Offshore Information for Area Contingency Planning

Pacific

Offshore Response Concept of Operations (CONOPS)

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1 Introduction

In 2019, the Bureau of Safety and Environmental Enforcement (BSEE) sponsored a project in cooperation with the United States Coast Guard (USCG) to improve the content of the coastal zone area contingency plans (ACPs) with respect to the information necessary to effectively plan for and respond to large oil spills from offshore oil and gas facilities. This collaboration between BSEE, USCG Sector Los Angeles-Long Beach (LA-LB), resource trustees, state agencies, oil spill response organizations (OSROs), and Area Committees resulted in a series of technical documents that provide offshore information for southern California on:

- Offshore Oil and Gas Infrastructure (Pacific Technical Document #1)
- Offshore Worst-Case Discharge Scenarios (Pacific Technical Document #2 and Appendices 2A-B)
- **Offshore Response Concept of Operations (Pacific Technical Document #3)**
- Offshore Response Strategies and Best Management Practices (Pacific Technical Document #4)
- Sensitive Species Profiles and Best Management Practices (Pacific Technical Document #5).
- Offshore Environmental Sensitivity Indices (ESI) Atlas (Pacific Technical Document #6)

These documents were developed specifically for incorporation by reference into the coastal zone ACPs and are hosted on the BSEE Oil Spill Preparedness Division's (OSPD) website. In addition to the above technical documents, an inventory of offshore spill response equipment and a set of Offshore ESI maps were created and embedded in NOAA's Environmental Response Management Application (ERMA). Collectively, these materials provide a foundation of risk assessment, resources at risk, and conceptual response information to inform coastal zone ACP planning and responses to a significant offshore facility oil spill incident.

This technical document contains a Concept of Operations (CONOPS) framework for planning, rapidly organizing, and responding to a Worst Case Discharge (WCD) incident in an offshore setting. The CONOPS is viable for any size of offshore spill incident whether it is a WCD or a smaller oil spill. This framework aligns with government and industry best practices and is not intended to be prescriptive in nature. During an actual offshore oil spill, an incident-specific CONOPS should be developed based on this construct but which is also adapted for actual spill conditions.

2 Purpose and Objectives

This CONOPS explains, in broad terms, the process and strategy involved in preparing for, responding to, and mitigating the impacts from a large offshore oil spill. To effectively manage a WCD-like incident, the CONOPS must clearly demonstrate a geographically and functionally layered, dynamic approach for deploying mitigation capabilities and strategies. The CONOPS also must be organized in a temporal sequence that reflects response priorities, the availability and deployment timelines of resources, and the evolving conditions on-scene. To that end, this CONOPS is built around the creation of divisions and zones that can be customized and sequenced, as appropriate, to most effectively address:

- The Availability and Phased Arrival of Response Resources On-scene
- Site-specific Circumstances of the Oil Discharge and Facility Location
- The Changing Properties (weathering), Distribution, Concentration, and Location of the Discharged Oil Slick, both Spatially and Temporally, and the Subsequent Mitigation Strategies and Response Equipment to be Used.

This CONOPS excludes some elements which are integral to a spill response, but out of scope for this technical document. These elements include:

- Initial Notifications
- Search and Rescue
- Marine Firefighting
- Incident Investigation
- Intentional Wellhead Ignition (IWI) as an Oil Spill Response Tactic
- Site Safety Requirements
- Authorization of Use Procedures for Alternate Response Technologies
- Wildlife Recovery Operations
- Decontamination, Waste Management, and Disposal

This document should not be seen as requiring the use of any specific spill response countermeasures and strategies during an incident. Instead, it is an effort to model a multilayered response to a large complex offshore spill. The use of any response strategy in an actual spill is subject to the authorization requirements of that strategy. Users of this CONOPS should refer to other documents in the Regional Contingency Plan (RCP) which are relevant, e.g., authorization of use annexes for alternate response technologies, the Offshore Response Strategies and BMPs Technical Document (#4), and other relevant references, e.g., the Aerial Dispersant Response After Action Report, Deepwater Horizon MC252 (Aerial Dispersant Group, ICP Houma, 31 Dec. 2010). All statutory and regulatory definitions apply.

