

SUMMARY NOTES¹
PLACES OF REFUGE WORKSHOP
FOR PACIFIC AREA CONTINGENCY PLANNERS
February 6, 2007
Executive Inn, Oakland, CA

PARTICIPANTS

Attendees included representatives from U.S. Coast Guard (USCG) District 14 (both Hawaii and Guam), all California Area Committees, the USCG Pacific Area Command, USCG Sectors San Francisco, San Diego, and LA/LB, the U.S. Department of the Interior, the Alaska Department of Environmental Conservation, the California Department of Fish & Game/OSPR, the Oregon Department of Environmental Quality, Sause Brothers Towing, the U.S. Navy, USCG Districts 11 and 13, USCG Office of Incident Management and Preparedness, NOAA, the Bay Conservation and Development Commission, Bluewater Consultants, the Alameda County Medical Center, and EPA Regions 9 and 10.

PRESENTATIONS AND DISCUSSIONS

The agenda for the Places of Refuge Workshop is provided in Attachment 1. Brief summaries of all presentations are presented below:

- By way of background, Jean Cameron, Executive Coordinator for the Pacific States/British Columbia Oil Spill Task Force - which sponsored this event in partnership with the California Coastal Commission and the USCG Pacific Area - explained that following the sinking of the *T/V Prestige* and the resulting oil spill affecting the coasts of Spain and Portugal in 2002 the International Maritime Organization (IMO) had adopted Places of Refuge Guidelines.
- In recognition that a similar incident could happen off the Pacific Coast, the Oil Spill Task Force member agencies had collaborated with the U.S. Coast Guard (USCG) Pacific Area as well as Canadian federal authorities and U.S. and Canadian stakeholders to operationalize these IMO guidelines into step-by-step decision-making guidelines. They had also developed a template for the advance collection of information regarding all potential places of refuge within a planning area, agreeing that no one place of refuge should be pre-designated since the needs of each incident would vary. This Annex and the Places of Refuge project report are both available at <http://www.oilspilltaskforce.org>.
- In early 2004, the USCG Pacific Area referred the guidelines and planning annex to all West Coast area committees to adopt into their area plans.
- Jean then provided an overview of the Pacific Area guidelines, providing background on the key concepts, definitions, jurisdictional authority issues, and the step-by-step decision-making process.
- She also noted that the Places of Refuge (POR) decision-making guidelines adopted by the Alaska RRT had since been adopted by RRT 9 for California, and that these differed slightly from the Pacific Area POR Guidelines in that they included decision-making steps for input from natural resource agency trustees.

¹ NOTE: This is a meeting summary and is not intended as a verbatim record of all presentations or comments made during the meeting.

- Ms. Cameron's PowerPoint presentation, *The Places of Refuge Area Plan Annex*, is available at http://oilspilltaskforce.org/docs/presentations/2007/cameron_presentation.pdf.

Incorporating POR Decisions into the Incident Command System; John Bauer, Spill Preparedness Section Manager, Alaska Department of Environmental Conservation

- John Bauer explained that a "Place of Refuge" (POR) needs to be considered as a "temporary location" for stabilizing a vessel and removing hazards. POR decision-making will also be influenced by the level of risk; for instance, does the vessel in question have a little leak, a large leak, or no leak?
- A POR could be in a harbor, port, natural embayment, a grounding site, or in offshore waters. He noted that Alaska's coastline has numerous natural embayments compared with the Washington, Oregon, and California coasts.
- He also stressed that Alaska has no "pre-designated" sites, only potential places of refuge (PPOR) for which relevant information is collected.
- The primary Place of Refuge decision-making players include the vessel master, vessel owner, salvors, Unified Command (UC), the oil spill response organization (OSRO), and affected resource agencies, local officials, and stakeholders.
- The POR decision-making process has become "institutionalized" into ICS in Alaska, John noted. ICS is an accepted approach for addressing salvage/pollution response situations, and most of the players are familiar with their roles and with one another.
- Decisions get made because there is a POR group focused on the task, John explained, and described the various roles of those involved as follows:
 - Unified Command:
 - Could include a local OSC if necessary;
 - Sets objectives and makes the final decision; and the
 - Liaison plays a key role in identifying, contacting, and informing stakeholders as well as gathering their input to the decision-making process.
 - The Planning Unit includes:
 - The Scientific Support Coordinator, who provides trajectories for all options; and
 - The Environmental Unit to evaluate all PPORs using the pre-inventoried data and verifying it with additional field observations, especially for seasonal factors.
 - The Operations unit will address salvage, source control and recovery, environmental protection including wildlife protection and recovery, and safety issues.
 - Logistics will manage the logistics for these efforts, as usual!
 - John explained that his experience has proven the value of a designated POR Coordinator; such a person could be designated by the Planning Chief or UC. The POR Coordinator's role is to:
 - Identify key players and give them status-updates;
 - Ensure information flows between UC, Operations, Planning, and the key stakeholders;
 - Establish a meeting schedule and designate persons to chair these meetings;
 - Provide outreach to local stakeholders; and

