



**Bureau of Safety and
Environmental
Enforcement (BSEE)**

Incident Command System

**Flow Modeling Group
Supervisor**

- FMGS -

Job Aid



January 2015

BSEE FMGS Job Aid

Common Incident Command System (ICS) Organization

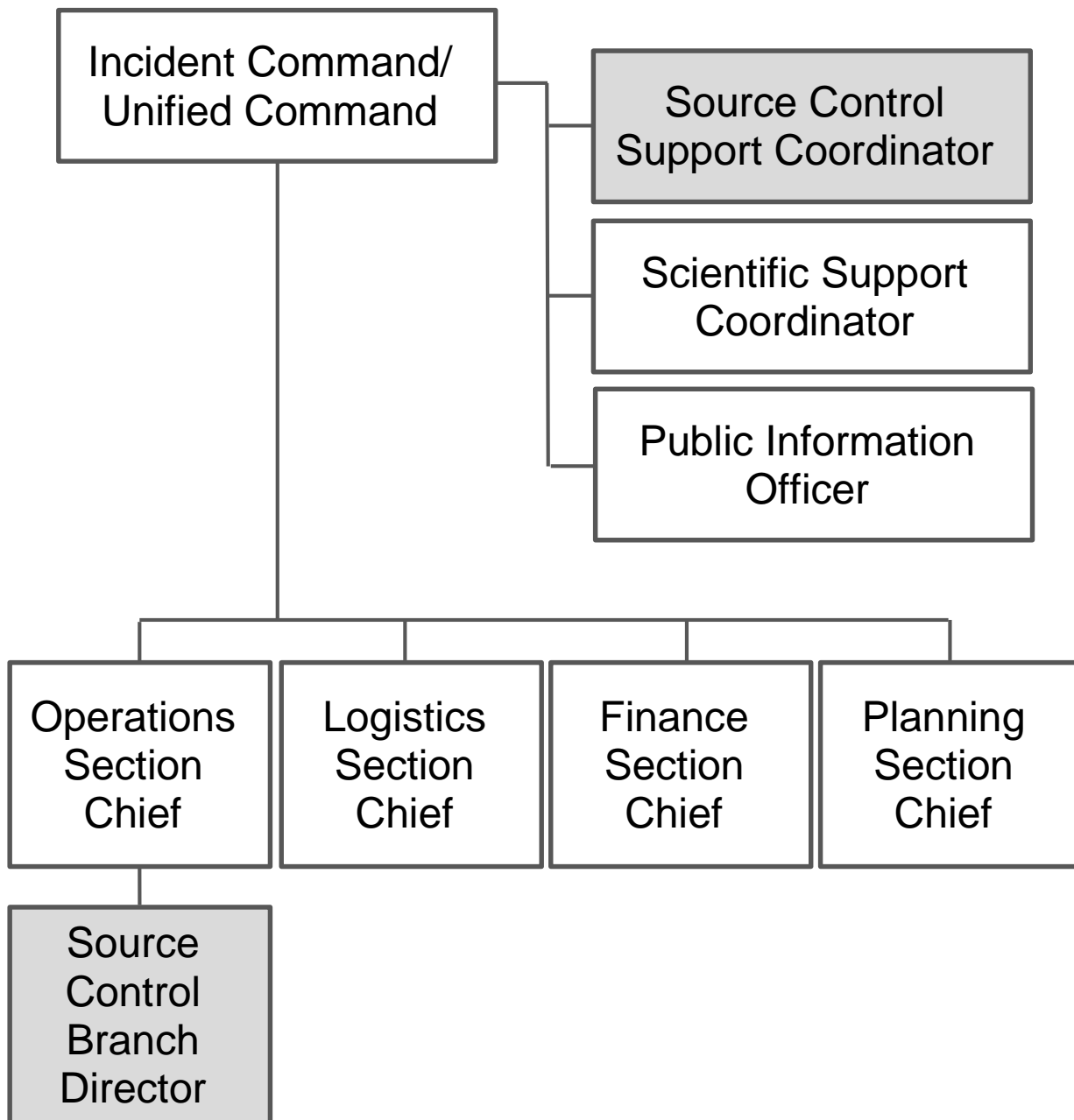


Figure 1 Common ICS Organization with Source Control

Personnel may be moved from their initial placement to another within the organization to meet the needs of an evolving incident. Be flexible.

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Sample Source Control Organization

A source control organization could vary depending on the incident needs. The dashed lines between the Operations Section Chief, Source Control Branch Director, and Source Control Support Coordinator represent ongoing technical source control communications.

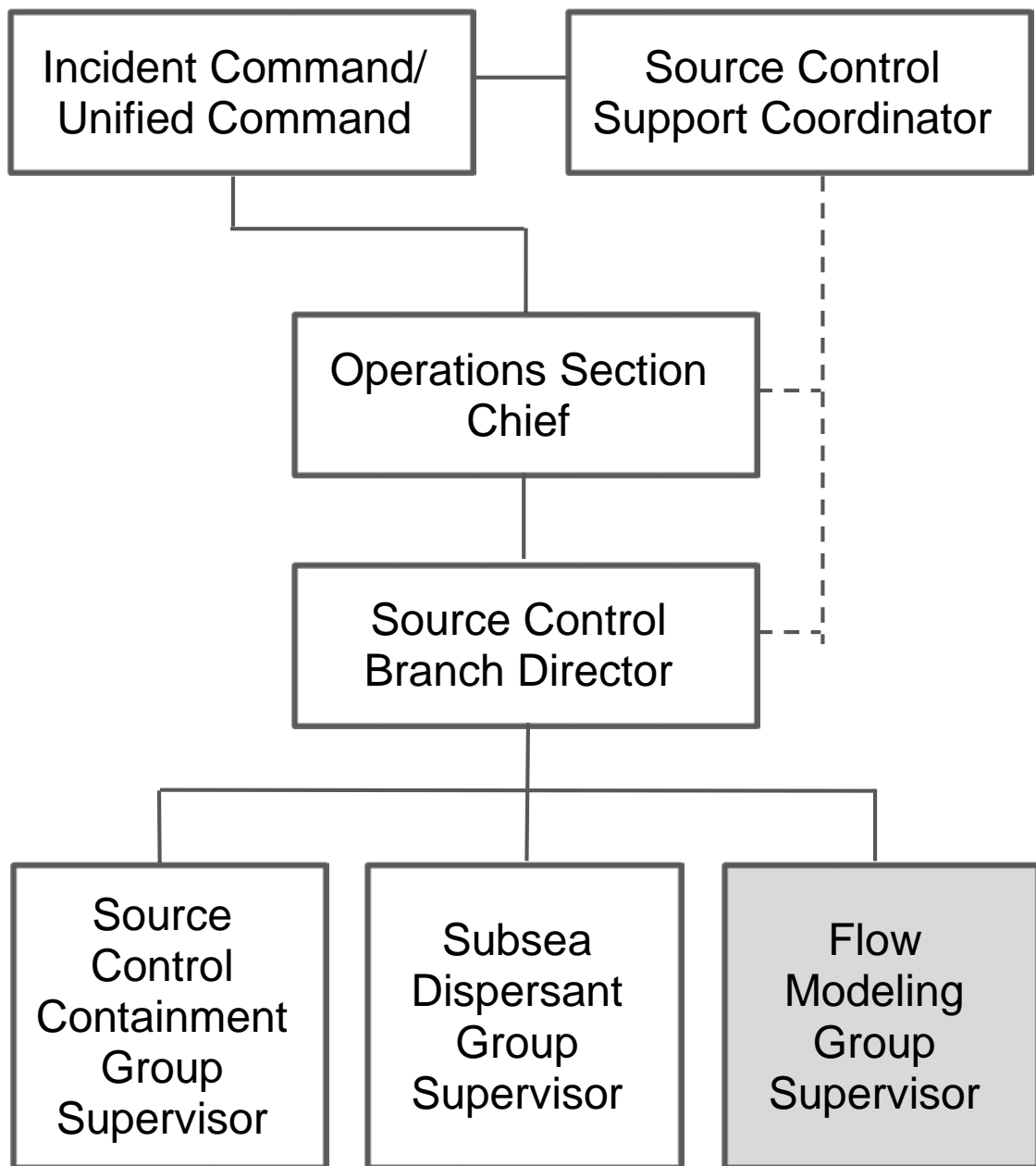


Figure 2 Sample Source Control Organization

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1.0 Flow Modeling Group Supervisor Overview

1.1 User

The user of this job aid will be anyone assigned as a Flow Modeling Group Supervisor (FMGS) within the National Incident Management System (NIMS) Incident Command System (ICS). The job of FMGS during an emergency response is a critical one. The FMGS is responsible for determining flow rate ranges, running the Well Containment Screening Tool, and developing soft shut-in procedures for use in Capping Stack and Cap and Flow projects.

Personnel assigned to this position should have a good flow modeling and technical and operational background and experience working with people in other organizations or agencies. Since this is a key position in the response organization, assignment should be based on experience level versus rank or employer.

This job aid assumes the FMGS has a working knowledge of the ICS and extensive flow modeling knowledge and experience.

This job aid does not cover other important traits of an effective FMGS, such as:

- Effective communication skills
- Leadership and supervisory experience
- Experience in risk-based decision making and

- setting priorities
- A solid grasp of organizational goals, objectives, and missions
- Adaptability and flexibility to the needs of the incident
- An in-depth knowledge of substantive aspects of, or technical solutions to the incident at hand
- An ability to work effectively in teams

A high-performing FMGS exhibits these traits and many more in addition to properly executing the ICS.

1.2 When to Use

This job aid focuses on the role of the Flow Modeling Group Supervisor in executing duties under the Incident Command System (ICS) to ensure effective coordination throughout the Incident Management Team (IMT) during a response to an incident requiring source control. The job aid should be used to assist the FMGS whenever an incident has occurred or during training or a planned drill or exercise that requires an Incident Command System organization. Use it as a supplement to the U.S. Coast Guard Incident Management Handbook (IMH).

1.3 How to Use

This job aid will help the user integrate source control into an ICS organization and effectively engage with the Incident Management Team (IMT). This job aid will provide the user with a perspective on how source control fits into the larger ICS organization, what the FMGS will be expected to provide, and how to be optimally prepared for and support the ICS operational planning process.