The majority of the potential offshore facility WCD scenarios in the Pacific are within 12 miles of the coastline. Due to the location of these potential spill sites, the IMT may be restricted in the response strategies available to mitigate the discharge. Responses in the nearshore environment will likely have limited ability to use aerial dispersants or in-situ burning (ISB). Preauthorization for use of either response measure is limited to waters greater than three miles from shore for dispersants and greater than 35 miles from shore for ISB. In addition, the heavy oils in this region will result in spills that weather quickly, increasing in viscosity beyond the conditions where dispersants or ISB would be effective. Dispersants and ISB may still be considered for use in these areas but must follow Subpart J of the NCP (40 CFR 300.910(b)) requirements and the guidance listed in the RCP.

The on-water response will be primarily focused on mechanical recovery, and significant shoreline impacts may occur within a much shorter timeframe. Shoreline protection and clean-up are likely to be a major part of the overall CONOPS for many scenarios. However, this technical document is focused on on-water operations. The oil will also move along shore, following the dominant direction of long-shore currents. Due to the types of production wells and platforms along the southern California coast, it is highly unlikely that any discharge would extend beyond one or two days.

3 Optimizing the Use of Response Countermeasures

In accordance with the NCP, the primary means of removing an oil spill should be through the use of mechanical oil recovery systems. However, incident specific circumstances may dictate that responders use multiple countermeasures to most effectively mitigate the impacts of an oil spill. Underlying this CONOPS is the necessary process of identifying the optimal mix of response strategies that will most effectively remove the discharge while minimizing ecological, socio-economic, and cultural impacts to the resources at risk. This has traditionally been accomplished through the use of comparative risk assessment models, with the most recently proposed model being described as a Spill Impact Mitigation Assessment (SIMA). SIMA is an updated approach to Net Environmental Benefit Analysis (NEBA) that also incorporates socio-economic considerations. Ideally, these assessment models are used in the planning phase to identify and assemble the information that will inform the use of response options for representative planning scenarios. During a spill response, the Unified Command can conduct an expedited or qualitative comparative risk analysis to rapidly select the response option(s) that are expected to yield the greatest overall environmental benefit. These risk analyses should neither pre-empt a response decision nor be the starting point for every decision. The goal of the analysis is to obtain agreement among the various parties over which response options will be most effective and result in the least overall impact.

4 Impact of Location, Weather, and Seasons

While the region of southern California experiences a temperate climate, there are a few local issues impacting an oil spill response in this area. The rainy season extends from approximately December through the end of February. Poor conditions associated with these rain events could impact an offshore response. The Santa Ana winds are another meteorological phenomena in the region. These dry winds that originate inland and blow strong winds offshore occur for one day and up to several days at a time during the cooler months between October and March. These events could assist a spill response by pushing the oil further offshore. King tides can also impact an offshore response. These tides are the highest tides of the year and occur approximately 3-4 times per year. In southern California, they typically occur near the summer and winter solstice with the most significant events in the winter. They happen during spring tides when the sun, Earth, and moon are in line in their orbits and when the moon is closest to the Earth. These large tidal fluctuations can create more shoreline impacts during high tide, especially when the discharge sources in the area are not far offshore.

5 Deployment of Strategies and Capabilities

As soon as an incident occurs, the responsible party (RP) will initiate a response drawing from the capabilities outlined in the offshore facility's Oil Spill Response Plan (OSRP) consistent with the strategies and procedures contained in the NCP, RCP, and ACP. Responders should characterize and monitor the evolution of incident-specific oil characteristics and behavior and implement strategies as necessary to deal with varying degrees of fresh and weathered oil. This information will inform the selection of response strategies and equipment, and the deployment of these capabilities as the response progresses. This CONOPS assumes that the RP will efficiently and effectively manage the levels of ongoing logistical and technological support that are necessary to carry out assignments approved by Unified Command for all offshore vessels, secondary storage for mechanical recovery, and (if appropriate) the supply chain for the stockpile of dispersants.

This CONOPS for an offshore facility WCD is organized around two key elements:

- The Temporal Phases of a Response
- A Geographical or Functionally-based Layered Construct

This CONOPS describes each of the basic layers in terms of divisions or groups and discusses the potential evolution of response activities within these layers over the course of the response in very general terms.

