United States Coast Guard
Refugio Beach Oil Spill After Action Report

Attachment D

Refugio Beach Oil Spill
Santa Barbara County, California

Federal On-Scene Coordinator's
After Action Report

May 3rd, 2016

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INTRODUCTION

An After-Action Report (AAR) is a tool intended to empower organizational learning, enhance contingency preparedness, and improve operations. The AAR for the Refugio Beach oil spill meets US Coast Guard requirements for conducting a review of Type 1 and Type 2 incidents involving the discharge of oil into the environment. The AAR adds to a body of response knowledge a collection of observations, lessons learned, promising practices, and recommendations to improve procedures, policies, and practices associated with oil spill planning, preparedness, response, and recovery. The AAR identifies a number of areas where the US Coast Guard can improve to include managing volunteers, mobilizing regional and national assets, and engaging with community groups, non-governmental organizations, elected officials, and citizens.

Implementing recommendations based on lessons learned is an essential, coordinated, and collaborative effort. The Los Angeles-Long Beach Area Committee and participating agencies and organizations should consider all recommendations and implement those most promising to improve oil spill planning, preparedness, response, and recovery. The committee should revisit the AAR in five years to reassess recommendations, assess improvements, and evaluate progress. Several of the recommendations have already been implemented, which will improve overall planning and preparedness for oil spill response and recovery.

This AAR is divided into four distinct sections. Part One contains an incident narrative, which provides an account of response activities and processes that includes, for example, initial response actions, building a unified multi-agency response team, articulating response limitations and constraints, enabling community engagement, and outlining response phases and end points. Part Two contains a list of agencies and organizations from the federal, state, tribal, and local tiers of government, non-government organizations, academia, and private industry that participated during the response. Part Three provides a detailed discussion around lessons learned and promising practices, as well as recommendations for consideration. The final part, Part Four, is an incident chronology that provides a timeline of response activities, resources and significant events.

Although the AAR attempts to be comprehensive, several features of the response not addressed within the report include Natural Resource Damage Assessments and investigation activities.

PART ONE
Incident Narrative

Discharge of oil
On May 19th, 2015, a 24-inch underground pipeline located in Santa Barbara County failed and discharged crude oil into the environment. The Responsible Party (RP), Plains Pipeline, LP, initially estimated the volume of spilled crude oil to be approximately 100,800 gallons according to a US Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) report, "Preliminary Factual Report, Plains Pipeline, LP, Failure on Line 901", dated February 17th, 2016. The PHMSA report states the RP later indicated that up to 142,800 gallons may have been discharged.

The Refugio Beach oil spill is considered one of the largest oil spills in recent Los Angeles-Long Beach history affecting both inland and coastal zones for oil spill response. The location of the pipeline at the point of discharge was east of US Highway Route 101 within the inland zone for oil spill response under US Environmental Protection Agency jurisdiction. The path of discharge, however, led to a US navigable waterway, the area vulnerable to the greatest threat, under US Coast Guard jurisdiction. The National Oil and Hazardous Substances Pollution Contingency Plan characterizes oil spills of this kind as "multi-regional responses".

Characteristics of the area
The point of discharge to the Pacific Ocean at Refugio State Beach is listed as a Class A sensitive site in the Los Angeles-Long Beach Area Contingency Plan. The area is characterized by tidally influenced sandy, cobblestone, and rip-rap beaches featuring steep coastal geography with weathered sandstone cliffs. The area hosts archeological and other tribal-cultural features within and around beaches and campgrounds managed by the California State Parks system.

The area is also located within a geologically active region of the Monterey Formation. The Monterey Formation is an oil-rich geological region featuring natural seep where oil and natural gas from the subseafloor permeates through natural fissures to enter the water column and rise to the surface as either sheen or small clumps of weathered oil called tarballs. The area also features numerous offshore oil platforms extracting crude oil for pipeline transportation to a nearby oil storage facility, for further distribution to oil refineries in Southern California. The failed pipeline that discharged crude oil served as one of the primary distribution means for oil produced by platforms offshore of Santa Barbara.

US Coast Guard initial response
US Coast Guard Marine Safety Detachment Santa Barbara (MSD SB) received notification from the Santa Barbara County Emergency Operations Center of an unknown quantity of crude oil coming from an unknown source. US Coast Guard MSD SB notified US Coast Guard Sector Los Angeles-Long Beach and responded with Santa Barbara County officials to investigate the discharge and to locate its source. As notification of the oil spill to partner agencies and organizations prompted the mobilization of federal, state, and local resources, US Coast Guard MSD SB and Santa Barbara County first responders traced the path of discharge from the shoreline at Refugio State Beach to its source, a ruptured pipeline parallel to US Highway Route 101.

Initial incident response organization and Unified Command (UC)
US Coast Guard MSD SB and Santa Barbara County first responders established an initial Incident Command Post (ICP) on May 19th at Refugio State Beach and entered a UC construct with multiple agencies. US Coast Guard Sector Los Angeles-Long Beach deployed an initial response Incident Management Team (IMT) comprised of the Sector Commander as the Federal On-Scene Coordinator (FOSC), an Operations Section Chief, a Planning Section Chief, and numerous qualified US Coast Guard Pollution Responders. Once the US Coast Guard Sector Los Angeles-Long Beach IMT arrived on May 19th, the UC was comprised of the US Coast Guard FOSC, California Department of Fish and Wildlife/Office of Spill Prevention and Response (OSPR), Santa Barbara County Office of Emergency Management (SB OEM), and the RP. The US Environmental Protection Agency (EPA) joined the UC as the initial ICP transitioned from Refugio State Beach on the morning of May 20th to Santa Barbara County's Emergency Operations Center.

Inland, shoreline, and on-water response
The majority of effort focused on minimizing environmental and cultural site damages and maximizing the recovery of discharged oil. For organizational efficiency, oil spill response operations were divided into three geographically distinct areas to include an Inland Branch, Shoreline Branch, and On-water Branch. Each geographic area presented unique response limitations and constraints to include, for example, access to affected sites, hazardous conditions, environmentally sensitive sites, culturally sensitive sites, and timing of the tide cycle and height.

The Inland Branch included the discharge site and pathway towards the Pacific Ocean. Inland branch response operations included oil recovery and removal, pipeline excavation, contaminated soil removal, community and responder air monitoring, and oil sampling from the source of discharge. Federal regulatory oversight of Incident Action Plan design and implementation as well as oversight of response contractors was provided by the EPA and members of the US Coast Guard National Strike Force.

The Shoreline Branch included the path of discharge from the top of a cliff and along 96 miles of affected shoreline. Federal regulatory oversight of Incident Action Plan design and implementation as well as oversight of response contractors was provided by the US Coast Guard with OSPR providing oversight as the State's natural resource trustee agency. Shoreline response operations included the use of multi-agency shoreline assessment teams that provided cleanup technique recommendations and shoreline cleanup teams that applied manual and mechanical recovery techniques, as well as applied response technologies with the exception of chemical dispersants. The US Coast Guard, EPA, and OSPR did not entertain chemical dispersants of any kind at any time during the response because use-thresholds and criteria were never met. Other operations included community and responder air monitoring, oil sampling, and wildlife recovery, rehabilitation, and release.

The On-water Branch included all offshore waters affected by the spill. Federal regulatory oversight of Incident Action Plan design and implementation as well as oversight of response contractors was provided by the US Coast Guard and OSPR. On-water response operations included the use of oil containment and protection boom, skimmers, and oil recovery vessels. In addition to on-water resources provided by the RP, the UC leveraged the capability of vessels of

opportunity (VOO). Owned and operated by local commercial fishing vessel owners and operators, VOOs were outfitted with oil recovery equipment and qualified supervision to enable removal of oil from the marine environment.

Community involvement

As the Refugio Beach oil spill made national headlines on May19th, there was a large turnout of local and regional non-governmental organizations, community groups, citizens, elected officials, and agencies and organizations not normally involved with oil spill response. The UC acknowledged benefits to leveraging the resources and commitment of an involved public who understandably perceived an ineffectual response in light of the initial lack of response activity amid oiled beaches given prolonged responder and resource transit times on the first day.

The UC responded to the desire for public participation by expanding its public affairs and external affairs capacity and by using state and local capabilities to enable public participation in safe and beneficial ways. While the public information staff aimed to develop and implement time-efficient ways of communicating incident information, the UC worked to improve ways of community outreach for local-scale knowledge and scientific expertise. The UC hosted community events, for example, a community open house meeting, to enable transparency and information exchange. Community involvement and public participation during the Refugio Beach oil spill revealed numerous ways to improve coastal oil spill response by using community-based resources through all response phases.

Response phases and endpoints

The UC defined a phased approach to oil spill cleanup in alignment with the National Oceanic and Atmospheric Administration's Shoreline Assessment Manual. The UC defined cleanup endpoints, which are agreed-upon benchmarks for oil removal based upon how well cleanup goals are met within each cleanup phase. The Refugio Beach oil spill cleanup effort completed Phase I "active cleanup and gross oil removal" on August 31st, 2015, and completed Phase II "refined oil cleanup endpoints for shorelines targeting maximum net environmental benefit" on January 22nd, 2016. Phase III "monitoring and sampling for buried oil" will continue through May, 2016, when oil sampling teams assess the affected area and collect oil samples for comparative analysis with oil from the discharge source. Based on results from the analysis, the UC will determine future courses of action.