This job aid is comprised of the following sections:

- **Checklists**
 - Ready for Deployment: Individual Readiness
 - Initial Response & Assessment
 - Ready for Operations: Actions completed upon activation that enable you to begin your assigned duties
 - Manage People and the Flow Modeling Process: Set up and maintain the flow modeling group organization
 - Provide Flow Modeling Support
 - Support Operational Planning: Guidance for integrating source control activities into the ICS Operational Planning “P” sequence
 - Transition and Demobilization
- **Detailed Guidance for Checklist Items**
 - Supporting detail for each of the Checklist Categories Above
- **Appendices**

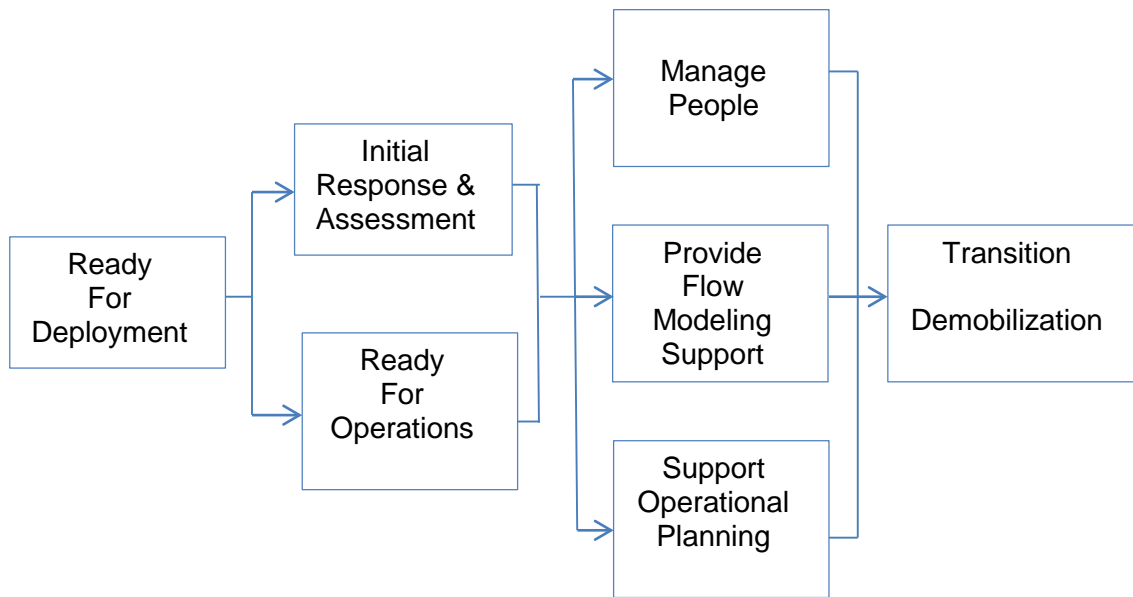


Figure 3 Organization and Flow of Checklist Items

The checklists present steps in the most probable sequence, but in practice the user may reference multiple checklists simultaneously. Additionally, where you enter the incident evolution will determine which steps are required of you; for example, first-on-scene personnel must perform different tasks than personnel arriving after an initial response.

Supporting detail for the checklist items can be found in the *Detailed Guidance for Checklist Items* section. Use the checklists to plan and track your actions; refer to the supporting detail section for explanations and additional information.

The initial actions to an incident are taken rapidly and a situational summary is generated quickly thereafter which is usually referred to as an initial “201 incident brief”. This brief serves as the initial incident action plan (IAP) until a more comprehensive document can be developed for the next operational period.

Following the 201 brief, simultaneous activities occur to manage operations while planning for the next operational period through a process known as the ICS operational planning cycle. For more detailed guidance on the ICS operational planning cycle, refer to Chapter Three of the USCG IMH.

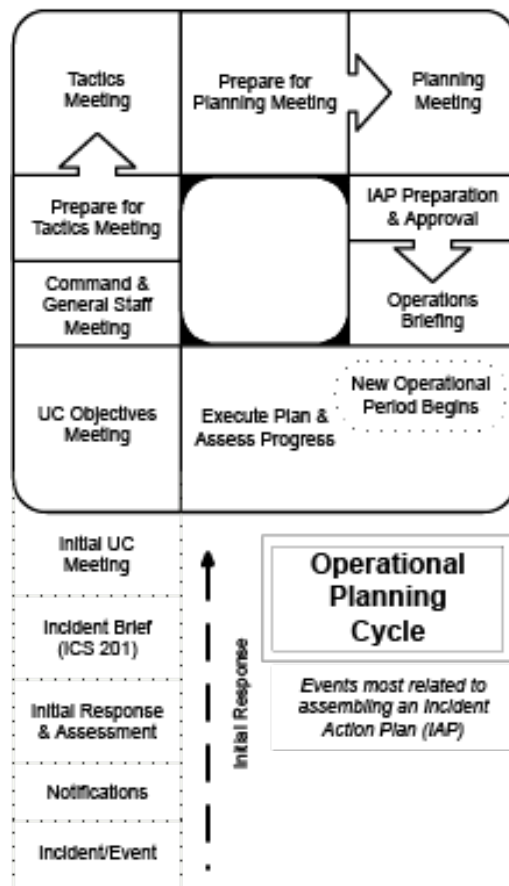


Figure 4 ICS Operational Planning "P"

1.4 Major Accomplishments for the Flow Modeling Group Supervisor

- FMGS is deployment ready
- FMGS is ready for operational tasking
- FMGS is ready for operation execution
- FMGS operations are complete
 - Determine flow rate ranges for the source of the discharge
 - Coordinate development of flow rate modeling. Implement, monitor, and adjust as necessary, coordinate with and report results to SITL, SCGS, SDGS, SSC.
 - Run Well Containment Screening Tool
 - Develop soft shut-in procedures
 - Contribute to the Incident Action Plan (IAP) and Common Operating Picture (COP).
- FMGS is demobilized

1.5 References

Below is a list of references that may be required while using this job aid:

- U.S. Coast Guard Incident Management Handbook (IMH) COMDTPUB P3120.17B is the key reference for executing Incident Command System processes. The IMH is available on the Coast Guard ICS website at <http://homeport.uscg.mil/ics/>.
- Helix Well Containment Group IMH for Deepwater Well Control Operations
- API Technical Report 1143, An Evaluation of the Alternative Response Technology Evaluation System (ARTES)
- BSEE/USCG MOA: OCS-03, April 3, 2012

1.6 ICS Forms

ICS Forms can be found on the Coast Guard ICS website at <http://homeport.uscg.mil/ics/>.

Generally, Source Control Branch personnel will have some level of responsibility for information on the following forms:

- Incident Briefing (ICS 201)
- Incident Objectives (ICS 202)
- Organization Assignment List (ICS 203)
- Assignment List (ICS 204)
- Assignment List Attachment (ICS 204a)
- Communications List (ICS 205a)
- Incident Organization Chart (ICS 207)
- Site Safety Plan (ICS 208)
- Incident Summary Status (ICS 209)
- Check-In List (ICS 211)
- General Message (ICS 213)
- Resource Request Message (ICS 213RR)
- Activity Log (ICS 214)
- Operational Planning Worksheet (ICS 215)
- Incident Action Plan Safety Analysis (ICS 215a)
- Demobilization Check-Out (ICS 221)
- Incident Personnel Performance Rating (ICS 225)
- Daily Meeting Schedule (ICS 230)
- Incident Open Action Tracker (ICS 233)
- Work Analysis Matrix (ICS 234)
- Incident Mishap Reporting Record (ICS 237)

2.0 FMGS Checklists**2.1 Ready for Deployment (Individual Readiness)****2.1.1 Pre-Incident Actions**

<input type="checkbox"/>	Assemble position deployment kit. (See detail on page 21)
<input type="checkbox"/>	Validate personal readiness. (See detail on page 21-21)
<input type="checkbox"/>	Validate training/certifications. (See detail on page 22)

2.1.2 Deployment Preparations

<input type="checkbox"/>	Receive assignment.
<input type="checkbox"/>	Verify reporting location, date, and time. (See detail on page 22)
<input type="checkbox"/>	Finalize personal readiness for assignment. (See detail on page 22)
<input type="checkbox"/>	Verify/update position deployment kit. (See detail on page 23)
<input type="checkbox"/>	Arrange/verify berthing/lodging/transportation.
<input type="checkbox"/>	Complete agency/company deployment requirements.
<input type="checkbox"/>	Make travel arrangements.

2.2 Ready for Operations

2.2.1 Check In to the Incident

<input type="checkbox"/>	Check-in on the ICS Form 211. (see detail on page 23)
<input type="checkbox"/>	Check in with the Resource Unit to receive assignment. (see detail on page 23)
<input type="checkbox"/>	Check in with Finance.
<input type="checkbox"/>	Check in with Logistics. (see detail on page 23)
<input type="checkbox"/>	Review and sign ICS Form 208, Site Safety Plan. (see detail on page 24)

2.2.2 Obtain Situational Awareness

<input type="checkbox"/>	Review ICS Form 201, Incident Briefing OR the Incident Action Plan (IAP). (see detail on page 24)
<input type="checkbox"/>	Review key incident information. (see detail on page 24-25)
<input type="checkbox"/>	Identify resources on scene and/or enroute. (see detail on page 25)
<input type="checkbox"/>	Review the size and complexity of the incident. (see detail on page 25)
<input type="checkbox"/>	Identify special considerations for the incident. (see detail on page 25)
<input type="checkbox"/>	Review applicable incident documentation. (see detail on page 26)
<input type="checkbox"/>	Review the Common Operational Picture (COP).
<input type="checkbox"/>	Obtain a meeting and briefing schedule. (see detail on page 26)

2.3 Initial Response and Assessment

<input type="checkbox"/>	Identify incident objectives. (see detail on page 27)
<input type="checkbox"/>	Identify incident strategies and tactics.
<input type="checkbox"/>	Identify incident priorities.
<input type="checkbox"/>	Assess incident reporting and meeting cycle.
<input type="checkbox"/>	Obtain information specific to the well. (see detail on page 27)
<input type="checkbox"/>	Consult with source control group supervisors, if activated. (see detail on page 27)
<input type="checkbox"/>	Obtain information (e.g., leak/escapement points) from SCBD and SCGS.
<input type="checkbox"/>	Estimate flow rate and volume of oil.
<input type="checkbox"/>	Conduct a resource needs analysis. (see detail on page 28)
<input type="checkbox"/>	Request resources using ICS Form 213 RR. (see detail on page 28)
<input type="checkbox"/>	Establish effective communications. (see detail on page 28)
<input type="checkbox"/>	Consult plans applicable to the Flow Modeling Group.