5.1 Temporal Phases of a Response

As the incident evolves, certain critical events will affect the structure and the geographic organization of the offshore response activities. These events are used as inflection points to identify the potential phases of the CONOPS. Specific times have not been applied to these different phases, due to potential variations in source location, travel times, availability of resources, and other uncertainties. The phases and corresponding inflection points are presented in Table 1.

Table 1. Temporal Response Phases with corresponding Inflection Points.

Response Phase	Inflection Point
Assessment	Arrival of surveillance and monitoring capabilities
Initial Response	Arrival of first mitigation resources on site capable of responding to fresh oil, such fast recovery vessels to perform mechanical recovery or aerial surface dispersant application systems. mitigation actions are occurring primarily near the source and recovering thicker fresh oil.
Post Discharge Removal Phase	Primary mitigation actions occur away from the source and involve chasing weathered oil in streamers and discontinuous patches These mechanical recovery assets would include task forces of vessels and temporary storage platforms and will include skimmers and boom. The discharge is either secured or reduced to being insignificant. Any complex source control actions begin.

5.1.1 Assessment

Assessment is the first phase immediately after initial notification where both the slick and the source are initially evaluated, determinations are made about the potential severity and impacts, and resources needed for the response begin to mobilize. Assessment activities may be carried out by offshore facility personnel using all available observation and monitoring capabilities, as well as satellite surveillance and aerial observation.

The Unified Command will meet to discuss the initial assessment findings discovered by the RP, including status of the facility, discharge volume and flowrate, safety hazards, oil characteristics, and expected behavior, fate, and transport. Securing the source is a response priority of the highest order during the assessment phase. The longer the discharge lasts, the more complicated and widespread the on-water response becomes, and the more critical and sensitive resources are impacted. A Remotely Operated Vehicle (ROV) may be used in conducting the assessment of the source, if necessary. Because all of the production wells in this region are assisted lift wells, the source control measures consist of shutting off the pump. Due to these types of wells, the maximum length of well discharge in this region would be one day. Other offshore facility sources include pipelines and storage tanks, which would also likely reach hydrostatic equilibrium and stop discharging within a day or two

During the Assessment Phase, the Unified Command should consider if there will be a need to employ other response countermeasures than mechanical recovery. Both dispersant application and in situ burning use are pre-authorized in limited areas in accordance with the Region IX RCP. The use of dispersants is preauthorized for use by the FOSC in waters greater than 3 NM from the nearest (mainland or island) shoreline, in waters outside a National Marine Sanctuary, and in waters greater than 3 NM from the California/Mexico border and running as a 3 NM band to a distance 200 NM offshore. Dispersants may not be used on Type 1 oils, on sheens, over areas of unoiled open water, on non-petroleum oils, natural seep oil or tarballs, on shorelines, or after dark, during low visibility, or at any time when applying dispersants would be unsafe for workers. In situ burning is only pre-authorized outside of 35 NM from the California coastline.

5.1.2 Initial Response

The Initial Response Phase begins when the first response resources arrive at the scene, begin oil removal operations and continues while mitigation actions are occurring primarily near the source and recovering thicker fresh oil. The oil sources at the WCD sites in southern California are all low API, very viscous oils that weather very quickly. Resources must be deployed quickly for all response strategies to be effective. Because all of the WCD scenarios considered in this region are one-day discharges due to assist lift wells, there will be no fresh oil added after the initial spill when the pump is secured to stop the flow of oil.

Fast response vessels (FRV) are the fastest response assets available in southern California. Dependent on conditions at the site and authorization of use procedures, they would likely be the first response assets that could be deployed on-scene.

Initial response resources must consider the safety of personnel before entering the "hot zone." Air monitoring readings will determine what actions can be taken and/or what additional personal protective equipment (PPE) is required for activities depending on the levels of Volatile Organic Hydrocarbons (VOCs), explosive vapor mixtures, and benzene. While FRVs may be first on-scene, these vessels do not carry respirators or PPE onboard for personnel to conduct removal operations in oil slicks that are producing high levels of volatile oil vapors. They only have the capability to detect if the area is safe for the responders onboard who work in Level D PPE. If initial air monitoring efforts reveal that conditions are not safe, any FRVs would retreat to a safe operating distance. Oil vapor readings over or near the source may exceed lower explosive limits (LEL), creating conditions that may result in explosion hazards.