PART TWO
Participants, coordinating agencies, and stakeholders

Federal

Channel Islands National Marine Sanctuary
Federal Aviation Administration
Federal Emergency Management Agency
National Park Service
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
US Bureau of Land Management
US Coast Guard Air Station Los Angeles
US Coast Guard Base Los Angeles
US Coast Guard District One
US Coast Guard District Seven
US Coast Guard District Eight
US Coast Guard District Nine
US Coast Guard District Eleven
US Coast Guard District Eleven Response Advisory Team
US Coast Guard District Thirteen
US Coast Guard District Seventeen
US Coast Guard Marine Safety Detachment Santa Barbara
US Coast Guard Marine Safety Lab
US Coast Guard Maritime Safety and Security Team Los Angeles-Long Beach
US Coast Guard National Pollution Funds Center
US Coast Guard National Strike Force, Atlantic Strike Team
US Coast Guard National Strike Force, Gulf Strike Team
US Coast Guard National Strike Force, Pacific Strike Team
US Coast Guard Pacific Area
US Coast Guard Research and Development Center
US Coast Guard Sector Humboldt Bay
US Coast Guard Sector Long Island Sound
US Coast Guard Sector Los Angeles-Long Beach
US Coast Guard Sector Puget Sound
US Coast Guard Sector San Diego
US Coast Guard Sector San Francisco
US Coast Guard Sector San Juan
US Coast Guard Sector Sault Ste Marie
US Department of Energy
US Department of Transportation/Pipeline and Hazardous Materials Safety Administration
US Environmental Protection Agency
US Fish and Wildlife Service
US Geological Survey

Tribal

Barbareno Band of Chumash Indians
Barbareno Ventureno Band of Chumash Indians
Coastal Band of Chumash Indians
Santa Ynez Band of Chumash Indians

State

California Air National Guard
California Coastal Commission
California Conservation Corps
California Department of Fish and Wildlife
California Department of Fish and Wildlife Natural Resource Volunteers
California Department of Fish and Wildlife/Office of Spill Prevention and Response
California Governor's Office of Emergency Services
California Office of Environmental Health Hazard Assessment
California State Department of Parks and Recreation
California Volunteers
State Historic Preservation Office

Local

Central Coast Regional Water Quality Control Board
City of Goleta
City of Los Angeles Fire Department
City of Santa Barbara
City of Santa Barbara Community Emergency Response Team
City of Santa Barbara Fire Department
City of Santa Barbara Police Department
County of Santa Barbara
Los Angeles Department of Public Health
Los Angeles Regional Water Quality Control Board
Santa Barbara County Fire Department
Santa Barbara County Health Department
Santa Barbara County Office of Emergency Management
Santa Barbara County Sheriff's Office
Santa Barbara Municipal Airport
Ventura County Office of Emergency Management

NGOs and other stakeholders

AIDS/Life Cycle Event
Coastal Advocates
Coastal Fund
Environmental Defense Center
Heal the Bay
Natural Resources Defense Council
The Nature Conservancy
Ocean Conservancy
The Ocean Foundation
Resources Legacy Fund

Santa Barbara Channelkeeper
Santa Barbara Museum of Natural History
SeaWorld San Diego
Surfrider Foundation
Wave Walker Charters

Academia

University of California, Davis, Wildlife Health Center, Oiled Wildlife Care Network
University of California, Santa Barbara
University of California, Santa Barbara, Community Emergency Response Team
University of California, Santa Cruz
Louisiana State University

Industry

Center for Toxicology and Environmental Health
Clean Seas, LLC
Marine Spill Response Corporation
National Response Corporation Environmental Services
Ocean Blue Environmental
Oil Mop, Inc
Patriot Environmental Services
Plains All American Pipeline, L.P.
Port of Hueneme
T&T Yard
Witt O'Brien's

PART THREE
Lessons learned, promising practices, and recommendations

1. Sourcing personnel to build management and operational capacity

OBSERVATION

US Coast Guard Publication 3-28 suggests that complex incidents place local units and staffs at sustained high operational tempo. Prolonged human capital investment under conditions of complex incident management creates the need to source qualified personnel from outside of the affected area. Requests for additional resources should be made early, which first requires an accurate view of incident size and complexity to determine resource needs.

DISCUSSION

Initial estimates of response size and complexity oftentimes fall short of actual response size and complexity. Incident requirements quickly exceeded the capacity of available personnel, which created the need to source additional overhead and field responders characterized by specialized skill sets, qualifications, certifications, and experiences. Over time, Sector Los Angeles-Long Beach assigned 70% of its personnel to support the response and enabled the flow of personnel resources from across the US Coast Guard.

Operational support from across the US Coast Guard was central to mounting an effective response. US Coast Guard personnel staffed Incident Command Post and Joint Information Center overhead positions, as well as field-scale capacities within regulatory enforcement and shoreline assessment roles. Resource mobilization requests to the US Coast Guard National Strike Force (NSF) to include all three Strike Teams and the Public Information Assist Team (PIAT), National Pollution Funds Center, District Eleven Response Advisory Team, and the US Coast Guard Incident Management Assist Team (CG-IMAT) enabled a professional network that augmented the initial incident management team from US Coast Guard Sector Los Angeles-Long Beach. Personnel from seven US Coast Guard District staffs, seven US Coast Guard Sectors, and myriad other units were also integrated throughout the incident management organization. Remote support was vital and included US Coast Guard equities from the US Coast Guard Marine Safety Laboratory (MSL) in New London, Connecticut, and, from US Coast Guard Headquarters, the Director of Incident Management and Preparedness Policy, and Office of Marine and Environmental Response.

Timing of the incident coincided with the US Coast Guard normal transfer season, so in many cases, personnel deployed for only short time periods before demobilizing to accommodate their permanent change of station. Frequent turnover of US Coast Guard personnel challenged organizational knowledge management related to incident operating procedures, response efficacy, geographic area familiarization, and agency, stakeholder, community group, and citizen relations.

Though formal sourcing and ordering mechanisms exist within the US Coast Guard, the procedures and processes for ordering those personnel resources during the initial phases of response may not be completely defined. Whereas the ICS form 213-RR initiates a resource request, other platforms are used to canvass the US Coast Guard in search of an available and capable match; namely, the Mobilization Readiness Tracking Tool (MRTT). MRTT is the US Coast Guard's only approved web-based human resource information system designed for requesting, sourcing, and tracking personnel in support of contingency and surge operations. Accessed from any computer, a user must have an account and be appropriately trained to manipulate the tool. There were simply not enough trained personnel to leverage the system during initial response. This reality led to missed requests, duplicated requests, and delayed requests.

LESSONS LEARNED/PROMISING PRACTICES

a. Complex incidents will challenge the capacity of Sector-level incident management teams, and the knowledge requirements to address all incident complexities will exceed the level of subject matter expertise typically found at US Coast Guard Sectors.

b. US Coast Guard Special Teams identified in the National Oil and Hazardous Substances Pollution Contingency Plan were utilized to full and positive effect.

c. Personnel from other Sectors across the US Coast Guard are needed to supplement organic capacity and to sustain the right level of overhead and field responders.

d. Personnel with Pollution Responder and Federal On-Scene Coordinator's Representative qualifications are absolutely necessary to fill positions that enable federal regulatory oversight of all public and private response personnel, as well as to ensure task direction provided from the Responsible Party's Qualified Individual/Spill Management Team to US Coast Guard responders aligns with the National Oil and Hazardous Substances Pollution Contingency Plan and US Coast Guard policies.

e. MRTT is difficult to leverage during critical phases of initial response without sufficient and adequately trained staff.

f. Operating in locations with poor or nonexistent internet connectivity will prevent the on-site use of MRTT.

RECOMMENDATIONS

a. Sector Los Angeles-Long Beach will work with US Coast Guard District Eleven and US Coast Guard Pacific Area surge staffing branches to understand the resource request process within the context of MRTT, and memorialize a process within internal standard operating procedures.

b. Sector Los Angeles-Long Beach will have both active duty and reserve personnel trained and registered to use MRTT.

c. US Coast Guard District Eleven should initiate MRTT data management during initial phases of response and transition the function to the affected unit once they establish an MRTT capability.

d. Sector Los Angeles-Long Beach and US Coast Guard District Eleven will explore opportunities for emergency contracting with internet service providers in locations where internet connectivity may present a barrier.

2. US Environmental Protection Agency (EPA) assistance during coastal zone response

OBSERVATION

EPA provides relevant assistance during coastal zone response.

DISCUSSION

The Refugio Beach oil spill affected both inland and coastal zones for oil spill response, what the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) calls "multi-regional response". Although the oil discharge occurred in the inland zone under EPA jurisdiction, the area prone to the greatest threat was the coastal zone under US Coast Guard jurisdiction. The NCP articulates a decision paradigm for determining a single federal On-Scene Coordinator (OSC) during multi-regional response, and it was determined through consultations with USCG District Eleven, EPA Region IX, Regional Response Team (RRT) IX, and the National Response Team (NRT) that the US Coast Guard would provide the federal OSC (FOSC). Given organizational and geographic complexities of the response, the US Coast

Guard FOSC found EPA capabilities beneficial during coastal zone oil spill response where various threats are presented to the public health and well-being, and to the marine environment.

Clean Water Act Section 311(c) Order:
The US Coast Guard and EPA co-signed a Clean Water Act Section 311(c) Order, pursuant to the US Coast Guard's authority as the FOSC. The purpose of the order served to align federal regulatory oversight and enforcement during the response. The order identified the RP by name, directed the RP to take appropriate actions to protect the public health, welfare, and environment of the United States against a substantial and imminent threat from the discharge of oil, detailed applicable oil pollution response laws and implementing regulations, and named the governmental agencies involved. Given multiple local, state, and federal jurisdictions, the order formalized unity of effort and governed the RP throughout the course of response operations.

Other EPA assistance:
It may be advantageous during coastal zone oil spill response to leverage the EPA's capabilities and tools. While EPA OSCs developed inland site cleanup and remediation strategies and provided contractor monitoring, air monitoring, photo documentation, and site safety, EPA contractors provided specialized expertise during removal operations for over 6,000 cubic yards of oil-contaminated soil. Other EPA teams provided sampling support using Scribe, a software tool developed by US EPA's Emergency Response Team staff, to assist in the process of managing oil sample data. EPA also provided public affairs and community outreach support to the JIC.

LESSONS LEARNED/PROMISING PRACTICES

a. In light of NCP guidance regarding multi-regional response, engage senior agency leaders from the US Coast Guard and EPA, as well as their respective legal staffs, to determine which agency provides the federal OSC during multi-regional responses.

b. The Clean Water Act Section 311(c) Order served well to articulate roles and responsibilities, as well as RP expectations and proved successful in formalizing unity of effort.

c. Minimize potential confusion by listing the federal agency not providing the federal OSC organizationally as either a Deputy Incident Commander for their jurisdictional area, Agency Representative, Operations Section Branch Director, Operations Section Division, or Planning Section Unit Leader.

d. Leverage EPA air monitoring capabilities.

RECOMMENDATIONS

a. The US Coast Guard should further consider the circumstances under which issuance of a Clean Water Act Section 311(c) Order may be appropriate.

b. Whereas the US Coast Guard can issue an Administrative Order when an RP fails to take

appropriate action to prevent or respond to an actual or substantial threat of an oil discharge, CG-MER may reconsider decision criteria for issuing Administrative Orders to RPs to preempt substandard response performance and possibly integrate new criteria with the on-going development of tactics, techniques, and procedures for Administrative Orders.

c. Area Committees and RRTs may consider developing within their respective plans a section that discusses multi-regional response, and to articulate the process of designating a federal OSC prior to engaging the RRT or NRT for a determination.

d. Encourage US Coast Guard FOSCs and US EPA OSCs to meet and discuss training opportunities and drills and exercises both inland and coastal. Collaboration during Area Committee and RRT meetings may enable this level of interaction.