2.3.1 Initial Incident Brief

<input type="checkbox"/>	Meet the SCBD and Operations Section Chief (OSC) (see detail on page 28)
<input type="checkbox"/>	Obtain briefing with expectations.
<input type="checkbox"/>	Determine the size and complexity of the incident.
<input type="checkbox"/>	Conduct watch relief, if applicable. (see detail on page 28)
<input type="checkbox"/>	Define your role as FMGS. (see detail on page 28)

2.4 Manage People and Flow Modeling Group Procedures

2.4.1 Establish/Assess Flow Modeling Group

<input type="checkbox"/>	Determine/assess additional staffing requirements. (see detail on page 29)
<input type="checkbox"/>	Establish/assess Flow Modeling Group work location. (see detail on page 29)
<input type="checkbox"/>	Establish/assess group organization. (see detail on page 29)
<input type="checkbox"/>	Request resources using ICS Form 213 RR. (see detail on page 30)
<input type="checkbox"/>	Activate components (personnel, equipment, plans)
<input type="checkbox"/>	Establish/assess communication methods and practices. (see detail on page 29)
<input type="checkbox"/>	Monitor organization for appropriate span of control. (see detail on page 30)

2.5 Provide Flow Modeling Support**2.5.1 Execute Source Control and Incident Action Plans and Assess Progress**

<input type="checkbox"/>	Coordinate the development of flow modeling. (see detail on page 31)
<input type="checkbox"/>	Determine flow rate ranges. (see detail on page 31)
<input type="checkbox"/>	Monitor and adjust flow modeling. (see detail on page 31)
<input type="checkbox"/>	Coordinate with SITL, SCGS, SDGS, SSC. (see detail on page 31)
<input type="checkbox"/>	Run Well Containment Tool.
<input type="checkbox"/>	Develop soft shut-in procedures.
<input type="checkbox"/>	Contribute to the Incident Action Plan (IAP). (see detail on page 32)
<input type="checkbox"/>	Contribute to the Common Operational Picture. (see detail on page 32)
<input type="checkbox"/>	Attend branch meetings. (see detail on page 32)

2.6 Support the Operational Planning Process

2.6.1 Prepare for the Tactics Meeting

<input type="checkbox"/>	Identify current operations. (see detail on page 33)
<input type="checkbox"/>	Prepare Work Analysis Matrix (ICS Form 234). (see detail on page 33)
<input type="checkbox"/>	Prepare Operational Planning Worksheet (ICS Form 215). (see detail on page 34)
<input type="checkbox"/>	Provide documents to SCBD.

2.6.2 Tactics Meeting

<input type="checkbox"/>	Attend the Tactics Meeting with the Operations Section Chief (OSC) and SCBD, as needed. (see detail on page 34)
<input type="checkbox"/>	Develop Work Analysis Matrix (ICS Form 234). (see detail on page 35)
<input type="checkbox"/>	Develop Operational Planning Worksheet (ICS Form 215). (see detail on page 35)

2.6.3 Prepare for the Planning Meeting

<input type="checkbox"/>	Revise Work Analysis Matrix (ICS For 234). (see detail on page 36)
<input type="checkbox"/>	Revise Operational Planning Worksheet (ICS Form 215). (see detail on page 36)
<input type="checkbox"/>	Prepare to explain flow modeling operations. (see detail on page 36)
<input type="checkbox"/>	Provide documentation to SCBD.

2.6.4 Planning Meeting

<input type="checkbox"/>	Attend the Planning Meeting with the SCBD and OSC, as needed. (see detail on page 37)
<input type="checkbox"/>	Brief current flow modeling operations, as required.

2.6.5 Operations Briefing

<input type="checkbox"/>	Attend the Operations Briefing. (see detail on page 38)
<input type="checkbox"/>	Receive IAP for operational period.
<input type="checkbox"/>	Conduct watch relief, as needed. (see detail on page 38)

2.7 Transition and Demobilization**2.7.1 Transition to On-Going Operations Phase**

<input type="checkbox"/>	Ensure continuity of authority and knowledge. (see detail on page 39)
<input type="checkbox"/>	Ensure continued effective management. (see detail on page 39)
<input type="checkbox"/>	Establish a personnel rotation. (see detail on page 39)
<input type="checkbox"/>	Prioritize issues. (see detail on page 39)
<input type="checkbox"/>	Monitor organization for appropriate span of control. (see detail on page 39)
<input type="checkbox"/>	Ensure information is exchanged via prescribed reporting chains. (see detail on page 39)
<input type="checkbox"/>	Support operational planning process and manage current operations simultaneously. (see detail on page 40)
<input type="checkbox"/>	Maintain Unit Activity Log, ICS Form 214 (see detail on page 40)

2.7.2 Complete Relief Process

<input type="checkbox"/>	Advise relief of any change in conditions. (see detail on page 40)
<input type="checkbox"/>	Ensure accountability for property.
<input type="checkbox"/>	Complete documentation and turn in to Documentation Unit.
<input type="checkbox"/>	Debrief SCBD.
<input type="checkbox"/>	Provide input for plan improvement.

2.7.3 Demobilize Personnel and Group

<input type="checkbox"/>	Provide input to Demobilization Plan. (see detail on page 40)
<input type="checkbox"/>	Confirm demobilization instructions with SCBD.
<input type="checkbox"/>	Attend to supplies and equipment. (see detail on page 40)
<input type="checkbox"/>	Supervise demobilization of Group personnel. (see detail on page 41)
<input type="checkbox"/>	Complete ICS Form 214, After Action Report.
<input type="checkbox"/>	Complete ICS Form 221, Demobilization Check Out.
<input type="checkbox"/>	Provide documentation to Documentation Unit.
<input type="checkbox"/>	Inform supervisor of departure plans.
<input type="checkbox"/>	Depart incident.

2.7.4 Complete return travel

<input type="checkbox"/>	Conduct travel in accordance with Demobilization Plan.
<input type="checkbox"/>	Contact Demobilization Unit upon arrival at home location.

3.0 Detailed Instructions for Checklist Items

3.1 Ready for Deployment (Individual Readiness)

3.1.1 Pre-Incident Actions

1. Assemble position deployment kit.
 - Gather manuals, USCG IMH, ICS forms, software, and technical equipment.
 - Gather appropriate Personal Protective Equipment (PPE) for position.
2. Validate personal readiness. Personal readiness includes: medical, dependent, financial, and legal readiness. Should you deploy without being personally ready, it will affect your ability to respond and cause a burden on the incident management team.
 - Verify medical readiness. Ensure you do not have outstanding issues that would prevent you from being deployed. For example, ensure you have enough medications for the entire period of the deployment.
 - Verify emergency contact information. Ensure you provide current emergency contact information to your agency/company supervisor and on-site supervisor.
 - Verify dependent care. Ensure you have a plan for dependent care/pet care for when you deploy.
 - Verify financial readiness. Ensure your finances are in order, including

agency/company credit card limit, and plan for bills to be paid while deployed.

- Verify legal readiness. Ensure your legal documents are current and in order, including but not limited to your will, power(s) of attorney, voting registration, tax requirements, etc. Consult your legal advisor for complete guidance.

3. Validate training/certifications. Ensure required/recommended training, such as the following, is current.

- Mandated training
- ICS training, e.g., ICS 100, 200, 300, 700, 800
- Technician-level HAZWOPER
- (Source control certification recommendations/requirements are not yet defined or established.)

3.1.2 Deployment Preparations

1. Verify reporting location, date, and time.

- Verify the reporting location, date, and time.
- Verify the check-in location.
- Verify the Incident Command Post (ICP) contact number for assistance with check in.

2. Finalize personal readiness for assignment.

- Review the pre-assignment check list to ensure readiness, including medical, dependent care, financial, and legal readiness.

3. Verify/update position deployment kit.
 - Verify the manuals, forms, technical equipment you will need.
 - Verify appropriate Personal Protective Equipment (PPE) for the position.
4. Arrange/verify berthing/lodging/transportation.
5. Complete agency/company deployment requirements.

3.2 Ready for Operations

3.2.1 Check in to the Incident

1. Upon arriving to the incident, check in at the designated check-in location.
 - Use ICS Form 211, Check-in List.
2. Check in with the Resource Unit.
 - Receive your position and shift assignment which may be slightly different than when you were called in.
3. Check in with the Finance Section.
4. Check in with the Logistics Section.
 - Obtain berthing assignment, if applicable. Logistics may have contracted with a local hotel for incident personnel. Even if you have made your own arrangements, Logistics should be informed where personnel are berthed.
 - Receive meal schedule.
 - Arrange for transportation.

5. Review ICS Form 208, Site Safety Plan.
6. Sign the worker acknowledgement form – ICS 208, Site Safety Plan. Periodically review the Site Safety Plan to learn of any additions and updates to the Plan.

Additional Information: Check in recorders may request a phone number where you can be reached, the name of the agency/company you deployed from, as well as any additional qualification you may have. Some incidents require credentials (badges) for all assigned personnel. If credentials are issued, you should receive them upon check in.

3.2.2 Obtain Situational Awareness

The purpose of this task is to acquire additional background on the incident prior to starting your assignment. When you enter an incident will effect what information is available.

1. Review the current ICS Form 201, Incident Briefing OR the current Incident Action Plan (IAP).
 - ICS-201 is used during initial response.
 - The IAP is used after initial response.
Consider reviewing all of the IAPs that have been generated for the incident.
2. Review key incident information:
 - Identify the agencies, organizations, and personnel that comprise the Incident Command/Unified Command (IC/UC).
This may provide insight into the stakeholders

and why the Command is setting particular objectives, as well as media issues or concerns.

