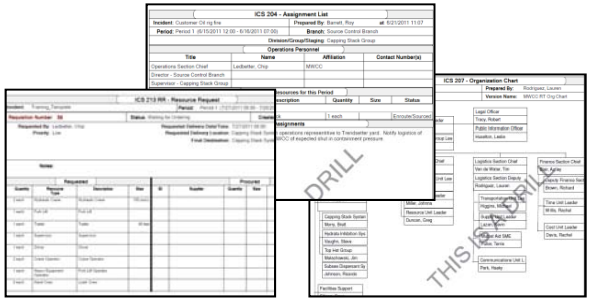
Detailed containment equipment specifications, procedures, & responsibilities

RP Checklist



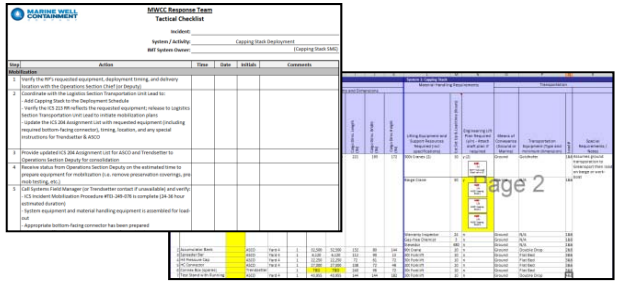
Checklist of required response activities & resources completed with well-specific data

ICS Documentation



Pre-populated organization chart, resource requisition forms, and work assignments

MWCC Tactical Action Plans



Role-based tactical checklists & quick reference guides for responders

An additional resource for Responsible Parties is MWCC's Emergency Response Network, which meets monthly to discuss source control topics and share response practices

Agenda

- Company Overview
- How MWCC Responds
- MWCC Emergency Preparedness
- **Conclusions**

Conclusions: Pre-Incident Planning

White Paper Elements

- Development of a response capability involved three primary activities :
  - Response Organization was defined and resources allocated
  - Tactical plans were developed where appropriate and a process to develop and adjust plans as needed during a response is in place
  - Competency was built and continues to improve through training and exercises
- Verification of industry capabilities and competence is achieved through current regulatory assessment mechanisms (BSEE exercises –planned and unannounced)

MWCC's Position on Key Pre-Incident Planning Topics

- Within a Unified Command, Source Control should remain under the Operations Section as a branch to ensure alignment of activities (SIMOPS) and reconciliation of resource needs among land, air, and marine operations – this alignment occurs in the existing Incident Command System processes
- The RP Checklists define the Responsible Party and well containment company responsibilities and outline a plan for response. Each containment solution must be a complete technical solution.
- Training in the Incident Command System assures competency in the response process for industry and regulators.
- Training specific to each containment solution should be provided to ensure organizational alignment, technical understanding of each kits capabilities, and familiarity with plans as outlined in RP checklists
- Pre-approval of subsea dispersant injection will enable pre-planning of response activities and improve the safety of responders on the surface