3. Regional Response Team (RRT) IX incident-specific activation

OBSERVATION

Complex incidents of any type, to include multi-regional response, should accompany an RRT incident-specific activation.

DISCUSSION

Although the Unified Command (UC) determined a mobilization or special convening of RRT IX was not necessary, RRT IX Co-chairs called an incident-specific activation for reasons stated in 40CFR300.115 (j.1.i and iii) and in light of the geographic, social, cultural, political, and environmental complexities of the oil spill. The incident-specific RRT IX established a daily situation brief facilitated by the US Coast Guard RRT IX coordinator.

The daily brief provided operational updates and enabled discussion around ways to mitigate operational and logistical constraints and limitations. General Services Administration, for example, was engaged to prepare emergency lodging services under their blanket purchase agreement given few lodging availabilities in the Santa Barbara area on graduation and holiday weeks and weekends. Natural resource trustee agencies from Department of the Interior, Department of Commerce, and California Department of Fish and Wildlife provided emergency consultation under the Endangered Species Act within the first operational period. The Applied Response Technology Subcommittee to RRT IX described the types of technologies offered by recognized oil spill response industries and entrepreneurial community groups and citizens. Daily situation brief summaries were distributed across RRT IX member agencies and organizations, as well as the National Response Team (NRT).

LESSONS LEARNED/PROMISING PRACTICES

a. The incident-specific RRT serves as the central conduit of information from the Incident Command Post to the RRT and NRT member agencies and organizations.

b. The incident-specific RRT, given access to UC limitations and constraints, can leverage member agencies and organizations to full effect for solutions that stem from contracting, consultations, and other means.

RECOMMENDATIONS

a. Refine criteria in the Regional Contingency Plan for (RCP) RRT incident-specific activation.

b. Within the RCP, provide memo templates for an RRT incident-specific activation. One template memo from the federal OSC to the RRT, and one template memo from the RRT Co-chairs to the federal OSC and RRT membership.

4. Using local-scale knowledge and assistance by assigning Incident Command System (ICS) Agency Representatives

OBSERVATION

Numerous organizations provided incident support without needing to fill ICS positions.

DISCUSSION

The Unified Command (UC) recognized the need for local-scale insight and advice from other agencies and stakeholders not assigned within the ICS organization. For example, Ventura County Emergency Managers and California State Parks Rangers were provided full access to UC discussions and planning meetings to share local knowledge related to coastal geography and environmental, social, cultural, economic, and political concerns. The Director of Emergency Operations at the University of California Santa Barbara (UCSB) provided responders with access to restricted areas on university property to assess shoreline impacts and initiate response. County health officials informed community air monitoring protocols and delivered public affairs support to help address community concerns and complaints regarding petroleum odors exacerbated by higher afternoon temperatures and light winds that caused rapid evaporation and odor transport.

The UC benefitted greatly by leveraging UCSB capabilities into its decision frameworks. UCSB marine environmental and geological academicians provided the UC a unique level of local area knowledge involving the Monterey Formation, bathymetry of area ocean waters, environmentally sensitive sites, access to private map collections of culturally sensitive sites, and coordination with Woods Hole Oceanographic Institute related to oil sample analysis and interpretation. Overall, UCSB provided trustworthy, local knowledge that was current and informed. Although their participation informed response decision-making, their presence also facilitated transparency, honest information sharing, and cooperation and collaboration between regulatory agencies and the public.

LESSONS LEARNED/PROMISING PRACTICES

a. Local stakeholders not normally engaged during oil spill response provide tremendous capability and benefits to response objectives.

RECOMMENDATIONS

a. Design an Agency Representative program through the Los Angeles-Long Beach Area Committee. Use the US Coast Guard Incident Management Handbook to style Agency Representative program functionality.

b. A non-governmental organization representative program should be considered as well given the levels of resources and commitment that could benefit response objectives.

5. Local Government On-scene Coordinator (LGOSC)

OBSERVATION

LGOSCs are most effective when they come to the UC with full and consistent decision-making authority throughout a response.

DISCUSSION

Including an LGOSC in Unified Command (UC) during oil spill response has precedence in US Coast Guard District Eleven. The San Francisco Bay and Delta Area Contingency Plan (ACP) articulates a process by which local governments can request of the US Coast Guard that an LGOSC be incorporated into the UC. This option was implemented during the 2009 Motor Vessel DUBAI STAR oil spill. Although the Los Angeles-Long Beach ACP does not feature explicitly the option of using an LGOSC, Santa Barbara County and California Department of Fish and Wildlife/Office of Spill Prevention and Response (OSPR) provide for this option, which was implemented during the Refugio Beach oil spill.

The Director of the Santa Barbara County Office of Emergency Management (SBOEM) served as the LGOSC, while other SBOEM personnel staffed the position as needed in the absence of the Director. Although the LGOSC provided valuable local-scale knowledge and access to local resources and community-based networks, the LGOSC did not have full and consistent decision-making authority throughout the response, and instead required higher-level concurrence to make decisions.

LESSONS LEARNED/PROMISING PRACTICES

a. The LGOSC's fullest potential is achieved when vested with decision-making authority.

RECOMMENDATIONS

a. Explore the possibility of US Coast Guard-OSPR discussions with SBOEM surrounding desired delegations of authority and other prerequisites for consideration as LGOSC.

b. Based on US Coast Guard-OSPR-SBOEM discussions, formalize in the Los Angeles-Long Beach ACP the prerequisites and desired authorities for consideration as an LGOSC.

6. Tribal government representation and integration with responders

OBSERVATION

Tribal governments optimized their participation by integrating their capabilities and competencies with planning and implementation phases of oil spill response. Federal government agencies have Tribal trust responsibilities where Tribal resources may be affected.

DISCUSSION

Tribal governments were vital to enabling a response that accounted for the protection and preservation of sensitive cultural sites and resources. During initial phases of the response while touring the Incident Command Post, response sites, and staging areas, Tribal government representatives articulated concerns about response methods used in and around culturally sensitive sites. Early on May 20th, the UC integrated Tribal government representatives into the response structure.

The Chumash Nation provided representatives of the Santa Ynez Band, the Barbareno Band, the Coastal Band including the Owl Clan, and the Barbareno Ventureno Band of Mission Indians. Tribal representatives integrated with field responders through Cultural and Historical Monitoring Teams within the Operations Section, and applied their capabilities and competencies to ensure alignment with the National Historic Preservation Act by identifying culturally sensitive sites and ensuring response techniques preserved those sites.

Cultural and Historical Monitoring representatives received modified Hazardous Waste Operations and Emergency Response training that allowed them to observe on-scene operations occurring in and around sites designated as culturally sensitive. They supported teams that participated in shoreline cleanup and assessment operations affecting the culturally sensitive sites along the coast, to include the cliff area, as well as inland locations. Their guidance and direction to assessment and cleanup teams enabled the protection and preservation of cultural resources, and their overall integration with the response provided a holistic view of cultural sensitivities that must be acknowledged by any UC.

LESSONS LEARNED/PROMISING PRACTICES

a. Area Contingency Plans may not identify all culturally sensitive sites and may only provide limited guidance on how to perform response operations in and around culturally sensitive sites.

b. Tribal governments can optimize their participation by integrating with the Operations Section and Planning Section.

RECOMMENDATIONS

a. Engage Tribal governments and integrate their lessons and recommendations in the Los Angeles-Long Beach Area Contingency Plan.

b. Develop a response model where Tribal government participation is recognized explicitly.

7. Continuous US Coast Guard legal support

OBSERVATION

Continuous US Coast Guard District Eleven legal support was central to negotiating through sensitive issues with attorneys from other agencies.

DISCUSSION

Multiple agencies from all tiers of government provided on-site legal assistance. Access to continuous US Coast Guard legal assistance enabled the Federal On-Scene Coordinator (FOSC) to make more informed decisions and support partner agencies. The decision to transition on-site legal support to remote support enabled the Unified Command (UC) to address sensitive issues in a manner that did not limit interactions between agencies and organizations. The District Eleven legal staff in Alameda, California, provided continuous advice and guidance to the FOSC.

LESSONS LEARNED/PROMISING PRACTICES

a. Legal support is absolutely necessary during complex incident response that involves investigation-sensitive issues.

b. On-site legal support during initial response is helpful while negotiating through circumstances of who should be represented in the UC, for example, during multi-regional response.

c. Continuous legal support provided the desired continuity needed to maintain incident awareness and relations within the community of legal service providers.

d. Attorneys from US Coast Guard District Eleven shifted from the ICP to an office within the area that provided better connectivity and legal resources. The benefits of remote legal support outweighed the benefits of on-site legal support.

e. District Eleven attorneys aided the FOSC in resolving a number of legal and policy issues by collaborating with attorneys from US Environmental Protection Agency, California Department of Fish and Wildlife/Office of Spill Prevention and Response, and US Department of Justice.

RECOMMENDATIONS

a. Assign an attorney who can commit for the duration of a response.

b. Balance the incident-specific trade-offs of having on-site legal support versus remote support.

c. US Coast Guard attorneys should take the leadership role to establish a managed approach at coordinating broader legal community concerns and objectives, and to negotiate workable solutions and/or compromises in light of potential conflicts.

8. Assistant Liaison Officers

OBSERVATION

The US Coast Guard Incident Management Handbook (IMH) defines an incident Liaison Officer as one who serves as a conduit of information and assistance between organizations. During initial phases of a response it is likely that each participating agency will assign their own Liaison Officer to coordinate with response participants and stakeholders. Although beneficial to have liaison staff capacity, multiple liaison officers may cause duplication of effort.

DISCUSSION

The US Coast Guard IMH suggests that one Liaison Officer will be assigned to an incident and that complex incidents may require one or more Assistant Liaison Officers. Assistant Liaison Officers were assigned during the Refugio Beach oil spill specifically to engage elected officials, non-governmental organizations, and community leaders to facilitate their participation with the response structure, and were labeled as Assistant Liaison Officer for External Affairs. US Coast Guard Assistant Liaison Officers for External Affairs worked collaboratively with external affairs professionals from California Department of Fish and Wildlife/Office of Spill Prevention and Response (OSPR) to engage with local political offices, non-governmental organizations, and community leaders. The Assistant Liaison Officer for External Affairs provided an information-sharing platform that provided mutual benefits as community concerns, desires, and goals were communicated in more timely ways that enabled the Unified Command to take action.