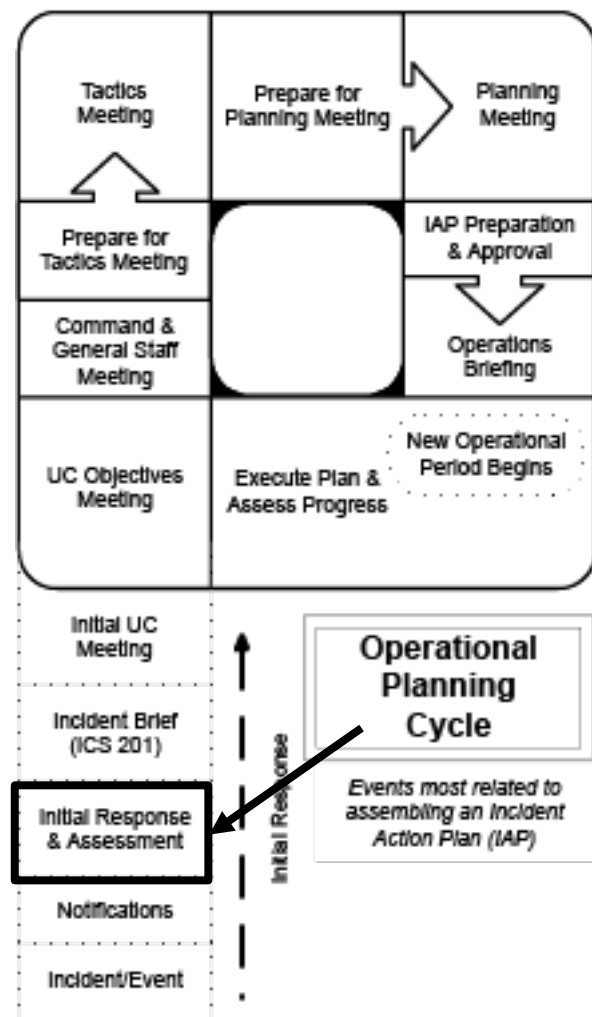
- What is the well/oil? This will give you an idea of the resources that should be operating in theatre.
 - When did the incident occur? Assess incident changes over time, including survival rates, weathering of oil, potential contaminants, vessel stability, etc.
 - Where did the incident occur? Are you familiar with the area, the platform, any equipment involved?
 - What are the operational challenges?
3. Consult with source control group supervisors, if activated. (e.g., Source Control Containment Group, Subsea Dispersant Group, Debris Clearing Group, Relief Well Group, and any other source control groups activated.)
 4. Obtain information (e.g., leak/escapement points) from Source Control Branch Director (SCBD) and Source Containment Group Supervisor (SCGS).
 5. Identify resources on scene and/or enroute, and estimated time of arrival for equipment.
 6. Review the size and complexity of the incident.
 - Is the incident expanding or contracting? What is the media interest?
 7. Identify special considerations for the incident (e.g., political, social, environmental, threats, vulnerabilities).

8. Review applicable incident documentation.
 - Review the most recent ICS Form 209, Incident Status.
 - Review maps/charts/imagery of the incident.
 - Obtain wellbore schematic.
 - Review the organizational chart.
 - Identify your chain of command.
 - Identify source control sites, activities, and personnel.
 - Identify the agencies, organizations, and personnel that comprise the IC/UC.
9. Review the Common Operational Picture (COP).
10. Obtain a meeting and briefing schedule.
 - Obtain a copy of the meetings and briefing schedule (ICS Form 230) from the Planning Section, if developed.

3.3 Initial Response and Assessment

The purpose of this task is to gain situational awareness and initiate first responder actions. The initial response to an incident will occur prior to the standup of the Flow Modeling Group.

1. Identify incident objectives, strategies, tactics and priorities in support of IC/UC stated priorities.
2. Assess incident reporting and meeting cycle.
3. Obtain information specific to the well.
 - Wellbore schematic
 - Daily drilling report
4. Consult plans applicable to the Flow Modeling Group.
5. Consult with source control group supervisors, if activated. (e.g., Source Control Containment Group, Subsea Dispersant Group, Debris Clearing Group, Relief Well Group, and any other source control groups activated.)
6. Obtain information from SCBD and SCGS.

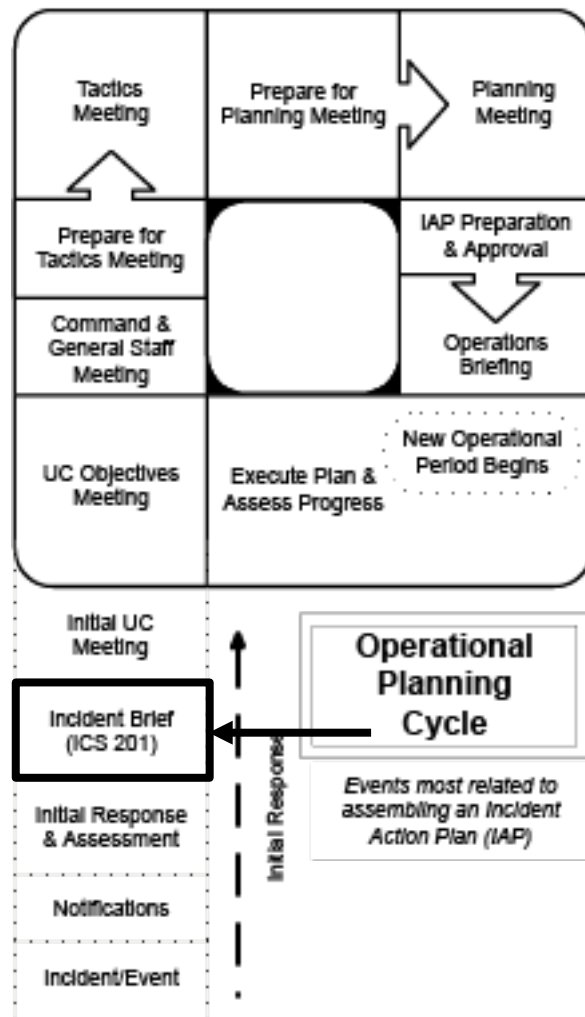


7. Estimate flow rate and volume of oil.
8. Conduct a resource needs analysis.
9. Request resources for the Flow Modeling Group using ICS Form 213 RR, Resource Request.
 - Request resources from the Logistics.
10. Establish effective communications between geographically dispersed source control sites/activities, as required.
 - Coordinate with Logistics for IT support.

3.3.1 Initial Incident Brief

The initial briefing is the opportunity for the FMGS to receive additional details about the incident assignment.

1. Meet the SCBD and OSC.
2. Obtain briefing with expectations.
3. Determine the size and complexity of the incident.
4. Conduct watch relief, if applicable.
 - Watch relief normally occurs during the Operations Brief.
5. Define your role as FMGS.



3.4 Manage People and Flow Modeling Group Procedures

3.4.1 Establish/Assess Flow Modeling Group

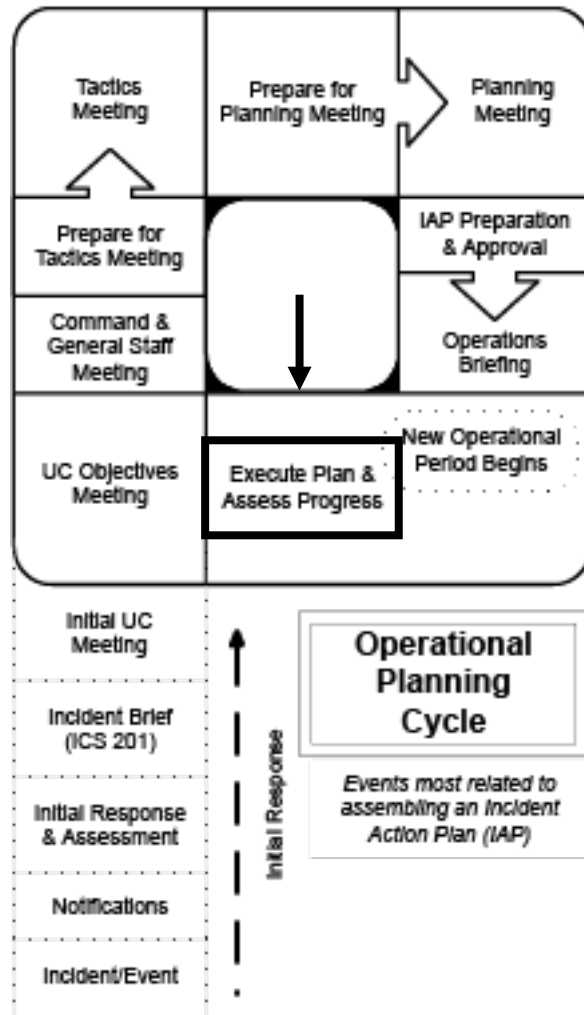
1. Determine/assess additional staffing requirements.
 - Select adequate staff capacity for 24-hour operations.
 - Consider staffing requirements and assignment duration for prolonged operations.
 - Consider human factors (e.g., endurance, environmental conditions).
 - Reference Occupational Safety & Health Administration (OSHA) Extended Unusual Work Shifts guidelines at the OSHA web site.
2. Establish/assess Flow Modeling Group work location.
3. Establish/assess group organization.
 - Advise SCBD on Flow Modeling Group organization.
4. Establish methods and practices for collecting, validating, and disseminating information to the SCBD, OSC, SCSC, SSC, ENVL, SDGS, SCGS, and pertinent members of the IMT. Establish effective communications between geographically dispersed source control sites/activities, as required.
 - Coordinate with Logistics Section and IT for set-up and maintenance of communication tools/technology.

5. Request resources using ICS Form 213 RR, Resource Request.
 - Request resources from the Logistics Section.
6. Activate components (e.g., personnel, equipment, plans) and monitor organization for appropriate span of control.
 - Ensure span of control is limited to 5-7 reporting elements.

3.5 Provide Flow Modeling Support

3.5.1 Execute Source Control and Incident Action Plans and Assess Progress

1. Coordinate the development of flow modeling.
 - Consult available information, including well schematics, and reconnaissance results.
2. Determine flow rate ranges for the source of the discharge.
3. Monitor and adjust flow modeling, as necessary.
4. Coordinate with and report results to the Situation Leader (SITL), Subsea Containment Group Supervisor (SCGS), Subsea Dispersant Group Supervisor (SDGS), and the Scientific Support Coordinator (SSC).
5. Run Well Containment Tool.
6. Develop soft shut-in procedures.