The USCG or RP must be employed on site to provide command and control on-scene and to provide direct communications with the shoreside Unified Command.

This phase may also include the use of aerial dispersant surface application in thicker oil areas further away from the source. The window for effective use of dispersants on Southern California-based crude oils is likely to be very short due to their chemical and physical properties and weathering.

5.1.3 Post-Discharge Removal Phase

This phase is marked when the majority of removal actions are occurring away from the source and the oil on site weathers to the point when high volume mechanical recovery, dispersant application, and ISB would no longer be effective. As an additional inflection point, this phase begins once fresh oil is no longer discharging from the source or has been significantly reduced in volume to the point of being insignificant. This occurs when the source is secured through source control operations, or once pressures in the well, pipeline or storage tank reach equilibrium and stop discharging oil. In the Pacific, this phase will commence quickly, as production wells in this area are all assisted lift and require active pumping to make oil flow to the surface. Once the pump is turned off, such wells will stop discharging.

The response will shift focus to actions in areas further away from the source involving the recovery of weathered oil that spreads into distributed, discontinuous patches. High volume primary removal assets will likely be demobilized. Responders must be aware that the characteristics of the oil will likely require changes in removal operational approaches and/or equipment capabilities.

5.2 Geographical or Functionally-based Layered Construct

Due to the unlikelihood of a long-term continuous discharge, the proximity of offshore facilities to the coast, and the low API gravity and rapidity in which most crude oils in this region weather, the CONOPS for spill response operations in Southern California follows a simpler approach than other areas such as the Gulf of Mexico. Conventional mechanical recovery will be considered the primary response approach. Surface dispersant application may be considered when this conventional approach is deemed inadequate for the specific incident response. This CONOPS adopts a geographical and/or functionally-based set of layers, composed of divisions or groups that start at the spill source and expand outward (see Figure 1). Decisions on where to place oil spill response countermeasures must be determined and adjusted daily based upon multiple factors, e.g., weather/wind direction, spill modeling for fate and transport, oil weathering progression, etc. Continual monitoring of the overall situation and adjustments to the response are required by the IMT as oil location and behavior evolves over time.

As the offshore facility WCD scenarios in this region are unlikely to result in a discharge lasting more than 24 hours in duration, and the transition to a weathered oil is expected to occur close to the discharge site, the creation of separate divisions for the recovery of fresh oil and for the recovery of weathered oil is unnecessary. In these circumstances, a single Mechanical Oil Recovery Group (MORG) that is adaptive in its capabilities and tactics appears sufficient. If winds and currents result in the oil spreading into multiple areas requiring offshore oil recovery operations, then the establishment of separate geographical divisions, or separate task forces within the Mechanical Oil Recovery Group may be useful and appropriate.

The following sections outline the response operations that may be conducted at the spill site and the Mechanical Oil Recovery Group as the spill progresses through assessment, initial response, and source control/oil removal operations.