LESSONS LEARNED/PROMISING PRACTICES

a. External Affairs is a critical component of oil spill response that seeks to align communication, coordination, and collaboration with elected officials, non-governmental organizations, and community leaders.

b. Although establishing an Assistant Liaison Officer for External Affairs during initial response will benefit relationships and enable integration of external affairs stakeholders into the response structure, establishing those connections during preparedness activities and processes optimizes the investment.

c. The Assistant Liaison Officer for External Affairs requires authentic and genuine interpersonal skills to build a foundation of trust with local elected officials, non-governmental organizations, and community leaders.

d. Identification and relationship-building with non-governmental organizations benefits response operations.

RECOMMENDATIONS

a. Extend invitations to local political offices and their supporting staffs to attend Area Maritime Security Committee, Area Committee, and Harbor Safety Committee meetings.

b. Establish long-lasting communication with appropriate local, state, and Tribal government officials not normally engaged during oil spill response to align opportunities for participation as part of the preparedness and response structure and in alignment with the National Oil and Hazardous Substances Pollution Contingency Plan.

c. Update the Los Angeles-Long Beach Area Contingency Plan to reflect the roles of local, state, and Tribal government officials.

d. Continue to partner with OSPR to explore relationship-building opportunities with the non-governmental and stakeholder communities during planning and preparedness activities and processes.

e. Present an update to the US Coast Guard IMH that includes greater specificity on Assistant Liaison Officer roles.

9. Hosting agency executives without interrupting response operations

OBSERVATION

Enable agency executive visits by assigning an Assistant Liaison Officer for Special Visits.

DISCUSSION

Within the first three-weeks of the response, a variety of agency executives and federal, state, and local elected officials visited the Unified Command (UC) for meetings, briefing, and tours of the Incident Command Post (ICP) and of response operations occurring along the shoreline.

Although ICP and operations area tours were similar, briefings were dynamic and featured a spread of different briefing requirements and spokespersons. In general, briefing topics included general situational awareness, on-going operations, notifications and response chronology, investigation status, response limitations and constraints, fundamentals of the National Oil and Hazardous Substances Pollution Contingency Plan and of oil spill response techniques, decision rationale, and future plans. Spokespersons who delivered briefings, presentations, and who guided tours were identified based on subject matter expertise or position within the UC.

The UC hoped the outcome of these collaborations would help to develop a foundation of trust and to provide a better understanding of the response. Though frequent, the collaborations had minimal impact to field operations or ICP functionality.

LESSONS LEARNED/PROMISING PRACTICES

a. Assigning an Assistant Liaison Officer for Special Visits to coordinate visits, align expectations, and meet needs was central to ensuring a productive and meaningful exchange.

b. Integrating agency executive visits with the meeting schedule provided more efficient schedule and meeting management.

c. Response leaders felt they developed more trust over time with agency executives and elected officials through tours and briefings.

RECOMMENDATIONS

a. Invest in Liaison Officer training and do this jointly with OSPR.

b. Identify District Eleven External Affairs resources within the Los Angeles-Long Beach Area Contingency Plan to support agency executive visit objectives.

c. Maintain communications with those who visited the ICP for tours and briefings to secure the trust and evolve relationships.

d. Present an update to the US Coast Guard Incident Management Handbook that includes greater specificity on Assistant Liaison Officer roles.

10. Community public participation during oil spill response

OBSERVATION

Public participation will occur if the public perceives gaps or delays in the coordinated multi-agency response along contaminated shorelines.

DISCUSSION

Public participation during oil spill response will occur whether it is managed or not. The public brings resources and commitment, and a UC must honor that. Demand for public participation materialized within the first operational period of the Refugio Beach oil spill. As California Department of Fish and Wildlife/Office of Spill Prevention and Response (OSPR) led consultations on the types of roles within which a variety of community members could serve, a number of local citizens self-deployed with resources including hand tools and buckets to remove oil from beaches. A large retailer provided the five gallon buckets free to citizens committed to removing oil from affected shorelines. The community response likely resulted from the perception of a slow and/or inadequate response given the presence of oil on shorelines and no response personnel on-scene at the time.

Whereas the National Oil and Hazardous Substances Pollution Contingency Plan provides the federal On-Scene Coordinator authority to utilize volunteers in certain circumstances and in defined ways, the US Coast Guard generally defers to state organizations and designated local organizations to implement volunteer activities. The State of California has mechanisms in place that accommodate the use of certain types of volunteers; namely, those affiliated with one

of the Oiled Wildlife Care Network's member organizations or those affiliated with Community Emergency Response Teams, California Department of Fish and Wildlife Natural Resource Volunteers, and the California Conservation Corps. Volunteers affiliated with those groups enter certain agreements that formalize their participation, provide for liability coverage, and that require them to receive a level or levels of safety and role-specific training well in advance of a deployment.

Managing community members during the Refugio Beach oil spill presented a host of other challenges. Self-deployed community members are generally not affiliated with a recognized volunteer group, have not received any level of required safety training, and do not share the same model of public participation. To accommodate community members, the Los Angeles-Long Beach Area Contingency Plan's Non-Wildlife Volunteer Plan was activated. This plan provides guidance on how to safely integrate community members within the response structure to support oil spill response activities. Given OSPR's volunteer management capability, OSPR assumed responsibility and liability for the management of all community members throughout the response while maintaining consistency with guidance in the Los Angeles-Long Beach Area Contingency Plan's Non-Wildlife Volunteer Plan.

LESSONS LEARNED/PROMISING PRACTICES

a. OSPR has superior capability and capacity related to volunteer management.

b. During incidents involving the management of community members, the US Coast Guard should seek assistance from local governments or state agencies that have authority to activate their emergency volunteer management system.

c. Engaging community groups not normally engaged during oil spill response is essential to help illuminate their desires to support oil spill response, as well as to illuminate the capabilities they bring. An understanding of those features may provide better and safer ways through which to apply their effort, and for them to understand the limitations associated with the use of volunteers during oil spill response.

RECOMMENDATIONS

a. The Los Angeles-Long Beach Area Committee should seek greater public participation within the area committee process; namely, from non-governmental organizations involved during the Refugio Beach oil spill.

b. The Los Angeles-Long Beach Area Committee should leverage lessons learned from volunteer engagement during the Motor Vessel COSCO BUSAN oil spill, the Deepwater Horizon oil spill, and the Texas City Y oil spill, and apply appropriate lessons to build a more capable Non-Wildlife Volunteer Plan within the Los Angeles-Long Beach Area Contingency Plan.

11. Joint Information Center (JIC) functionality and management

OBSERVATION

The presence of multiple Public Information Officers (PIO) and the limited experience and frequent rotations of JIC personnel delayed the coordinated release of public information, and stifled the assignment of duties according to the NRT JIC model.

DISCUSSION

The initial response featured PIOs from numerous agencies and organizations speaking to parochial concerns and not necessarily about the response as a whole. The Unified Command (UC) established a JIC to consolidate public affairs capability across agencies and the Responsible Party (RP). However, as the JIC was established and roles were assigned to each PIO it became apparent that some PIOs had neither depth of experience nor sufficient Incident Command System training.

The UC assigned on a rotating basis experienced public affairs personnel from the US Coast Guard Public Information Assist Team (PIAT), US Environmental Protection Agency, and California Department of Fish and Wildlife/Office of Spill Prevention and Response (OSPR) to serve as JIC Managers. Rotating JIC Managers provided a more equitable workload ensuring each agency and the RP could optimize their capability. Additionally, this enable experienced public affairs professionals to work alongside and coach those with less experience.

Though JIC functionality improved, frequent unannounced personnel rotations challenged JIC staffing and impacted relationships with media outlets. Public affairs staff would mobilize, receive position training and area familiarization, and then never see reassignment and instead demobilize. To improve public affairs relations in light of frequent JIC personnel turnover, the UC formalized regular helicopter tours of the area for members of the media and offered access to the Incident Command Post (ICP) to enable transparency and awareness of response operations from a different though complementary perspective.

LESSONS LEARNED/PROMISING PRACTICES

a. Use public affairs capability from US Coast Guard District Eleven, US Coast Guard Pacific Area, PIAT, EPA, and OSPR and embed experienced public affairs professionals throughout the JIC to serve in both their professional capacity and also to coach less experienced public affairs practitioners.

b. Avoid frequent rotations of public affairs/JIC staff and encourage reassignment at a later date instead of demobilization.

c. Enable media overflights and ICP tours.

d. In light of coordinating with multiple PIOs from numerous agencies, mount a shared email account, for example, Gmail or similar platform.

RECOMMENDATIONS

a. During response, develop a JIC billet map that identifies JIC positions, projects each person's duration on-scene within a particular position, and identifies in advance the experience and training requirements of their relief.

b. The JIC Manager should schedule time for ICP tours and for media to observe, for example, a planning meeting.

c. Scheduled overflights should consider space requirements to host media ride-alongs. If media cannot ride-along, then the PIO should schedule flights specifically for media relations.

d. Design a strategy within the Los Angeles-Long Beach Area Contingency Plan that provides for an incident-specific shared email account between JIC and PIO staff.

e. Articulate within the Los Angeles-Long Beach Area Contingency Plan all forms of public affairs support from federal, state, and local agencies, as well as non-governmental organizations, and the methods through which to request and apply those resources.

12. Scalable public information and outreach plan template

OBSERVATION

The absence of a pre-existing public information management framework and plan exacerbates public information management challenges during initial response phases despite the presence of proactive public information staff.

DISCUSSION

Timely and effective public communication is essential and must occur through a suitable public information system that achieves rapid and far-reaching distribution. Achieving early and accurate public information requires a pre-existing framework that defines the structure, duties, and responsibilities of public information staff and that enables unified public information releases. Response organizations may consider use of social media outlets and open-house events as valuable outreach tools and resources in addition to traditional media strategies to reach a broader media market.

Unified Command (UC) objectives directed the Joint Information Center (JIC) to conduct frequent and transparent public communications. To enable timely public information objectives, the JIC co-located with the Incident Command Post (ICP), and was structured in alignment with the National Response Team JIC model. The JIC consisted of representatives from the US Coast Guard District Eleven, Public Information Assist Team (PIAT), US Environmental Protection Agency (EPA), California Department of Fish and Wildlife/Office of Spill Prevention and Response (OSPR), Santa Barbara County, the cities of Santa Barbara and of Goleta, and the Responsible Party (RP).