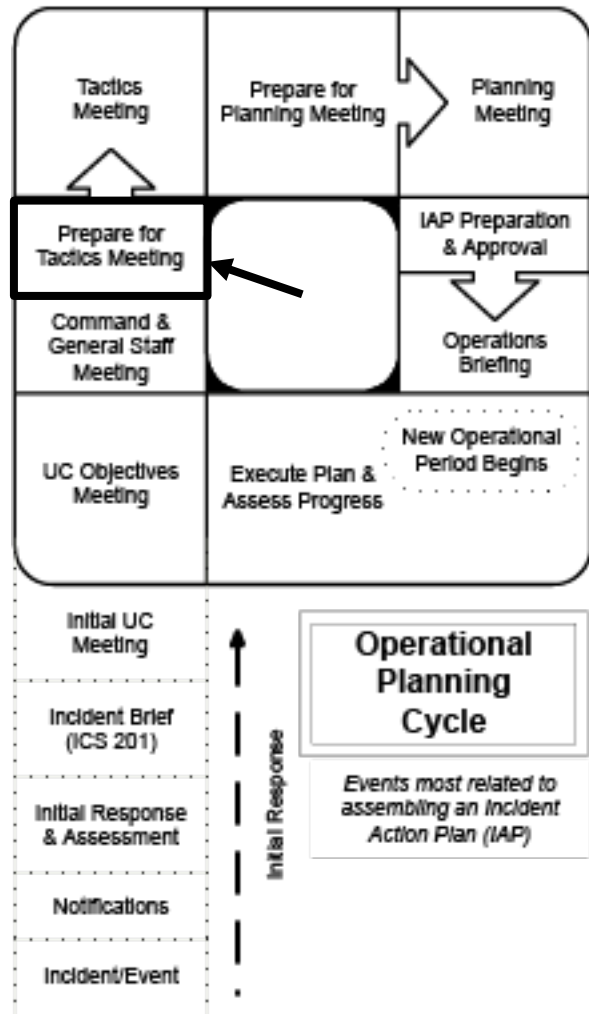
7. Contribute to the Incident Action Plan (IAP).
 - Ensure current information is provided to SCBD for inclusion in the IAP.
8. Contribute to the Common Operational Picture.
 - Ensure current information is provided to the Situation Unit and Planning Section.
9. Attend branch meetings.
 - Meetings may be conducted virtually to accommodate multiple locations.

3.6 Support the Operational Planning Process

3.6.1. Prepare for the Tactics Meeting

The Tactics Meeting is one of the most important steps in the source control planning process. This meeting is where you will help develop plans to take to the Planning Meeting for inclusion in the IAP. Your contribution will be crucial in preparing the OSC for the Tactics Meeting.

Refer to the USCG IMH (2014) Chapter 3, Operational Planning Cycle, for a detailed explanation of the ICS planning process and meeting agendas.



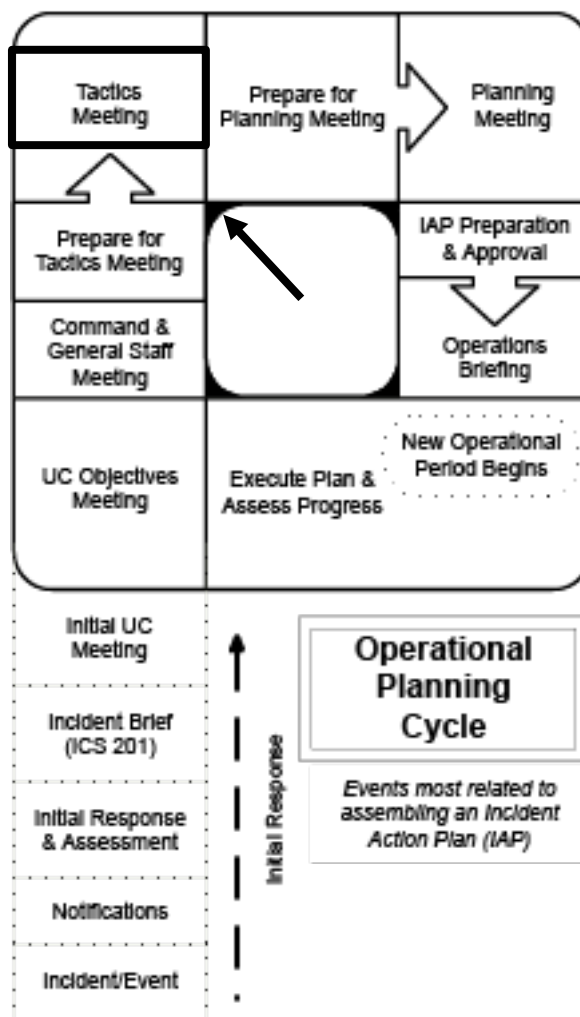
1. Identify current flow modeling operations.
2. Prepare a Work Analysis Matrix (ICS Form 234)
 - Prepare objectives, strategies, tactics, and work assignments in support of IC/UC stated priorities.

3. Prepare an Operational Planning Worksheet (ICS Form 215)
 - Identify source control resources required/on hand/needed to order to accomplish IC/UC stated priorities.
4. Provide documents to SCBD and the Planning Section for use at the Tactics Meeting.

3.6.2 Tactics Meeting

The Tactics Meeting produces operational input needed to support the IAP. Adjustments to the draft plan are made in consultation with other attendees.

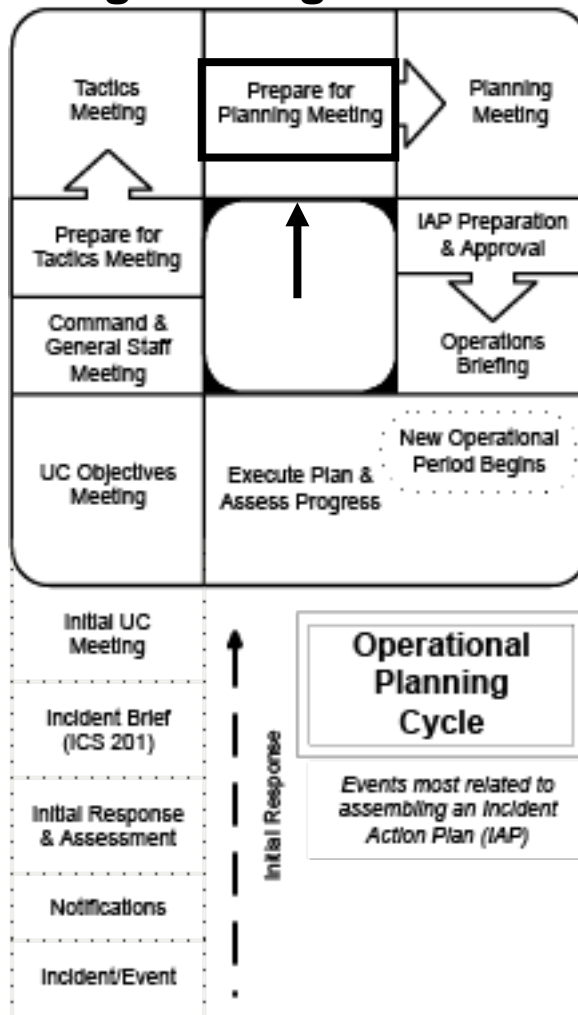
1. If requested, attend the Tactics Meeting with the OSC and SCBD.
 - Prepare to explain flow modeling issues in layman’s terms.
 - Communicate flow modeling planning/actions for inclusion in the IAP.



2. Develop a Work Analysis Matrix (ICS Form 234). In collaboration with others in the Tactics Meeting, adjust plans to take to the Planning Meeting.
3. Develop an Operational Planning Worksheet (ICS Form 215). In collaboration with others in the Tactics Meeting, adjust plans to take to the Planning Meeting.

3.6.3 Prepare for the Planning Meeting

Use this time to prepare plans and recommendations to bring to the Planning Meeting where the OSC will present the proposed plan to the Command and General Staff for review and comment.

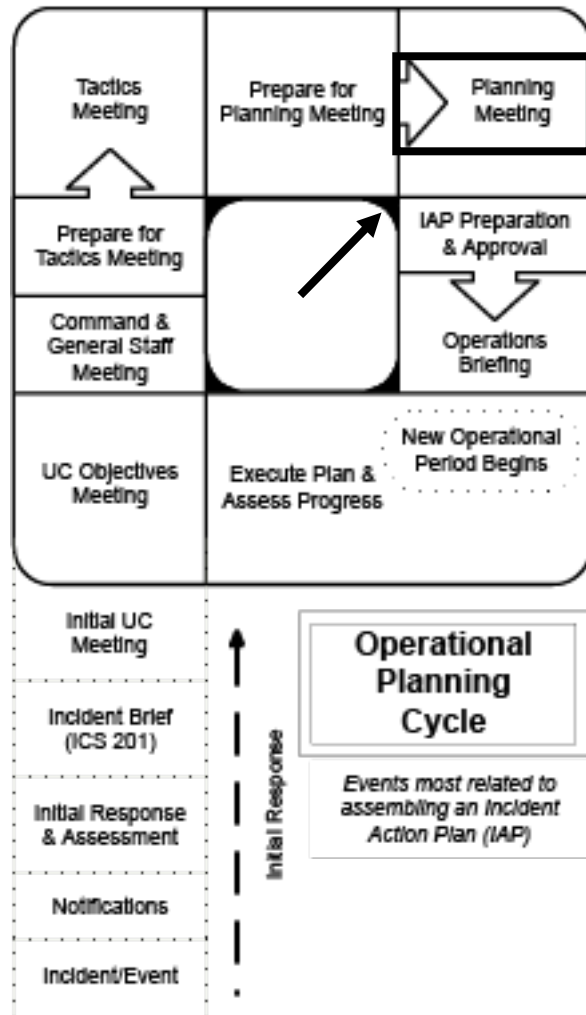


1. Revise the Work Analysis Matrix (ICS Form 234), as needed.
2. Revise the Operational Planning Worksheet (ICS Form 215), as needed.
3. Prepare to explain flow modeling operations.
 - Prepare to explain complex technical flow modeling issues in layman’s terms.
4. Provide documentation to SCBD.

3.6.4 Planning Meeting

In this meeting the Operations Section Chief (OSC) will present the proposed plan to the Command and General Staff for review and comment. Prepare to accompany the SCBD to the Planning Meeting to provide flow modeling expertise.

The OSC will present strategies for the next operational period, work assignments, resources, and support required to implement the proposed plan. This meeting provides the opportunity for the Command and General Staff to discuss and resolve any issues and concerns prior to assembling the IAP.