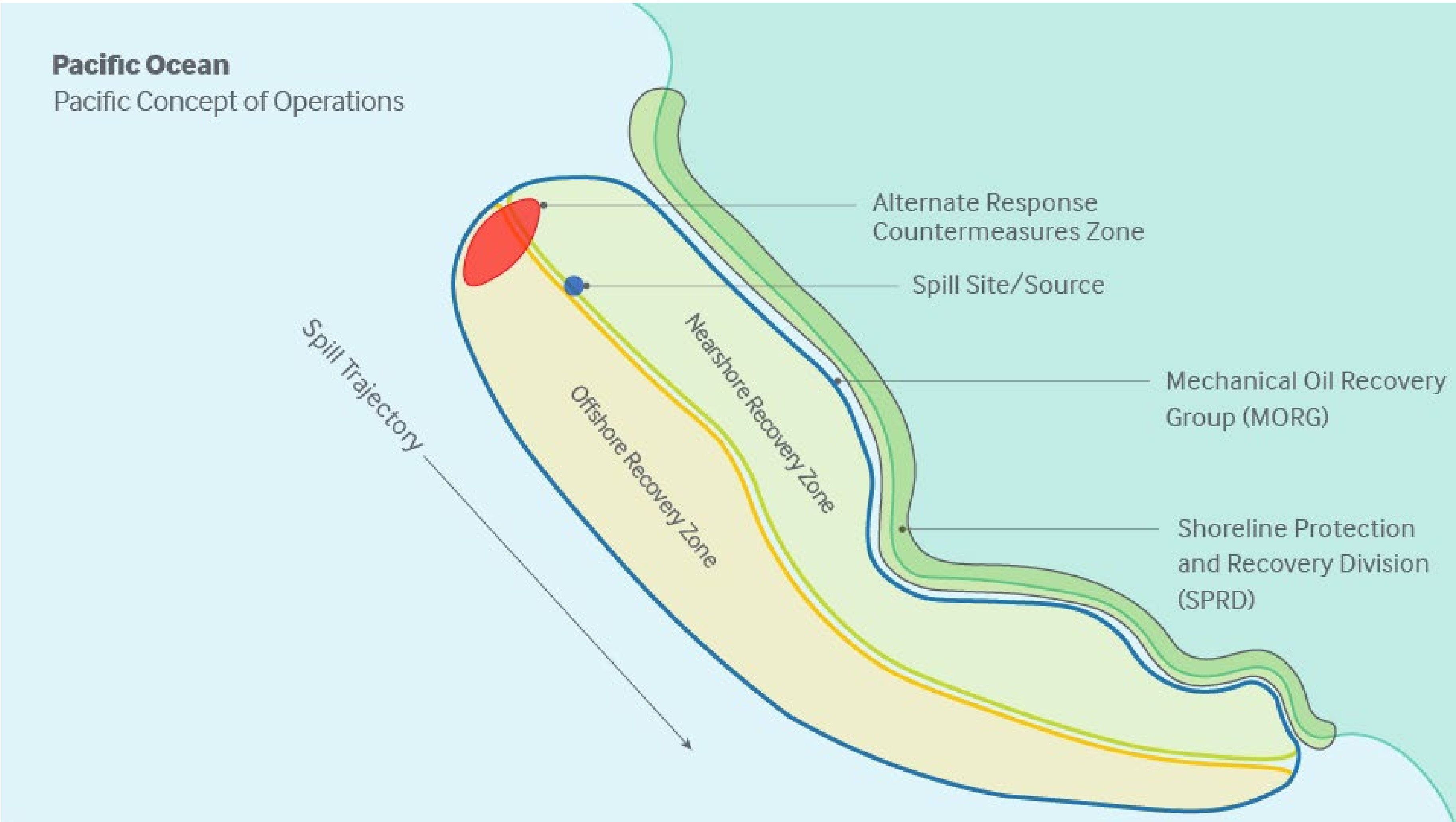

Figure 1. Pacific CONOPS Geographical Breakdown.

6 Spill Site

A safety zone will likely be established around the location of the well blowout (or other discharge source type) for the duration of the event. While not discussed in this CONOPS, other critical tasks may be occurring near the source during the early response to the incident, which may also restrict access to the area and limit response options, such as search and rescue (SAR) and marine firefighting, etc.

The discussion below describes the activities occurring for each temporal phase of the response focusing on source control for a well blowout.

6.1 Assessment

If there are personnel available on the facility during the assessment phase, they will communicate known or probable causes of the discharge to the incident management team (IMT). If facility personnel are not available, there may be ROV vessels or other vessels at the source able to provide information to the IMT.

During this phase, the offshore facility operator will likely be able to conduct an initial well integrity assessment before the Unified Command forms in person and make an early determination of the status of the source. Due to the assist lift wells at each of the WCD scenarios in southern California, facility personnel should be able to shut off the pump to the well and secure the source in a fairly short timeframe.

The RP will also begin aerial reconnaissance using aircraft and/or drones to characterize any oil that is surfacing in order to determine the extent of the spill. By assessing the size of the slick on the surface along with known facility parameters, the Operator can begin to estimate spill volume and initiate oil spill trajectory modeling. Information on potential well volumes, oil characteristics, and spill trajectory should be promptly relayed to the USCG Federal On-Scene Coordinator (FOSC) as the Unified Command is formed.