The JIC's public information plan enabled frequent communication through traditional media. The model of public information conveyance, though, did not fully achieve public desires for

more expedited release of incident information given the information clearing process through the networked-hierarchy of the UC. The UC directed the JIC to enable more direct interaction with community groups and citizens through an incident-specific website and an open-house event after noting that community groups and citizens used social media as a means through which to express concerns and desires for incident information, as well as to orchestrate public events including protests and rallies.

The website (www.refugioresponse.com) featured photos, press releases, incident status updates, informational articles, community announcements, and provided a forum for community feedback. The open-house event was planned in collaboration with 19 community leaders to ensure the event met the expectations of community groups and citizens. In advance of the open-house event, an announcement was posted to the website and provided readers the option of scanning a bar code with a Smartphone to text questions and concerns to be addressed during the event. The three hour open-house event at the Elks Lodge in Santa Barbara, California, on May 30th, hosted 180 citizens, helped to resolve community group and citizen concerns, and provided a different level of insight to oil spill response on an interactive and interpersonal level.

LESSONS LEARNED/PROMISING PRACTICES

a. A scalable public information management plan template should contain strategies for initiating rapid communications through both traditional media outlets and non-traditional social media outlets.

b. The public information management plan template should also contain the steps required to plan and implement open-house events, so community groups and citizens can simultaneously voice their concerns, learn more about an incident, and so leadership can take back concerns to inform response plans.

c. UCs with or without an RP should consider hosting open-house events during early phases of a response. Making such an event an option for the community helps to enable transparency, address community group and citizen concerns, and provide a forum for locals to provide local knowledge and expertise.

RECOMMENDATIONS

a. Regional Response Team (RRT) IX should facilitate collaboration between US Coast Guard District Eleven and OSPR to develop a statewide strategy to address public information and liaison functions.

b. Outcomes of the statewide strategy can be forwarded from RRT IX to the area committees. An outcome should include a scalable public information management plan template that provides initial public information staff a viable approach to organizing a public information function that includes addressing all governmental and non-governmental stakeholders while leveraging a variety of traditional and non-traditional communications tools.

c. The Los Angeles-Long Beach Area Committee should engage non-government organizations

on how to best communicate with community groups and citizens during both planning and response activities and processes.

d. The Los Angeles-Long Beach Area Committee should explore ways to template open-house events and memorialize plans and task lists in the Area Contingency Plan. RRT IX may consider exploring the same concept for the Region IX Regional Contingency Plan. PIAT may consider providing a scalable national template to assist Area Committees nationwide.

e. The Sector Los Angeles-Long Beach Public Affairs Officer will communicate to partner agencies and organizations available public information officer training opportunities.

f. Sector Los Angeles-Long Beach may consider establishing a workgroup comprised of local public information officials.

g. Delegate incident information clearance and release authority to a Deputy Incident Commander to enable expediency.

13. Early initial UC media briefing

OBSERVATION

The first press briefing featuring the Unified Command (UC) was scheduled early during the initial phases of response when information was uncertain and incomplete given a rapidly evolving situational picture. Despite the information challenges, the first press briefing was especially important as it provided a necessary first glimpse of a unified effort to address a complex response.

DISCUSSION

Scheduling a press briefing that preceded the first press release worked to the benefit of providing maximum disclosure of incident information with minimum delay.

LESSONS LEARNED/PROMISING PRACTICES

a. Convene the first press briefing at the earliest opportunity while recognizing uncertainty and incomplete information.

RECOMMENDATIONS

a. US Coast Guard Incident Commanders (ICs) supporting any kind of mission need to prepare themselves to conduct a short press briefing amid the chaos of initial response. A joint press briefing is preferred, in which case agency ICs should train to this effect and be prepared to confidently state that information is limited, that there is much uncertainty, and that agencies are responding.

14. Applied Response Technology (ART) Technical Specialists (THSP)

OBSERVATION

The response was of sufficient magnitude to sustain expertise within the ART THSP position given the volume of requests to vet ARTs and other response technologies for alternate cleanup methods.

DISCUSSION

The Unified Command (UC) did not entertain the use of dispersants or in-situ burning because ART-use thresholds were not met. ART THSPs vetted nearly 40 ART products presented by recognized oil spill response industries, as well as concerned and entrepreneurial community groups and citizens. The ART THSPs applied a vetting methodology that enabled the UC to explore novel methods of oil removal and recovery.

Numerous ARTs were tested and evaluated, but the most significant solution found was the application of dry ice as an oil cleanup technology used on large rock formations, as well as the use of a "spider excavator" designed to access elevated cliff faces without causing unintended damages. Both technologies met stated goals to include not causing additional environmental harm.

LESSONS LEARNED/PROMISING PRACTICES

a. Leverage ART professionals through the Regional Response Team (RRT) or build ART capability within the RRT if it does not already exist.

b. Consider placing in the Operations Section an ART Field Observer from the Planning Section to validate operational needs, vet ARTs and methods, and implement ART solutions.

c. Consider lessons learned from previous incidents and reassess the design of an ART in-situ vetting methodology to determine the appropriateness and efficacy of proposed ART.

RECOMMENDATIONS

a. Sector Los Angeles-Long Beach will continue to leverage RRT IX ART THSPs into drills and exercises.

b. RRT IX should encourage the National Response Team to adapt a vetting methodology designed to conduct in-situ assessment of ARTs presented by the spill response community, as well as concerned and entrepreneurial community groups and citizens.

c. Integrate use of the spider excavator and dry ice techniques within the ART section of the Region IX Regional Contingency Plan.

15. At-sea logistics support for oil recovery vessels

OBSERVATION

Offshore oil recovery vessels required an 80 nautical mile round-trip to a suitable transfer facility to offload recovered oil-water mixture.

DISCUSSION

Port characteristics and infrastructure along the Santa Barbara coast are not equipped for large vessel offloading. Response vessels assigned to recover oil offshore traveled 40 nautical miles one-way to the nearest transfer facility at the Port of Hueneme. Port Hueneme was the only transfer facility in proximity to the spill that could safely handle the size and draft of the response vessels for offloading recovered oil-water mixture to temporary storage and disposal trucks. In moderate seas and weather conditions, response vessels were in transit for five hours during the operational period. To avoid the five hour one-way transit for other logistical needs, a work barge was assigned within the spill area as a platform to provide light equipment decontamination and boom repair, but did not support at-sea lightering of recovered oil-water mixture.

LESSONS LEARNED/PROMISING PRACTICES

a. Offshore oil recovery in logistics-limited regions will require high-volume temporary storage within the area of the spill.

RECOMMENDATIONS

a. Determine and meet requirements that allow at-sea lightering of recovered oil-water mixture to receiving barges instead of taking response vessels out-of-service for prolonged periods for transit to adequate facilities.

16. Resolving operational limitations and constraints

OBSERVATION

A culturally sensitive site containing hazardous geography required innovative approaches to delivering acceptable cleanup techniques.

DISCUSSION

The path of discharge involved a culturally sensitive site on a nearly vertical cliff face characterized by porous, fractured, and weathered sandstone with coastal scrub and dense vegetation. Prior to conducting oil removal operations it was necessary to first engage representatives from Tribal governments, safety specialists, and Environmental Unit professionals to articulate primary concerns, develop mitigating solutions, and identify appropriate cleanup technologies.

Representatives from Tribal governments served as Cultural Monitors and assessed various response methods to select technologies and techniques that maximized oil removal and minimized unintended damages to culturally sensitive sites, including the cliff face. Mechanical removal with heavy equipment was not practical for a variety of reasons to include

safety hazards and the limited ability to mitigate unintended damages to habitat. Deploying crews was not practical either as no one was dual-qualified in oil spill response and technical climbing/rappelling. Natural weathering was unacceptable given the prolonged presence of oil in a culturally and ecologically sensitive location.

The Unified Command tasked responders to leverage their network and source possible options used to remove oil from the cliff without damaging the culturally sensitive site, without accelerating erosion, and without presenting undue risk to responders and the environment. Responders sourced a light duty "spider excavator" that manipulated itself in a climbing fashion without damaging habitat to gently remove oil. Cultural Monitors and site safety specialists determined the response method did not present risks to cultural sensitivities or unduly hazard responders.

LESSONS LEARNED/PROMISING PRACTICES

a. Access to a network of professionals and other specialists is central to defining the extent of a problem and for sourcing an appropriate solution.

RECOMMENDATIONS

a. Maintain and develop relations with Cultural Monitors from Tribal governments to build their capability and competencies into the Los Angeles-Long Beach Area Contingency Plan.

b. Where Cultural Monitors from Tribal governments find sensitive sites in the Los Angeles-Long Beach Area Contingency Plan, cross-reference Geographic Response Plans and reconsider response methods in and around those locations.

c. Regional Response Team IX might consider exploring not just traditional ART, but other new/emerging technologies similar to the spider excavator.

17. Establishing and managing multiple safety zones

OBSERVATION

Complex, multi-regional response will require safety zones across inland and coastal areas.

DISCUSSION

The Refugio Beach oil spill, given its multi-regional characteristic, required numerous safety zones managed by federal, state, and local agencies with law and/or public safety enforcement jurisdiction and authority. Safety zones were established upon a US navigable waterway, federal airspace, a federal highway, a state fishery, two railroad rights-of-way, two state beaches, and around physical infrastructure.

US Coast Guard Sector Los Angeles-Long Beach implemented a temporary safety zone that restricted marine traffic upon navigable waters affected by the spill. The Federal Aviation Administration issued a temporary flight restriction over affected inland and coastal areas. California Department of Transportation (Caltrans) facilitated lane closures and traffic management of the southbound number two lane of US Highway Route 101 to enable inland

spill site access and egress by site workers and heavy equipment. Given the site's proximity to a Class I railroad used by Amtrak and Union Pacific Railroad, rail service providers diverted freight and passenger rail traffic to other rights-of-way or altered transit times during periods of non-operation at the spill site. California Department of Fish and Wildlife issued a fishery closure around state waters affected by the oil spill, and California State Parks closed Refugio State Beach and El Capitan State Beach to visitors and prohibited camping at either beach given the presence of spilled oil and spill response equipment.