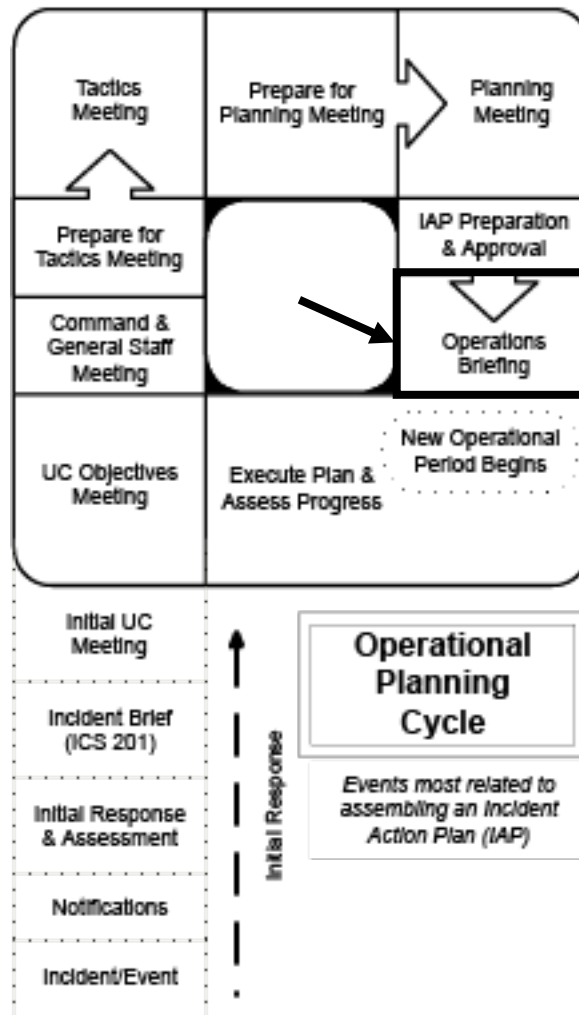


1. Attend the Planning Meeting with the SCBD and OSC, as required.
 - Prepare to explain flow modeling issues in layman’s terms.
2. Brief current flow modeling operations, as required.

3.6.5 Operations Briefing

In 30 minutes or less, this recurring briefing presents the IAP to the Operations Section oncoming shift supervisors.

1. Attend the Operations Briefing.
2. Receive the IAP for the next operational period.
3. Conduct watch relief, as needed.
 - Debrief as directed at the end of each shift.
 - Off-going: Complete an interview with your relief and SCBD; advise relief personnel of any change in conditions, activities, equipment status, and any unusual communications situations.
 - On-coming: Receive brief from off-going FMGS including current conditions, activities, equipment status, and communications.



3.7 Transition and Demobilization

3.7.1 Transition to On-Going Operations Phase

Facilitating the transition to on-going operations within the Flow Modeling Group is a crucial role of the FMGS. Ensuring continuity and continued effective management will position the Group to proactively manage the incident.

1. Ensure continuity of authority and knowledge, taking into account the increasing or decreasing incident complexity.
2. Ensure continued effective management of current operations during transition.
3. Establish a personnel rotation to sustain the participation of those with the technical background needed.
 - Consider contract personnel.
4. Prioritize issues.
 - Identify game-changers, impossibilities, and items that can be done immediately.
5. Monitor the organization for an appropriate span of control.
 - Ensure span of control is limited to 5-7 reporting elements. Consider use of additional source control elements, if needed.
6. Ensure information is exchanged via prescribed reporting chains.
 - Ensure technical specialist information is effectively communicated.

7. Support operational planning process and manage current operations simultaneously.
 - Plan for long-range efforts, as needed.
8. Maintain a Unit Activity Log, ICS Form 214.
 - Hold a long-term view to ensure documentation is memorializing the decisions and data relevant to the incident from a future perspective.

3.7.2 Complete Relief Process

1. Advise relief of any change in conditions.
2. Ensure accountability for property.
3. Complete documentation and turn in to Documentation Unit.
4. Debrief SCBD.
5. Provide input for plan improvement.

3.7.3 Demobilize Personnel and Group

1. Provide input to Demobilization Unit regarding demobilization of group personnel.
2. Confirm demobilization instructions with Demobilization Unit.
3. Attend to supplies and equipment.
 - Replenish supplies if incident is ongoing.
 - Provide inventory of equipment to replacement or Resources Unit.
 - Turn in/over equipment, as appropriate.

4. Supervise demobilization of Group personnel.
 - Identify group personnel for demobilization. Ensure you have requested replacements, if required.
 - Brief personnel regarding demobilization process and responsibilities of personnel.
 - Utilize ICS Form 225 as follows:
 - Submit ICS-225 to your supervisor and request he/she complete the form for your performance.
 - Complete ICS-225 for your subordinates to evaluate and recognize personnel.
5. Complete ICS Form 214, After Action Report.
6. Complete ICS Form 221, Demobilization Check Out.
7. Provide documentation to Documentation Unit.
8. Inform supervisor of departure.

3.7.4 Complete Return Travel

1. Conduct travel in accordance with Demobilization Plan.
2. Contact Demobilization Unit upon arrival at home location.

4.0 Appendices

4.1 Functional Interactions

The input/output matrix below provides guidance to the FMGS for obtaining information from other ICS IMT positions and providing information to ICS IMT positions.

MEET WITH	WHEN	GROUP SUPERVISOR OBTAINS	GROUP SUPERVISOR PROVIDES
SCBD	Initial Brief	Incident status	N/A
	Ops Briefing	IC priorities, objectives, and work assignment	Acknowledge clarity of assignment
	End of shift briefing	Feedback on performance	Update on work assignment

SDGS	As needed	Technical information to help conduct assignment	Technical information - Accurate flow rate information is critical to effective dispersant application operations
SCGS	As needed	Technical information to help conduct assignment	Technical information - accurate flow modeling information is critical to successful containment operations
Resource Unit	Upon arrival at incident	Assignment (if available) Status of current situation Resources in play	Home base Contact info Other qualifications

Planning Section	Daily	Up to date info from SITL and RESL as appropriate	Situation or resource changes, needs, or surplus, ICS-215
Logistics Section	Ops Briefing	Briefing on logistical issues (food, fuel, etc.) Resource request process Medical plan Comms plan Transportation plan	Feedback on resource use decisions
Finance Section	As needed	FSC concerns regarding time sheets or other resource utilization	Feedback on resource use decisions

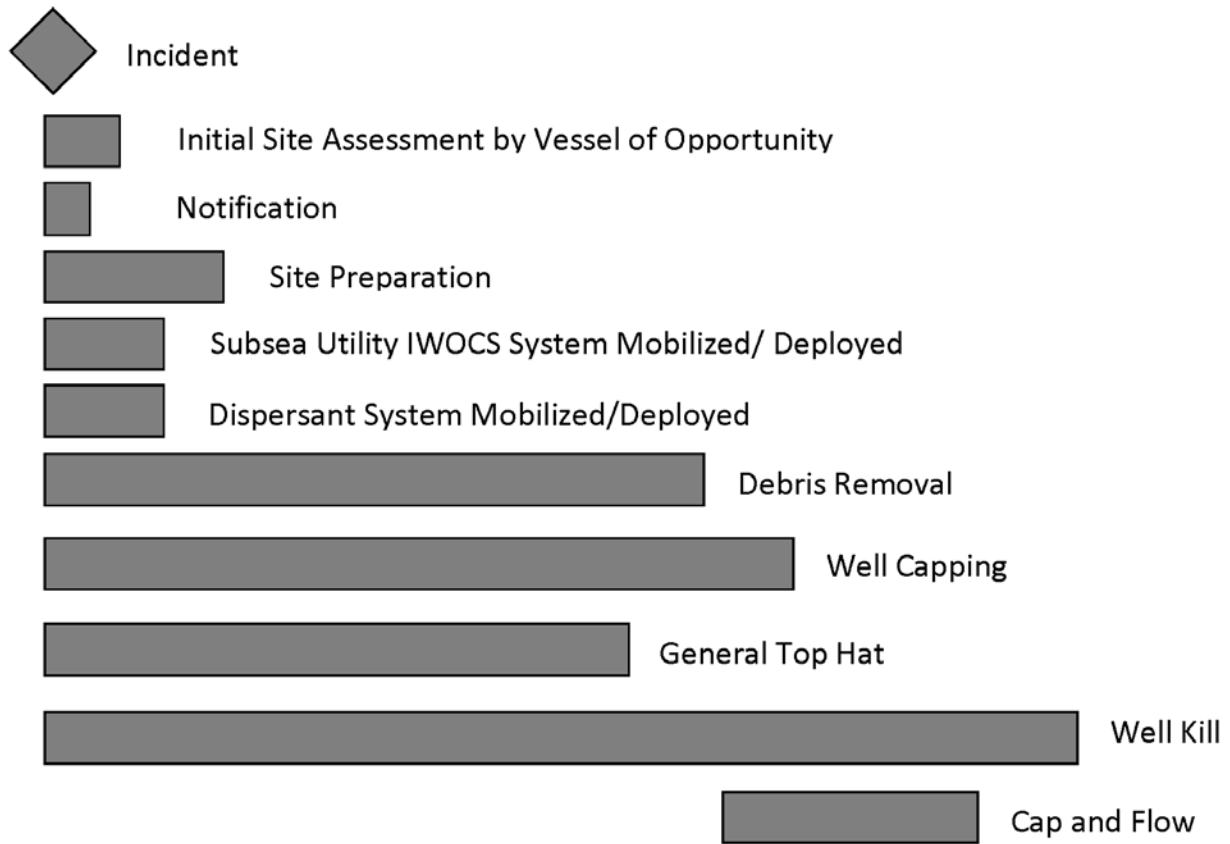
Safety Officer	Ops Briefing As needed	Safety information	Feedback on safety issues
Liaison Officer	Ops Briefing	Liaison issues	Feedback on previous encounters with other agencies, organizations, stakeholders
Public Information Officer	Ops Briefing	Incident policy on media encounters	Feedback on previous media encounters
Technical Specialists	As needed	Technical information to help conduct assignment	Feedback on assignment

Blank rows are provided below for adding other key IMT members:

4.2 ICS Map/Chart Display Symbolology

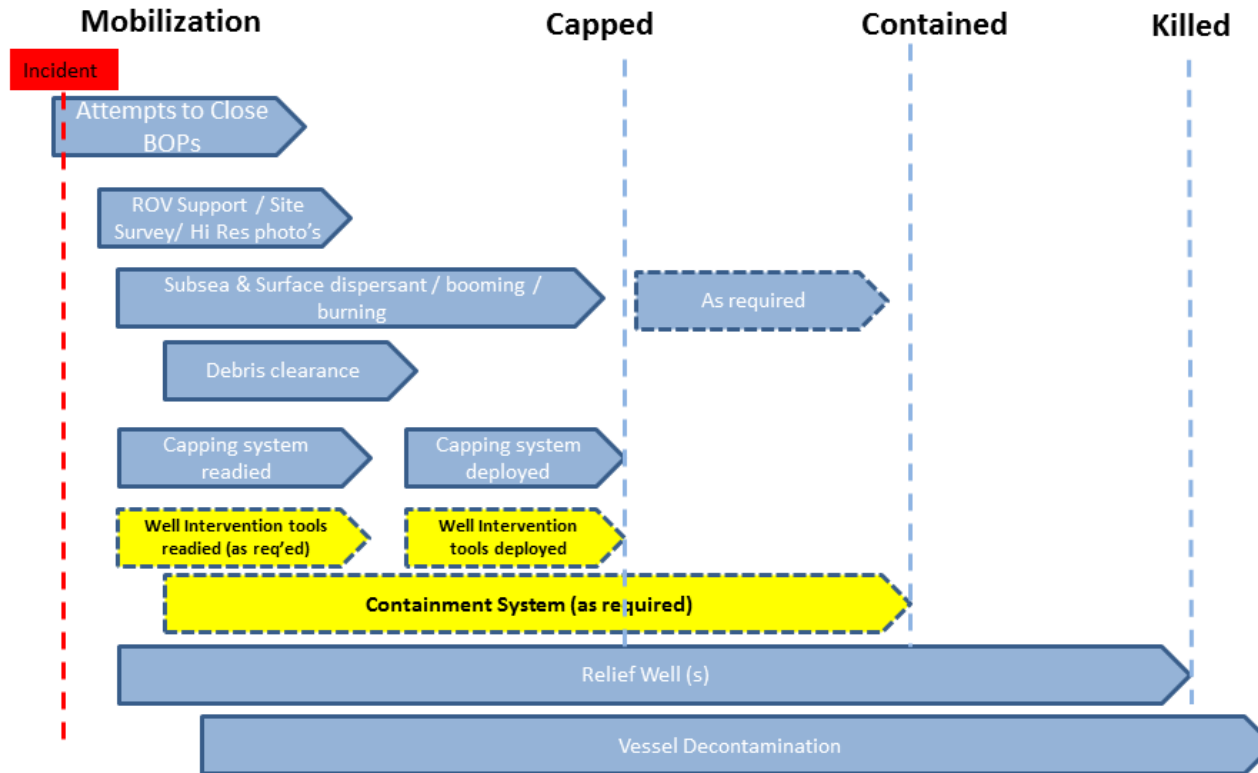
ICS MAP/CHART DISPLAY SYMBOLOLOGY	
<p>MINIMUM RECOMMENDED</p> <p>BLACK</p> <ul style="list-style-type: none"> Proposed Boom Completed Boom Absorbent Material <p>RED</p> <ul style="list-style-type: none"> 10 Aug ⊗ Hazard Origin 1430 <p>BLUE</p> <ul style="list-style-type: none"> Incident Command Post Incident Base Camp (Identify by Name) Staging Area (Identify by Name) Joint Information Center Helispot (Location & Number) Helibase Mobile Relay <p>OPTIONAL</p> <p>BLUE</p> <ul style="list-style-type: none"> Police Station Telephone Fire Station Mobile Weather Unit Emergency Operations Center Fire Aid Section Hospital 	<p>ORANGE</p> <ul style="list-style-type: none"> Oil Spread Prediction <p>BLACK</p> <ul style="list-style-type: none"> Actual Oil or Chemical Plume <p>BLACK</p> <ul style="list-style-type: none"> [I] [II] Branches (Initially numbered clockwise from Incident origin) (A) (B) Divisions (Initially lettered clockwise from Incident origin) Division Boundary Branch Boundary Wind Speed and Direction Safety/Security Zone Boat Ramp <p>All overlays must contain registration marks. These may consist of identified road intersections township/range coordinates, map corners etc.</p>
<p>TO BE USED ON INCIDENT BRIEFING AND ACTION PLAN MAPS/CHARTS</p>	

4.3 Sample Well Containment Activities

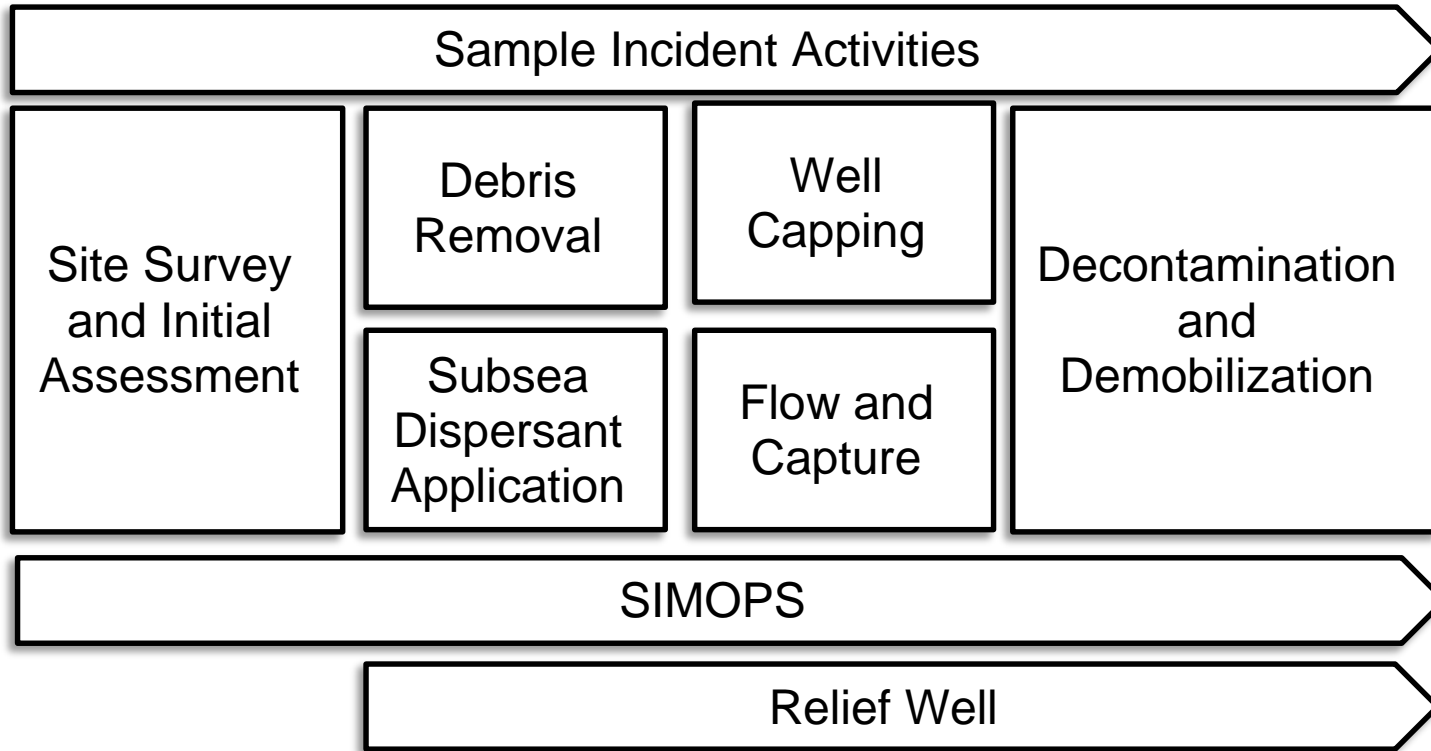


Activity Sample 1

Sample Deep Water Well Emergency Response Activity



Activity Sample 2



Activity Sample 3

4.4 Acronym List

Acronym	Definition
AC	Area Command
AHTV	Anchor Handling Tug Vessel
AIS	Automatic Identification System
APD	Application for Permit to Drill
ARTES	Alternative Response Tool Evaluation System
ASOF	Assistant Safety Officer
BMP	Best Management Practices
BOP	Blowout Preventer
BOPD	Barrels of Oil per day
CFD	Computational Fluid Dynamics
COML	Communications Unit Leader
COMP	Compensation/Claims Unit Leader
COP	Common Operational Picture
COST	Cost Unit Leader
CWA	Covered Well Addendum
DDR	Daily Drilling Report
DIVS	Division/Group Supervisor

DMOB	Demobilization Unit Leader
DOCL	Documentation Unit Leader
DOSC	Deputy Operations Section Chief
DPIC	Deputy Incident Commander
ENSP	Environmental Specialist
ENVL	Environmental Unit Leader
FACL	Facilities Unit Leader
FOSC	Federal On-Scene Coordinator
FPU	Floating Production Unit
FSC	Finance Section Chief
GOR	Gas-Oil Ratio
HPU	Hydraulic Power Unit
HSE	Health, Safety, and Environment
IAP	Incident Action Plan
IASG	Interagency Solutions Group
IATAP	Interagency Alternative Technologies Assessment Program
IC	Incident Commander
ICS	Incident Command System
IMT	Incident Management Team
IRS	Intervention Riser System

LARS	Launch and Recovery System
LMRP	Lower Marine Riser Package
LNO	Liaison Officer
LRP	Lower Rise Package
LSC	Logistics Section Chief
MEDL	Medical Unit Leader
OIM	Offshore installations manager
OPBD	Operations Branch Director
OPS	Operations Section
OSC	Operations Section Chief
OSC	Operations Section Chief
OSRP	Oil Spill Response Plan
PFD	Process Flow Diagram
PIO	Public Information Officer
PPE	Personal Protective Equipment
PSC	Planning Section Chief
RCD	Regional Containment Demonstration
RESL	Resource Unit Leader
ROV	Remotely Operated Vehicle
RP	Responsible Party or Riser Pipe/Package
RRT	Regional Response Team

RRT	See Regional Response Team
S.M.A.R.T.	Special Monitoring of Applied Response Technologies
SCBD	Source Control Branch Director
SCKN	Status/Check-In Recorder
SCSC	Source Control Support Coordinator
SCTL	Scientific Unit Leader
SIMOPS	Simultaneous Operations
SITL	Situation Unit Leader
SITREP	Situation Report
SMT	Spill Management Team
SOFR	Safety Officer
SSC	Scientific Support Coordinator
SSHP	Site Safety and Health Plan
THSP	Technical Specialist
TMS	Tether Management System (for ROV)
UC	Unified Command
WCD	Worst Case Discharge
WCST	Well Containment Screening Tool

4.5 Glossary

Term	Definition
Alternative Response Tool Evaluation System (ARTES)	Program to evaluate offers of innovative response technologies from both domestic and international entities
Assigned Resources	Resources checked in and assigned work tasks
Assisting Agency	Agency directly contributing or providing tactical or service resources to another agency
Available Resources	Incident-based resources that are immediately available for assignment
Best Management Practices (BMP)	Techniques, measures, or structural controls used to manage the flow of pollutants
Blowout Preventer (BOP)	Large, pressurized sealing device installed at the top of a wellhead
BOP Organization	Manages and coordinates operations on the blow-out well BOP

Branch	The organizational level having functional and/or geographic responsibility for major incident operations. The Branch level is organizationally between Section and Division/Group in the Operations Section. Branches are identified by roman numerals or by functional name
Cap and Flow	Integration of flowlines with a containment device to flow hydrocarbons from a subsea release point to the surface for processing, storage, and transportation away from the site
Capping	Installation of a containment device, such as a capping stack or BOP, onto a well for the purposes of shutting in the well to stop the uncontrolled release of hydrocarbons

Capping Organization	Manages capping stack operations to shut in the well or facilitate flowback/surface containment
Capture and Collection Devices	Devices that are deployed subsea to funnel hydrocarbons from a release point to a containment vessel on the surface via drill pipe. Examples include top hats, riser insertion tube tools, and containment chambers or domes.
Chief	The ICS title for individuals responsible for the command of functional sections.
Clear Text	The use of plain English in radio communications. Neither 10 Codes nor agency-specific codes are used when using Clear Text.