6.2 Initial Response

If air monitoring results on-scene indicate conditions are unsafe for response personnel, the FOSC may request authorization from the Regional Response Team (RRT) to use surface dispersant application operations to reduce VOCs at the surface near the spill site. The application of dispersants may be conducted by vessels on oil at the surface in an attempt to reduce VOCs near the source. These activities would occur in the Alternate Response Countermeasures Zone.

Site assessment and temporary source control operations will continue. The first source control resources likely deployed to the site will be ROV support vessels to determine the discharge source(s) and to take any additional response actions. If the site was evacuated following the incident, source control personnel will begin planning to reboard the facility if it is safe to do so.

The USCG District Commander will likely establish a safety zone for offshore facilities greater than 3 miles from shore (33 CFR 147.5). This safety zone is limited to 500 meters or less. A USCG cutter will likely be assigned to provide command and control of water and air assets in and around the incident until command and control can be established by the shoreside Unified

Command ICP. Additional USCG vessel(s) may also be on site to enforce any established safety zones around the entire response. There may be a need for the FAA to restrict the air space in the vicinity of the incident response to ensure the safety of aerial operations.

6.3 Post-Discharge Removal and Source Control Operations

Once the source is secured mechanical recovery assets will shift to recovering oil away from the spill site. Any complex surface intervention actions on the well will likely take several days to initiate operations. If a relief well needs to be drilled to kill the well, the rig may not arrive on scene for six months or more.

Plans will need to be developed at the time of the incident for any offshore response. These plans could include:

- Air Quality Monitoring and Site Safety Plan
- Site Survey Plan
- Air Traffic Control Plan

Once mobilized, relief well drilling will begin and continue until the original well is intercepted and plugged. Although demobilization of most response resources will occur during this phase, maintaining sufficient response resources on standby in the that are capable of rapidly responding to potential discharges at the spill site should be considered during relief well drilling.

7 Mechanical Oil Recovery Group (MORG)

This group will be focused on spotting, surveilling, and removing oil from the offshore environment. The mechanical oil recovery group will initially be focused on recovering oil near the spill source until the discharge stops, and then will follow the oil as it weathers and moves through the offshore environment Separate task forces or geographic divisions and zones may be established based on the situation, e.g., weather, the availability of resources and their efficiency in recovering or successfully treating the oil, trajectory of the oil, and changes in the oil as it spreads, weathers, and is transported away from the discharge site. The WCD scenarios in this region include oils with very low APIs. These oils would emulsify and increase viscosity at an extremely fast rate.

7.1 Assessment

At the start of the response, surveillance aircraft and FRVs will be the first spill response assets arriving on-scene. In certain scenarios, response equipment may have limited access to the site during the initial phases of the incident due to activities such as SAR or firefighting. The FRVs are likely to be the initial assessment vessels on-scene and will initiate air sampling to determine if the skimming operations in the vicinity of the discharge site can be performed safely.

Various surveillance platforms and sensors are used for ongoing assessment to support response assignments and operations throughout this group. Depending on the numbers of vessels and aircraft being used on the response in this group, deconfliction of vessel and air traffic will be essential for safe operations.

Mechanical recovery will be considered the primary response countermeasure. Surface dispersant application will only be considered if this conventional approach is deemed inadequate for the specific response. Decisions on where to place each oil spill response countermeasure, e.g., mechanical, ISB & aerial dispersants, must be made daily in order to avoid conflicts between these response assets. These decisions are based upon multiple factors, e.g., weather/wind direction (ISB smoke/air quality), spill modeling for fate and transport, oil weathering progression impacting dispersibility/burnability/skimming effectiveness, etc. The IMT will need to re-evaluate operational zones as the spill characteristics change daily. Continual monitoring of the overall situation and adjustments to the response are required as oil location and behavior evolve over time.

7.2 Initial Response

Once initial site assessments are conducted, any FRV(s) on-scene will begin recovering fresh, spilled oil near the source. Skimming operations may "bottleneck" and suffer delays without early arrival of offshore temporary storage. Decanting is another vital operational need in order to mitigate limitations to skimming that might be caused by a lack of temporary storage on-scene. Decanting approvals should be addressed in the first 24 hours concurrent with the mobilization of mechanical recovery resources. During this phase, additional skimming resources will continue to mobilize and deploy to the site.