Santa Barbara County Sheriff's Office provided a safety and security presence at the Incident Command Post where organized protests and other demonstrations occurred. Santa Barbara County Sheriff's Office also provided a safety and security presence at staging areas at Refugio Beach State and El Capitan State Beach.

LESSONS LEARNED/PROMISING PRACTICES

a. Multi-regional response requires numerous forms of safety and security requirements that account for both inland and coastal needs.

b. Using law enforcement authorities across each tier of government is essential to providing comprehensive safety and security for the public, for responders, and for property both public and private.

RECOMMENDATIONS

a. The Los Angeles-Long Beach Area Contingency Plan should contain a section listing all possible safety and security zones and related requirements during oil spill response.

18. Incident Command Post (ICP) requirements and transitions

OBSERVATION

Incident complexity dictates the capability and capacity of an ICP.

DISCUSSION

The initial ICP within the first twelve hours of the response was at Refugio Beach State Park. This field level ICP lacked the needed infrastructure to support the growing response and compelled the UC to seek appropriate accommodations. The Santa Barbara County Emergency Operations Center (EOC) offered the UC the use of its facility to support over 200 first responders. The Unified Command (UC) understood the EOC as an ICP was a temporary accommodation, as Santa Barbara County required the EOC to conduct routine operations, and as incident complexity grew, so did the capability and capacity requirements of the ICP. The UC identified a vacant facility adjacent to the airport that could accommodate more ICP staff as well as incident communication and technology requirements.

The vacant facility was contracted by the Responsible Party (RP) and called "ICP Goleta". ICP Goleta was co-located with Santa Barbara County's medium-size airport and in proximity to US Highway Route 101. Proximity to the airport enabled timely shipment of oil and wildlife samples to analytic facilities, and afforded ICP personnel and VIPs rapid access to contracted

aircraft for over flights. As incident complexity diminished and operations scaled down, the final ICP was located in a vacant lot east of Refugio State Beach, which later transitioned into a staging area for contracted response resources.

The public staged peaceable protests near each ICP that neither threatened the safety of responders nor interrupted operations. Santa Barbara County Sherriff's Office provided law enforcement presence while ensuring public safety. The RP provided contracted security at the Santa Barbara EOC and ICP Goleta to manage check-in and control access.

LESSONS LEARNED/PROMISING PRACTICES

a. Do not assume one ICP will accommodate all phases of oil spill response.

b. As part of initial response objectives, task the Logistics Section Chief to locate a contingency ICP in case incident complexity demands something more capable and with more capacity.

c. Local law enforcement may have resources to initially support a response, but should not be relied upon for long term operations.

RECOMMENDATIONS

a. The Los Angeles-Long Beach Area Committee should establish an ICP Workgroup to locate and access potential ICPs across areas covered by the Area Contingency Plan.

b. The ICP Workgroup should develop a list of potential ICPs, set ICP criteria that apply to different incident types, and assess for fit. Publish the list of ICPs and related capability/capacity within the Los Angeles-Long Beach Area Contingency Plan.

c. The Los Angeles-Long Beach Area Committee should review and validate private area security firm contact information and capability.

19. Integrating data management platforms

OBSERVATION

The speed and volume at which incident data and information becomes available will overwhelm the capacity of single-capability spreadsheets and open-action trackers.

DISCUSSION

Enormous amounts of data and information develop within the first 96 hours of a response. Though not leveraged immediately, data management professionals and technologies from the US Environmental Protection Agency, National Oceanographic and Atmospheric Administration (NOAA) and California Department of Fish and Wildlife/Office of Spill Prevention and Response (OSPR) integrated to manage information collection, storage, retrieval, and dissemination.

The NOAA Scientific Support Coordinator established the Environmental Response Management Application (ERMA) for use within the Operations and Planning Sections and

OSPR provided a geographic information system capability. Taken in aggregate, those capabilities provided interactive tools delivering real-time incident information to include response vessel locations, weather, ocean currents, and other user-required data layers, a capability central to the efficacy of the Situation Unit and overall response decision-making.

Other data and information management systems were used without integrating directly with ERMA despite ERMA's versatility. Agency and private industry systems were used to meet administrative requirements for personnel and resource cost documentation, personnel time and attendance records, and off-site resource status tracking. Such administrative support systems do not add value to ERMA as an operational awareness platform. However, Sector Los Angeles-Long Beach Command Center provided operational awareness and information management through maritime domain awareness tools that cannot integrate with other data platforms. Despite the gap in connectivity, the Unified Command provided the Sector Los Angeles-Long Beach Command Center with reporting times and information requirements that further illuminated the operational picture and informed response decision-making. Providing a linkage to the US Coast Guard District Eleven Command Center took time to formalize, which limited the District's ability to communicate up the US Coast Guard chain of command and horizontally to myriad stakeholder agencies and organizations.

An information management operating procedure ultimately defined the process through which field-scale data transitioned into decision tools, and how reports were provided to US Coast Guard command centers. The procedure was vital in light of frequent Incident Management Team personnel rotations. If multiple Incident Command Posts were established, then a more robust management network and procedure would be required.

LESSONS LEARNED/PROMISING PRACTICES

a. Integrate data management professionals and technologies as early as practicable. Do not wait for those technologies to make themselves available; instead, set objectives for them and submit formal resource requests to enable their mobilization.

b. Ensure data and information management tools are complementary to each other and not competitive.

c. Ensure reporting times, information requirements, and reporting processes are clearly articulated in ICS form 204s.

d. Assign Incident Command Post Field Observers or Situation Unit "External Reporting Technical Specialists" to collect information for distribution across the US Coast Guard and multi-agency response enterprise.

e. Define and publish an information management operating procedure to memorialize the process in light of Incident Management Team personnel rotations.

f. The use of daily ICS form 209s as an "Executive Summary" enabled information-sharing with all UC and Regional Response Team member agencies.

RECOMMENDATIONS

a. Area Committees throughout US Coast Guard District Eleven should define essential elements of information as part of the Area Contingency Plan, so data management professionals understand immediately the basic information needs of decision-makers, executive leaders, elected officials, community groups, and citizens.

b. Identify the best data management tool for oil spills and designate it as the primary method to eliminate possible future competition.

c. Provide guidance within Area Contingency Plans on how reports are generated and where the capability is sourced to staff an external reporting function.

20. Vetting research opportunities

OBSERVATION

Oil spill response appeals to the research community as a natural experiment and will compel them to seek implementation of their research designs.

DISCUSSION

The Unified Command (UC) received requests from academia and other organizations desiring to conduct research and field-testing activities. Many requests included designs that required field-scale integration during initial response phases. Universities, public agencies, and non-governmental organizations sought permission to conduct research through dive operations in offshore areas where response vessels recovered spilled oil. The US Coast Guard Research and Development Center requested to field test oil spill detection sensors on board unmanned aerial vehicles. Some non-government organizations requested the Responsible Party to fund their research designs and field-testing activities.

The UC advised research entities that while all requests would receive consideration, not all would receive permission given safety risks presented to the public, to researchers, and to responders. The UC also stated that funded research opportunities designed to assess natural resource damages were already formalized as part of the Natural Resource Damage Assessment (NRDA) process. After the first few weeks of the response, research requests diminished.

LESSONS LEARNED/PROMISING PRACTICES

a. Oil spill response offers research opportunities beyond the controlled laboratory setting.

b. Public, private, and non-governmental organizations will engage the UC with requests to conduct field-scale research and field-testing activities.

c. Requests that unduly hazard the public, researchers, and responders must be declined.

d. Research requests that serve to complement the NRDA process should be considered by natural resource trustee agencies, but are not likely to receive permission.

RECOMMENDATIONS

a. Regional Response Team (RRT) IX should develop an in-situ vetting process and tool that assesses research and field-testing requests.

b. Given the scale of a spill and the volume of requests, RRT IX should have a process in place that leverages RRT member agencies to provide vetting support and/or to engage the US Coast Guard Research and Development Center for a similar capability.

21. Oil sampling plan and data sharing

OBSERVATION

The presence of natural seep challenged the Federal On-Scene Coordinator's ability to assess whether the Responsible Party (RP) was meeting oil recovery and cleanup goals.

DISCUSSION

The Refugio Beach oil spill occurred within the Monterey Formation, an oil-rich geologic region spanning inland and coastal areas of central and southern California. The Monterey Formation contains a network of fissures that serve as natural conduits through which oil percolates from the subseafloor to the water column and is called natural seep. Within the water column, oil from natural seep settles onto the seafloor, becomes entrained in ocean currents, or rises to the surface. Whereas some oil forms visible sheens on the surface of the water, other oil weathers, mixes with sediment, and forms tarballs that can become entrained in ocean currents and eventually wash ashore. Conducting oil spill response within an area prone to natural seep presents the need to determine natural seep oil from oil discharged by an RP, as the Oil Pollution Act of 1990 requires an RP to remove only the oil they discharged into the environment and is not accountable for removing natural seep oil.

As the on-water response progressed and oil recovery vessels encountered fewer patches of recoverable oil, the Unified Command (UC) understood that natural seep might account for the presence of unrecoverable surface sheen and presence of tarballs. Prior to making any determination, the UC assessed that the source of discharged oil was secured, that effective protection strategies were in place that prevented additional discharged oil from entering ocean waters, that oil recovery vessels no longer encountered patches of recoverable oil, and that offshore oil production platforms were not actively extracting hydrocarbons from the subseafloor. The primary oil transportation medium, the ruptured pipeline, was out of service. In light of those assessments and of observed sheen and tarballs consistent with natural seep, the UC required a mechanism, an oil-sampling plan, through which to distinguish natural seep oil from discharged oil.

The UC directed a collaborative multi-agency approach to collecting and managing oil samples. Uniquely qualified members from the US Coast Guard, California Department of Fish and Wildlife/Office of Spill Prevention and Response (OSPR), National Oceanographic and Atmospheric Administration (NOAA), and the RP's environmental contractors developed protocols enabling consistent sampling procedures and techniques, sample handling and transmittal procedures, and data and information-sharing. The sampling plan isolated authority

for sample collection and management to the US Coast Guard and OSPR. Samples collected by others required approval, which served to eliminate unsolicited samples from unauthorized sources using unknown procedures with potential to introduce sample process error and/or sample contamination.