Command and Control	The exercise of authority and direction by a properly designated Incident Commander/Unified Command over assigned resources to accomplish a mission.
Command Post	Incident Command Post
Command Staff	Report directly to Incident Commander — Source Control Support Coordinator, Public Information Officer, Safety Officer, Liaison Officer
Common Operational Picture (COP)	Capability for sharing dynamic, geospatially-referenced situational awareness information; data is drawn from authoritative data sources
Constraint	Requirement placed on the IC/UC through Agency direction that dictates an action that must be performed

Containment Chambers or Domes	Encapsulates a parted/broken riser or other hydrocarbon release point to funnel hydrocarbons to the surface via drill pipe
Contingency Plan	Portion of an IAP, or other plan, that identifies possible but unlikely events and the contingency resources needed to mitigate those events
Covered Well Addendum (CWA)	BSEE required permitting tool that covers specific well information
Critical Information Requirements	Comprehensive list of information requirements the IC/UC has identified as critical to facilitating timely decision making
Daily Drilling Report (DDR)	Report on activity at well
Debris Removal Organization	Ensures debris is cleared to allow access for access relief well, installation of capping stack and/or interim containment device

Decontamination	Removal of hazardous materials from personnel, equipment, and vessels
Demobilization	Release of resources from an incident in strict accordance with a detailed plan approved by the IC/UC
Deputy	A fully qualified individual who, in the absence of a superior, could be delegated the authority to manage a functional operation or perform a specific task. Deputies can be assigned to the Incident Commander, General Staff, and Branch Directors
Director	ICS title for individuals responsible for supervision of a Branch

Division	Organizational level used to divide an incident into geographical areas of operation; established when number of resources exceeds the span-of-control of the OSC; organizationally between Task Force/Team and Branch
Dynamic Positioning (DP)	Computer controlled propulsion capability for drillships and drilling rigs that enables vessels to maintain station/location using thrusters in addition to normal propulsion
Emergency Disconnect Package (EDP)	Allows drilling platform or intervention vessel to disconnect from subsea well
Emergency Support Function (ESF)	Mechanism for grouping support, resources, program implementation, and services
Engineering Organization	Provides technical and engineering support services to the Source Control Branch

Federal On-Scene Coordinator (FOOSC)	Primary federal official with authority to direct oil removal operations
Floating Production Unit (FPU)	Floating or semi-submersible unit used for drilling and production operations
Flowback/Surface Containment Organization	Oversees the collection, storage, and processing of hydrocarbons flowing back from subsea well
Gas-Oil Ratio (GOR)	Ratio of gas to oil
General Staff	Section Chiefs — report directly to Incident Commander
Group	Organizational level used to divide an incident into functional areas of operation; composed to perform a special function; organizationally between Branch and Resources

Incident Action Plan (IAP)	Oral or written plan containing objectives reflecting overall strategy for managing an incident; may include resources and assignments
Incident Base	Location at the incident where the primary logistics functions are coordinated and administered; only one base per incident
Incident Command Post (ICP)	Location at which primary tactical-level, on-scene incident command functions are performed
Incident Command System (ICS)	Standardized on-scene emergency management concept; allows user(s) to expand or contract organizational structure to match the complexity and demands of incident(s)
Incident Commander (IC)	Individual responsible for all incident activities, including development of strategies and tactics and ordering and releasing resources

Incident Management Objectives	Guidance and direction necessary for the selection of strategies and the tactical direction of resources
Incident Management Team (IMT)	Incident Commander and Command and General Staff
Incident Situation Display	Status boards maintained by Situation Unit to communicate critical incident information
Intervention Riser System (IRS)	Subsea device providing access to a well
Intervention Workover Control System (IWOCS)	Powers and controls workover operations
Joint Field Office (JFO)	Temporary federal facility established locally for Federal, State, local, and tribal executives with responsibility for incident oversight, direction, and/or assistance

Launch and Recovery System (LARS)	System for deployment and retrieval of remotely operated vehicles
Leader	ICS title for individuals responsible for a Task Force/Strike Team or functional unit
Limitation	Requirement placed on the IC/UC through Agency direction that prohibits an action
Logistics Section	Section responsible for providing facilities, services, and materials in support of incident
Lower Marine Riser Package (LMRP)	Installed on top of BOP during drilling operation as an interface between riser and BOP
National Response Framework (NRF)	A national approach to domestic incident management designed to integrate efforts and resources of Federal, State, local, tribal, private sector, and non-governmental organizations

Objectives	IC/UC desired outcomes
Officer	ICS title for Command Staff positions
Oil Spill Response Plan (OSRP)	Oil industry operator's plan for response to an oil spill
Operational Period	Period of time scheduled for execution of a given set of operational actions as specified in the IAP; usually not over 24 hours; coincides with completion of on planning "P" cycle
Operations Section	Responsible for all operations directly applicable to the primary mission
Personal Protective Equipment (PPE)	Equipment worn for personal protection such as, gloves, safety glasses, etc.

Planning Section	Responsible for collection, evaluation, and dissemination of tactical information related to the incident, and for the preparation and documentation of the IAP
Process Flow Diagram (PFD)	Visual representation of the steps in a process
Regional Containment Demonstration (RCD)	Response strategy to demonstrate spill response efforts are efficient, coordinated, and effective as required by the National Contingency Plan
Regional Response Team (RRT)	Regional representatives of the Federal agencies on the National Response Team and representatives of each state within the region; provides planning and preparedness before a response; provides coordination and advice during a response

Relief Well Organization	Manages and coordinates relief well design and operations
Remotely Operated Vehicle (ROV)	An unmanned vehicle controlled remotely
Reporting Location	One of six possible facilities/locations where incident assigned resources may check in to the incident
Resources	All personnel and major items of equipment available or potentially available for assignment to incident tasks; status is maintained on resources
Riser Insertion Tube Tool (RITT)	Inserts into the end of a parted or broken riser to capture hydrocarbons and provide a conduit to the surface
Scientific Support Coordinator (SSC)	Special technical advisor to the IC/UC on fate and effects of oil in environment and impacts on natural resources

Section	Organizational level having functional responsibility for primary segments of an incident such as, Operations, Planning, Logistics, Finance; organizationally between Branch and IC
Severe Weather Contingency Plan	Comprehensive plan incorporating strategic, operational, and tactical planning focused on the safety of all response personnel during the transition from, and return to, surface and shore based cleanup operations and subsurface source control operations
Simultaneous Operations (SIMOPS)	Ensures all simultaneous subsea and surface well containment operations are coordinated safely and efficiently

Single Resource	Individual, piece of equipment and personnel complement, or crew/team with an identified work supervisor
Site Safety and Health Plan	Site-specific document; contains health and safety hazard analysis for each site task or operation, comprehensive operations work plan, personnel training requirements, PPE selection criteria, site-specific occupational medical monitoring requirements, air monitoring plan, site control measures, confined space entry procedures (if needed), pre-entry briefings, pre-operations commencement health and safety briefing, quality assurance of SSHP effectiveness
Site Survey Organization	Utilizes ROVs to survey the source point to gather data for all other source control effort

Source Control Procedures Risk Assessment	Using the model specified by IC/UC, assess risk of proposed source control procedures
Source Control Support Coordinator (SCSC)	Responsible for the abatement and containment of an uncontrolled oil well in Federal offshore waters; special technical advisor to IC/UC
Span of Control	Number of organizational elements that may be directly managed by one person; may vary from one to seven; five elements is optimum
Stakeholder	Any person, group, or organization affected by and having a vested interest in the incident and/or response operation
Strategy	General plan or direction selected to accomplish incident objectives

Subsea Dispersant Organization	Plans and coordinates the application of dispersants at the source of a subsea discharge
Supervisor	ICS title for individuals responsible for command of a Division or Group
Tactics	Deploying and directing resources during an incident to accomplish objectives designated by strategy
Technical Specialists (THSP)	Personnel with special skills; may be used anywhere within the ICS organization
Top Hat	Non-pressurized, non-sealing device placed over a hydrocarbon release point (e.g. from the LMRP, BOP, or wellhead) and funnels the hydrocarbons to a containment vessel on the surface via drill pipe

Unified Command (UC)	Application of ICS when more than one agency has incident jurisdiction or when incidents cross political jurisdictions.
Unit	Organizational element having functional responsibility for a specific incident activity
Vessel of Opportunity (VOO)	Vessel engaged in spill response activities that is normally and substantially involved in activities other than spill response and not carrying oil as a primary cargo
Volatile Organic Compounds (VOC)	Organic chemicals released as part of the "light ends" or vapors from hydrocarbons, including unrefined crude oils; impose health hazard when exposure is above minimum levels established by incident industrial hygienist or government agencies

Well Containment Organization	Plans, organizes, coordinates well containment operations
Well Containment Plan (WCP)	Document that contains the high-level operational strategy and resources for responding to a subsea, surface or land blowout of a given well. Other common names include Blowout Contingency Plan (BCP), Well Control Emergency Response Plan (WCERP), or Well Control Plan.
Well Containment Screening Tool (WCST)	Program to analyze a well's mechanical and geologic integrity
Well Kill Organization	Manages well kill operations via a relief well or capping stack, concurrently with all other source control efforts
Wet Store	Temporary subsea storage area for equipment or debris
Workover	Well intervention involving invasive techniques

Worst Case
Discharge (WCD)

The highest projected oil flow based on specific, given assumptions; ensure assumptions are consistent throughout the IMT

For further information contact
oilspillresponsedivision@bsee.gov