If approved by the FOSC (or the RRT as appropriate), aerial dispersant application platforms may be the first resources to respond, especially for scenarios that are far offshore. All dispersants must be listed on the NCP Product Schedule and be licensed as a California Oil Spill Cleanup Agent (OSCA). After a test spray and Special Monitoring for Applied Response Technologies (SMART) Tier 1 visual evaluation has confirmed that the oil is successfully being dispersed, dispersants may be applied to the most concentrated oil slick areas; however, once mechanical recovery assets arrive, dispersant aircraft should be tasked to treat large patches and streamers of oil that have moved past the mechanical recovery assets operating near the spill site .

7.3 Discharge Removal and Source Control Phase

Within 24 to 48 hours of the start of the discharge, the source will likely reach hydrostatic equilibrium and stop discharging significant volumes of oil. At this point the surveillance and mechanical recovery assets already on scene will begin to focus primary recovery actions away from the spill site. In addition, during this phase, additional resources with longer deployment times will arrive on-scene, including larger oil spill response vessels (OSRVs), vessels of opportunity (VOOs), and oil spill response barges (OSRBs). Dependent on the available assets and geographic spread of the oil on the water's surface, task forces may need to be formed consisting of mechanical recovery assets with capabilities designed to address different recovery needs and operating environments.

As the oil spreads on the surface and is transported away from the source, it will become thinner and more discontinuous in nature, breaking up from large slick areas into smaller patches and windrows of increasingly weathered oil. Due to their low API gravity, oils produced in southern California offshore wells will quickly weather and become more viscous. Due to these natural processes and the changing oil characteristics, the surface slick will become increasingly difficult to locate, track, contain and remove.

Aerial reconnaissance/surveillance increases in importance to locate the oil and to determine its recoverability. The Mechanical Oil Recovery Group will require a larger number of surveillance assets, including aircraft, drones, and vessel mounted systems to meet the challenge. Satellite images may also be used to detect large areas of oil. There would also be the expectation that more wildlife would be encountered as proximity to shore decreases, which may require additional monitoring capabilities.

Many dedicated oil spill response vessels (OSRVs) and vessels of opportunity (VOOs) will not have the advanced X-Band Radar, infrared sensors, or dedicated drones. Any vessels that do have sensors can be used to guide other vessels, including VOOs and OSRVs, not outfitted with remote sensing equipment to areas of concentrated oil.

Due to the spreading of the oil, it will be critical to use skimming assets with enhanced encounter rates. Enhanced encounter rates can be achieved through skimming systems that can operate at increased speeds of advance, such as a current buster or rigid sweep arms, or through enhanced skimming tactics for oil collection that increase the effective swath width, such as vessels towing a U-shaped boom configuration with an open apex as shown in Figure 2. Increased skimmer effectiveness for higher viscosity oils can also be improved by evaluating different types of skimmers and using positive displacement skimmer pumps.