The oil sample plan used the US Environmental Protection Agency's (EPA) Scribe software as the user-protected data and information management tool. Scribe is a software tool that supports sample data management and was developed by EPA's Emergency Response Team staff. Scribe provided a web- based and user-protected data warehousing and retrieval medium accessed only by those authorized to collect oil samples and view sample results. Samples collected during authorized activities throughout Santa Barbara, Ventura, Los Angeles, and Orange Counties were analyzed at the US Coast Guard Marine Safety Lab (MSL) where staff provided priority analysis of oil samples and delivered subject matter expertise surrounding sample analytic methodologies and interpretation of sample results. The sample results were disclosed publicly on the Refugio response website. California's Petroleum Chemistry Laboratory (PCL) also supported the UC with sample analysis technical expertise. Given the spread of sample analytic facilities, representatives from each collaborated to understand analytic processes and interpretation methodologies.

During the initial response, qualified US Coast Guard responders collected samples for comparative analysis that were subject to a non-disclosure of results order given by the US District Attorney. The management of samples taken for comparative analysis required a coordinated approach to aligning the legal community's concerns and objectives given the involvement of legal staff from US Coast Guard District Eleven, EPA, OSPR, US Department of Justice, and the US District Attorney. Non-governmental organizations and local officials throughout Southern California wanted to know if the samples matched oil taken from the ruptured pipeline. US Coast Guard District Eleven attorneys coordinated with attorneys from partner agencies on how to design a joint approach at confronting a valid question while preserving the integrity of an on-going investigation.

LESSONS LEARNED/PROMISING PRACTICES

a. Natural seep is a complicating factor that will challenge the Federal On-Scene Coordinator's determination that an RP is meeting its oil spill removal and cleanup requirements.

b. Sampling plans should designate a specific person responsible for planning and implementing oil-sampling activities, the method of sample collection, processes for splitting samples among UC organizations, and an understanding of each participating laboratory's analytic process and interpretation methodologies.

c. Public information strategies should accompany the sampling plan. The UC should make sample results available to the public and have subject matter experts available to explain the science of oil sample analysis.

RECOMMENDATIONS

a. Include in the Sample Coordinator job aid a section for evaluating and sampling natural seep sources during oil spills in known natural seep areas.

b. Responders and planners should review and update the Los Angeles-Long Beach Area Contingency Plan with offshore platform operations and the petroleum byproducts used in production.

c. Continue to evaluate professional literature on how to improve methodologies for differentiating natural seep from discharged oil.

d. When conducting response activities in areas known to contain natural seep, the UC should task the Environmental Unit with developing a sampling plan, which produces analytic results to determine whether the oil discharged contains properties that allow it to be distinguished from natural seep.

22. Managing concurrent and prolonged incidents

OBSERVATION

Concurrent incidents of prolonged duration require consideration whether to manage separately or together, and also require long-term incident support that enables the unit to sustain routine operations.

DISCUSSION

Eight days into the Refugio Beach oil spill, a separate incident occurred nearly 80 nautical miles south in Santa Monica Bay in Los Angeles County. Sector Los Angeles-Long Beach received notification from Los Angeles County Lifeguards that unusually thick tarballs were washing ashore along Manhattan, Hermosa, Redondo, and Santa Monica Beach communities. A US Coast Guard helicopter overflight confirmed an area of shoreline contained swaths of tarballs with no observable sheen offshore and no sheening from a nearby anchorage. Media interest was high given the impacted areas involved highly populated beaches, as well as the perception that tarballs could be connected with the Refugio Beach oil spill.

Initially, the Sector Los Angeles-Long Beach Deputy Commander served as the Federal On-Scene Coordinator (FOSC) and established a Unified Command (UC) with California Department of Fish and Wildlife/Office of Spill Prevention and Response (OSPR) at the lifeguard station in Manhattan Beach. Because a responsible party could not be identified, the FOSC accessed federal response funds through the Oil Spill Liability Trust Fund, activated a Basic Ordering Agreement with an Oil Spill Removal Organization, and responded in collaboration with multiple agencies including Los Angeles County Lifeguards, Los Angeles Fire Department, Los Angeles Public Health Department, Department of Beaches and Harbors, and Los Angeles County Emergency Management. The UC designated the incident as the South Bay Incident.

Sector Los Angeles-Long Beach managed two concurrent oil spill response operations while

sustaining routine unit-scale operations at the largest port complex in the United States. To enable regulatory oversight of response activities without losing awareness over routine operations, the Sector Commander integrated on a long-term basis a succession of Response Officers from the US Coast Guard National Strike Force who were designated as incident-specific FOSCs. The incident-specific FOSCs for Refugio Beach and South Bay served on behalf of the Sector Commander to oversee oil spill response operations.

LESSONS LEARNED/PROMISING PRACTICES

a. Concurrent incidents require an assessment to determine whether to manage separately or together. Assessment criteria include geographic distances between the spill site and existing ICP, access to oil spill response resources, ability of the ICP to accommodate two incidents, level of media and stakeholder attention, and extent of oil impacts.

b. Response Officers from the National Strike Force provided continuous regulatory oversight and leadership for the Sector Commander during two simultaneous incidents.

RECOMMENDATIONS

a. Leverage the US Coast Guard National Strike Force for an incident-specific FOSC when confronted by multiple concurrent incidents of prolonged duration.

b. Have available within the Region IX Regional Contingency Plan a template incident-specific FOSC designation letter.

PART FOUR
Incident Chronology

The incident chronology provides a snapshot of response activities. The data fields are taken from incident status summaries (ICS-209) signed by the Unified Command for most operational periods. Some of the data are cumulative and build upon each subsequent operational period.

May 19, day 1, to date

Personnel assigned to the incident command post (ICP)	136	Observed wildlife affected (birds/mammals)	0/0
Personnel assigned to support field operations	135	Recovered oil-water mix in gallons	0
Boom deployed in feet (Water/Land)	3,000/1,000	Recovered oily sand and soil in cubic yards	0
Resources assigned (Boats/Aircraft)	9/1	ICP location	Red Barn; Refugio Beach State Park

Operational Highlights:
Santa Barbara County emergency officials received a 911 call reporting a petroleum odor near Refugio State Beach and notified California Department of Fish and Wildlife/Office of Spill Prevention and Response (OSPR) and the US Coast Guard. Santa Barbara County Fire Department and US Coast Guard Marine Safety Detachment Santa Barbara personnel responded and located the source of the discharge. The Responsible Party (RP) confirmed the discharge of oil sourced from an underground pipeline. The US Coast Guard Federal On-Scene Coordinator, US Environmental Protection Agency, OSPR, Santa Barbara County, and the RP established a Unified Command while activating the Oiled Wildlife Care Network (OWCN) and soliciting for pre-trained volunteers. Contracted OSROs on-scene included Clean Seas LLC, Pacific Petroleum, and Patriot Environmental Services.

May 20, day 2, to date

Personnel assigned: ICP	276	Observed wildlife affected (birds/mammals)	0/0
Personnel assigned: field operations	349	Recovered oil-water mix in gallons	9,492
Boom deployed in feet (Water/Land)	3,000/1,000	Recovered oily sand and soil in cubic yards	91
Resources assigned (Boats/Aircraft)	18/1	ICP location	Santa Barbara (SB) County Emergency Operations Center (EOC)

Operational Highlights:
California Department of Fish and Wildlife closed 161 square miles of offshore fishing areas. Santa Barbara County offered the Emergency Operations Center as an interim ICP. The first UC meeting established a 24-hour operational period. California State Parks closed Refugio

State Beach Park and El Capitan State Beach Park and evacuated the campgrounds. Both parks established as incident staging areas. US Coast Guard personnel conducted emergency Endangered Species Act Section 7 Consultations with trustee agencies. Joint agency (USCG, OSPR, SB County) Shoreline Clean-up Assessment Teams (SCAT) assessed affected areas. SCAT teams surveyed affected shorelines and provided operational recommendations for oil removal.

May 22, day 3, to date

Personnel assigned: ICP	276	Observed wildlife affected (birds/mammals)	9/4
Personnel assigned: field operations	349	Recovered oil-water mix in gallons	9,492
Boom deployed in feet (Water/Land)	3,720/1,200	Recovered oily sand and soil in cubic yards	1,250
Resources assigned (Boats/Aircraft)	18/1	ICP location	SB EOC

Operational Highlights:
Additional response contractors to include NRC Environmental Services, Oil Mop Inc, ANCON Environmental, and Ocean Blue Environmental assist with recovery operations. The US Coast Guard established a safety zone off Refugio and El Capitan beaches.

May 24, day 5, to date

Personnel assigned: ICP	276	Observed wildlife affected (birds/mammals)	15/5
Personnel assigned: field operations	390	Recovered oil-water mix in gallons	9,492
Boom deployed in feet (Water/Land)	3,720/1,200	Recovered oily sand and soil in cubic yards	1,250
Resources assigned (Boats/Aircraft)	18/2	ICP location	SB EOC

Operational Highlights:
A modified HAZWOPER training session was held for community volunteers supporting the response. The UC requested the Federal Aviation Administration to establish a temporary flight restriction above the operational area.

May 26, day 7, to date

Personnel assigned: ICP	307	Observed wildlife affected (birds/mammals)	26/16
Personnel assigned: field operations	512	Recovered oil-water mix in gallons	10,060
Boom deployed in feet (Water/Land)	4,080/3,000	Recovered oily sand and soil in cubic yards	1,990
Resources assigned (Boats/Aircraft)	16/0	ICP location	SB EOC

May 28, day 9, to date			
Personnel assigned: ICP	307	Observed wildlife affected (birds/mammals)	38/26
Personnel assigned: field operations	512	Recovered oil-water mix in gallons	10,060
Boom deployed in feet (Water/Land)	6,000/4,080	Recovered oily sand and soil in cubic yards	2,000
Resources assigned (Boats/Aircraft)	18/2	ICP location	SB EOC
Operational Highlights: Joint agency and RP SCAT teams and Cultural Monitors continued to survey affected shorelines and provide operational recommendations for oil removal.			
May 30, day 11, to date			
Personnel assigned: ICP	307	Observed wildlife affected (birds/mammals)	57/32
Personnel assigned: field operations	879	Recovered oil-water mix in gallons	11,600
Boom deployed in feet (Water/Land)	6,000/4,080	Recovered oily sand and soil in cubic yards	3,046
Resources assigned (Boats/Aircraft)	24/0	ICP location	SB EOC
Operational Highlights: UC met with local stakeholders to discuss the status of response operations and take concerns and ideas. The UC discussed and confirmed plans with the Joint Information Center (JIC) for the open house event.			
May 31, day 12, to date			
Personnel assigned: ICP	307	Observed wildlife affected (birds/mammals)	78/52
Personnel assigned: field operations	927	Recovered oil-water mix in gallons	11,600
Boom deployed in feet (Water/Land)	6,800/4,050	Recovered oily sand and soil in cubic yards	4,743
Resources assigned (Boats/Aircraft)	24/0	ICP location	SB EOC
Operational Highlights: With JIC support, the UC hosted an open house event for the local community. Crews removed the compromised section of pipeline and installed a new segment of pipe.			