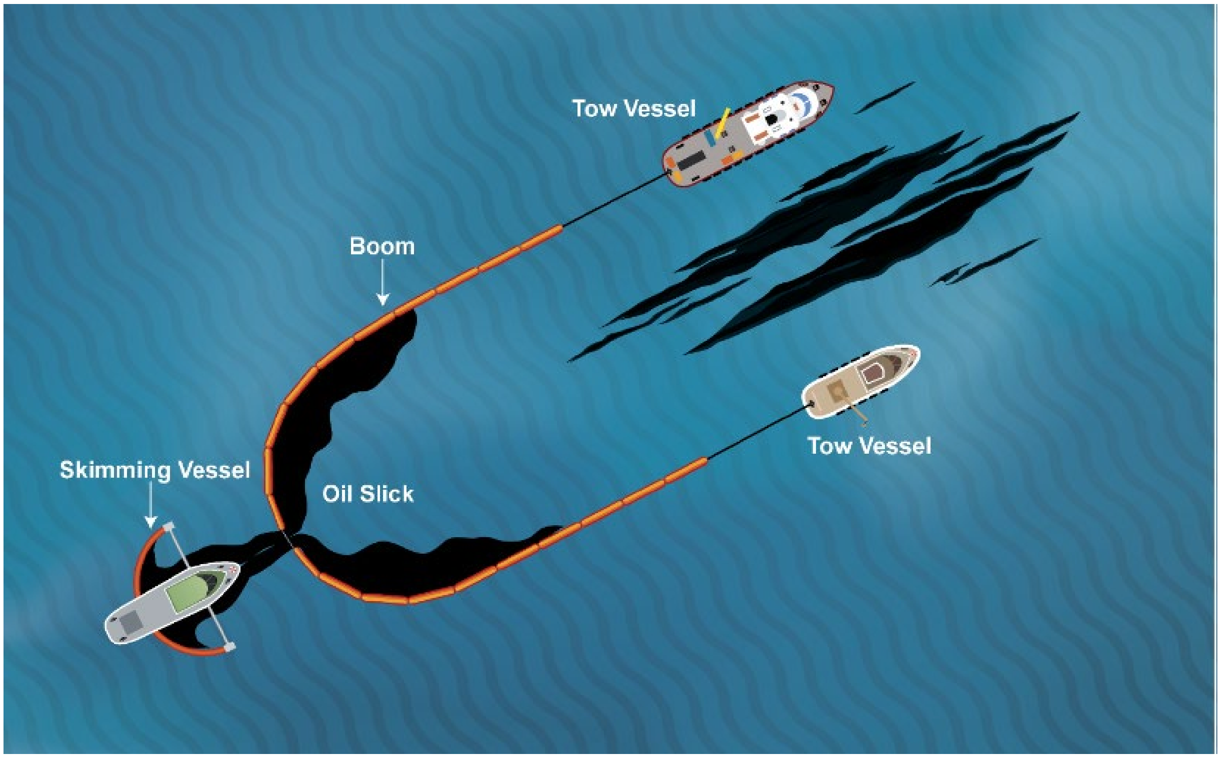

Figure 2. U-Shaped Boom Configuration with an Open Apex.

Typically, as the oil weathers, its viscosity also increases, which affects the various efficiencies and effectiveness of each response methodology. Task forces will likely encounter oil at different stages of weathering and emulsion and should be equipped with skimming options for recovering increasingly viscous oils. Mechanical skimmers adapted to more viscous oils will likely be the primary removal countermeasure.

As oil reaches nearshore coastal areas smaller skimmers and support vessels with shallow drafts may be required that can operate in shallow waters. Therefore, the vessels operating in this zone will also be more affected by sea and wind conditions and are restricted in the distance they can safely operate from the shoreline. They must remain close to areas of safe-haven and seek shelter should weather conditions deteriorate. These assets will normally be limited to daylight only operations since they do not include living accommodations and must return to their launch points in the evening. Access to secondary temporary storage may also be limited in these shallow water areas.

Task force elements operating in both shallow water areas may encounter heavily weathered/emulsified oil and tarballs and may need to adapt their recovery techniques to include dip nets or other physical means of "grabbing" the oil for removal. Special surveillance techniques may also be needed to detect spilled oil submerged in the water column before the oil reaches shore. Some floating oils can interact with sediments and subsequently become heavier than water by mixing with sand suspended in the water column by wave action. The oil-sediment mixture can become slightly negatively buoyant and become suspended in the water column by currents, or it can be dense enough to sink to the bottom.

This CONOPS recognizes the need to plan for demobilization activities, including the decontamination of vessels. Gross decontamination sites will need to be established in nearshore areas prior to port entry (at least one primary site for large vessels and multiple secondary sites for smaller vessels). Final decontamination activities likely will be done dockside at designated facility sites or anchorages.

8. Shoreline Protection and Recovery Division (SPRD)

This technical document is intended to focus on offshore and nearshore operations and does not discuss shoreline protection or shoreline oil removal operations. These operations are critical to any coastal spill that experiences landfall where oil enters into bays and sounds or strands on shorelines. Information about operations that will occur in the Shoreline Protection and Recovery Division (SPRD) are well developed and can be found in the appropriate ACPs, especially in the Geographical Response Strategies and Plans (GRS and GRPs).