June 1, day 13, to date			
Personnel assigned: ICP	307	Observed wildlife affected (birds/mammals)	62/42
Personnel assigned: field operations	1124	Recovered oil-water mix in gallons	11,600
Boom deployed in feet (Water/Land)	6,000/4,080	Recovered oily sand and soil in cubic yards	4,743
Resources assigned (Boats/Aircraft)	24/0	ICP location	ICP Goleta
Operational Highlights: The UC transitioned the ICP from the EOC to ICP Goleta at the Santa Barbara County Municipal Airport.			
June 2, day 14, to date			
Personnel assigned: ICP	307	Observed wildlife affected (birds/mammals)	137/83
Personnel assigned: field operations	1,063	Recovered oil-water mix in gallons	11,999
Boom deployed in feet (Water/Land)	6,000/4,580	Recovered oily sand and soil in cubic yards	5,280
Resources assigned (Boats/Aircraft)	13/0	ICP location	ICP Goleta
Operational Highlights: Crews continued recovering oil and tarballs from the affected area. On-water Recovery Branch reported no visible oil on the surface. Workers ordered to cease operations during night hours due to grunion run through June 5.			
June 3, day 15, to date			
Personnel assigned: ICP	307	Observed wildlife affected (birds/mammals)	145/93
Personnel assigned: field operations	1,191	Recovered oil-water mix in gallons	11,999
Boom deployed in feet (Water/Land)	6,000/4,580	Recovered oily sand and soil in cubic yards	5,280
Resources assigned (Boats/Aircraft)	22/0	ICP location	ICP Goleta

June 5, day 17, to date			
Personnel assigned: ICP	123	Observed wildlife affected (birds/mammals)	173/100
Personnel assigned: field operations	1,082	Recovered oil-water mix in gallons	12,167
Boom deployed in feet (Water/Land)	6,000/4,580	Recovered oily sand and soil in cubic yards	5,355
Resources assigned (Boats/Aircraft)	13/0	ICP location	ICP Goleta
Operational Highlights: UC directed modified operations due to AIDS Lifecycle Event transiting through the operational area on US Highway Route 101. Heavy equipment ordered to begin removing oily soil from the culvert.			
June 7, day 18, to date			
Personnel assigned: ICP	101	Observed wildlife affected (birds/mammals)	218/131
Personnel assigned: field operations	1,154	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	5,000/1,080	Recovered oily sand and soil in cubic yards	5,835
Resources assigned (Boats/Aircraft)	3/0	ICP location	ICP Goleta
Operational Highlights: UC reported that response efforts met 44% of beach cleanup goals and demobilized nine response vessels.			
June 9, day 20, to date			
Personnel assigned: ICP	101	Observed wildlife affected (birds/mammals)	218/131
Personnel assigned: field operations	1,154	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	5,000/1,080	Recovered oily sand and soil in cubic yards	5,835
Resources assigned (Boats/Aircraft)	3/0	ICP location	ICP Goleta
Operational Highlights: UC reported that response efforts met 76% of beach cleanup goals and demobilized all local fishing vessels part of the Vessel Of Opportunity program.			

June 11, day 22, to date			
Personnel assigned: ICP	95	Observed wildlife affected (birds/mammals)	221/133
Personnel assigned: field operations	1,081	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	5,000/1,080	Recovered oily sand and soil in cubic yards	5,969
Resources assigned (Boats/Aircraft)	3/0	ICP location	ICP Goleta
Operational Highlights: Joint SCAT teams and Cultural Monitors continued to survey affected shorelines and provide operational recommendations for oil removal. OWCN released ten rehabilitated pelicans.			
June 14, day 25, to date			
Personnel assigned: ICP	127	Observed wildlife affected (birds/mammals)	222/134
Personnel assigned: field operations	1,079	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	5,000/1,080	Recovered oily sand and soil in cubic yards	6,214
Resources assigned (Boats/Aircraft)	3/0	ICP location	ICP Goleta
Operational Highlights: OWCN released seven rehabilitated pelicans. Contractors demobilized boom from environmentally sensitive areas no longer under threat from discharged oil.			
June 16, day 27, to date			
Personnel assigned: ICP	111	Observed wildlife affected (birds/mammals)	242/146
Personnel assigned: field operations	741	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	0/200	Recovered oily sand and soil in cubic yards	8,871
Resources assigned (Boats/Aircraft)	0/0	ICP location	ICP Goleta
Operational Highlights: UC reported response efforts met 91% of beach cleanup goals and demobilized on-water operations. Response vessels remain available.			

June 18, day 29, to date			
Personnel assigned: ICP	109	Observed wildlife affected (birds/mammals)	243/157
Personnel assigned: field operations	845	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	0/200	Recovered oily sand and soil in cubic yards	8,871
Resources assigned (Boats/Aircraft)	0/0	ICP location	ICP Goleta
Operational Highlights: OWCN released seven rehabilitated pelicans. Response crews continued excavating the culvert to remove oily soil. California State Parks announced El Capitan State Beach to re-open on June 26. US Coast Guard suspended the on-water safety zone.			
June 20, day 31, to date			
Personnel assigned: ICP	109	Observed wildlife affected (birds/mammals)	243/157
Personnel assigned: field operations	852	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	0/200	Recovered oily sand and soil in cubic yards	8,871
Resources assigned (Boats/Aircraft)	0/0	ICP location	ICP Goleta
Operational Highlights: Response crews continued excavating the culvert to remove oily soil.			
June 21, day 32, to date			
Personnel assigned: ICP	109	Observed wildlife affected (birds/mammals)	243/157
Personnel assigned: field operations	852	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	0/200	Recovered oily sand and soil in cubic yards	8,871
Resources assigned (Boats/Aircraft)	0/0	ICP location	ICP Goleta
Operational Highlights: OWCN released nine rehabilitated pelicans. The UC commenced a 72 hour operational period.			

June 26, day 37, to date			
Personnel assigned: ICP	104/145* (249)	Observed wildlife affected (birds/mammals)	243/157
Personnel assigned: field operations	516	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	0/0	Recovered oily sand and soil in cubic yards	8,871
Resources assigned (Boats/Aircraft)	0/0	ICP location	ICP Goleta
Operational Highlights: UC established a new operational period of 96 hours. Response contractors demobilized from El Capitan State Park. Rangers reopened the area to the public. *merged field support personnel with ICP overhead.			
June 30, day 41, to date			
Personnel assigned: ICP	195*	Observed wildlife affected (birds/mammals)	252/168
Personnel assigned: field operations	496	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	0/0	Recovered oily sand and soil in cubic yards	12,134
Resources assigned (Boats/Aircraft)	0/0	ICP location	ICP Goleta
Operational Highlights: UC and ICP Goleta demobilized. ICP transitioned to a reduced general staff at Refugio Beach State Park campground. UC agreed to reconvene as needed. *merged field support personnel with ICP overhead.			
July 9, day 52, to date			
Personnel assigned: ICP	29*	Observed wildlife affected (birds/mammals)	252/168
Personnel assigned: field operations	489	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	0/0	Recovered oily sand and soil in cubic yards	12,134
Resources assigned (Boats/Aircraft)	0/0	ICP location	Refugio Beach State Park
Operational Highlights: UC approved a 33 day operational period. Joint sampling teams completed a two-day "oil sampling blitz" removing tarballs and taking oil samples from Ventura, Santa Barbara, Los Angeles, and Orange County beaches. *merged field support personnel with ICP overhead.			

July 17, day 60, to date			
Personnel assigned: ICP	27*	Observed wildlife affected (birds/mammals)	252/168
Personnel assigned: field operations	489	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	0/0	Recovered oily sand and soil in cubic yards	12,134
Resources assigned (Boats/Aircraft)	0/0	ICP location	Refugio Beach State Park
Operational Highlights: Response contractors demobilized from Refugio Beach State Park. Park Rangers reopen the campground and beaches to the public. *merged field support personnel with ICP overhead.			
July 29, day 72, to date			
Personnel assigned: ICP	27*	Observed wildlife affected (birds/mammals)	252/168
Personnel assigned: field operations	318	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	0/0	Recovered oily sand and soil in cubic yards	13,427
Resources assigned (Boats/Aircraft)	0/0	ICP location	Refugio Beach State Park
Operational Highlights: US Coast Guard Marine Safety Laboratory returned sample results from the "oil sampling blitz". Results indicate no match to discharged oil. The UC approved a 60 day operational period. *merged field support personnel with ICP overhead.			
August 31 - December 7, days 104-206, to date			
Personnel assigned: ICP	13*	Observed wildlife affected (birds/mammals)	267/168
Personnel assigned: field operations	78	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	0/0	Recovered oily sand and soil in cubic yards	14,061
Resources assigned (Boats/Aircraft)	0/0	ICP location	Refugio Beach State Park
Operational Highlights: UC reported that response cleanup efforts met Phase One endpoints (active clean up and gross oil removal) for most beaches. The UC developed Phase Two and Three endpoints for the remaining areas that included continued SCAT efforts, monitoring, cleanup actions, and oil sampling. December 4-7, multi-agency teams conduct sampling of oil found on Santa Barbara			

county beaches. USCG, OSPR, and contracted laboratories reported no match to discharged oil. *merged field support personnel with ICP overhead.			
January 5-26, day 254, day 104			
Personnel assigned: ICP	As needed	Observed wildlife affected (birds/mammals)	267/168
Personnel assigned: field operations	As needed	Recovered oil-water mix in gallons	14,267
Boom deployed in feet (Water/Land)	0/0	Recovered oily sand and soil in cubic yards	14,061
Resources assigned (Boats/Aircraft)	0/0	ICP location	As needed
Operational Highlights: Contracted oil spill removal organizations remained on stand-by during this period. Multi-agency SCAT surveys conducted after storms or significant wave and tidal action to determine if any re-oiling occurred. SCAT teams conducted post-storm shoreline assessment and collected oil samples for analysis January 5-8. UC reported that response cleanup efforts met all Phase Two end points. USCG, OSPR, and contracted laboratories reported no match to discharged oil.			