- Ensure that salvors are aware of the need for the UC to make the final choice of a POR.
- John also recommended a POR meeting schedule. The first of these meetings would be to evaluate the risks, fate, and effects associated with the first five choices: vessel continues on its voyage, is taken further out to sea, is scuttled at an approved location, is allowed to remain in place, or is directed to a POR. A second meeting is then needed to select the option above with the best consequences among those five options.
- An initial scoping meeting then brings Operations and Planning together to share information on the vessel status, condition, contents, a transit plan to a POR, a timeline, and a schedule for the remaining meetings. John recommended that the salvors be included in this scoping meeting, and that all participants share their agendas and concerns.
- The Operations Unit then meets to identify and rank PPORs, both those previously inventoried as well as local sites that may not have been in that inventory. Their site-selection criteria should address the vessel's seaworthiness, weather and fetch, water depth and anchoring site criteria appropriate for the vessel's size and draft, the navigation approach and piloting requirements, spill response and salvage assets, EMS and firefighting capability, and necessary port/harbor approvals.
- The PPORs acceptable from an operational perspective are then prioritized and provided to the resource agencies and stakeholders with information including why they were chosen, transit routes, escort and spill response support available, the vessel's status and seaworthiness, what salvage activities are necessary and how long the vessel will need to be in the POR, plus the weather forecast.
- Under guidance from the Planning Unit, the resource agencies and stakeholders then evaluate potential PORs based on resource protection, health and safety, and local stakeholder criteria.
- In the next step, Ops and Planning meet to compare their ranked selections. If their rankings concur, their recommendations are forwarded to UC. If they do not concur, then Planning and Operations meet and work out their concerns and requirements, come to consensus, and identify any mitigating conditions. If Planning and Operations still cannot reach consensus, then their rationales are presented to the UC, which then makes the final decision. UC documents its decisions and the rationales, and takes responsibility to communicate with the media and affected stakeholders.
- John also explained that the final POR selection may carry with it "conditions of approval" to ensure resource protection. Such conditions of approval may cover such issues as safety, discharge control, vessel stability, protection of both the transit route and the POR, and lightering of remaining product. John then reviewed various "best practices" for all of these types of conditions of approval.
- John then presented the following Job Aids to the group:
 - [A risk matrix to evaluate PPORs;](#)
 - [A form for listing POR Stakeholders;](#)
 - [A Proposed POR Evaluation worksheet;](#) and
 - [A form for documenting the UC decision.](#)
- John described the types of persons most likely to serve as stakeholders under the following categories:
 - Those with legal authority - resource agencies, local officials, and landowners - should attend the POR meetings.

- Resources users such as pilots, fishing or charter boat operators, and chambers of commerce should attend the meetings if they have information to add.
- Special interest groups should be provided information through the liaison officer. Such groups would include environmental organizations, local "friends of", and harbor safety committees or regional citizens' councils.
- Mr. Bauer's PowerPoint presentation is available at http://oilspilltaskforce.org/docs/presentations/2007/ps_bc_tf_placesofrefuge_2007feb06a.pdf.

A Case Study: the M/V Tong Cheng, LCDR Chris Curatilo, USCG Sector Honolulu

- LCDR Curatilo explained that the *M/V Tong Cheng* was a 485' Chinese-flagged dry cargo vessel transiting to Cuba with 26 crew members on board. Although it was a bulk carrier, it was transporting containers on deck and its holds contained dunnage and a variety of building materials. The #2 hold had flooded during heavy weather, and the pumps were unable to keep up; if one more hold became flooded, the vessel would probably have sunk. The master contacted the USCG Sector Honolulu on January 7th and requested a Place of Refuge. The vessel was 130 nm west of Oahu at the time, and bad weather was approaching.
- The *M/V Tong Cheng* was carrying 120,000 gallons of heavy fuel, 14,000 gallons diesel, and 8,000 gallons of lubricating oils. A light sheening was observed during an initial flyover; this later dissipated and is assumed to have come from the flooded hold.
- A Unified Command was establishing which included the USCG FOSC, the State OSC, the Honolulu Harbormaster, Customs and Border Protection, NOAA, the Shanghai Ocean Shipping Company, and an attorney for their P&I club. Other players in this incident response included the Pacific Strike Team, a USCG Incident Management Team and a Public Information Assistance Team, the USCG Salvage Engineering Response Team (SERT), and the U.S. Navy Mobile Diving Salvage Unit One
- Representatives for the ship owner were initially unable to get visas to enter the U.S.; USCG attorneys helped resolve this problem. The owners did not have a U.S. COFR for this vessel, since it was not intended to enter a U.S. port, but immediately worked to get one.
- The USCG requested that the *M/V Tong Cheng* hold 65 miles offshore as their request for refuge was processed. If the vessel sank, SAR helicopters could rescue the crew at this location and any oil spilled would have been carried south of the Hawaiian Islands by the ocean currents.
- U.S. Navy divers inspected the hull and found a 2.5' crack. The crew later reported more cracks. The divers applied temporary patches.
- There were difficulties associated with the language barrier, including differing container counts almost daily. Translators were used, but there were other factors which made this a challenging incident. For instance, there was some concern regarding unknown contents of certain containers listed on the cargo manifest, and two other Chinese cargo vessels had been traveling in a convoy with the *M/V Tong Cheng*, which was unusual behavior.
- The vessel was brought into Anchorage B and the #2 hold was dewatered into the Marine Spill Response Corporation's storage barge. This was necessary in order to reduce the vessel's draft so she could get into Kalealoa for repairs and offloading. Although there was no secure container yard in Kalealoa that could safely store the ship's cargo, it had to be removed in order to access the #2 hold and affect repairs. Since the entire process was expected to take

four to six weeks, a few other vessel operators who needed access to this port area expressed objections.

- Since U.S. regulations prohibit vessels from carrying any goods to Cuba from a U.S. port, once repaired the *M/V Tong Cheng* could not proceed to Cuba with its cargo.
- PLEASE NOTE: Since this Workshop on Feb. 6, repairs were completed and the *M/V Tong Cheng* left Kalealoo on March 17th en route to China.
- LCDR Curatilo's PowerPoint presentation is available at http://oilspilltaskforce.org/docs/presentations/2007/curatillo_presentation.pdf

U.S. Coast Guard's Places of Refuge Guidance, CDR Drew Tucci, U.S. Coast Guard Office of Incident Management and Preparedness

- CDR Tucci noted the IMO Guidelines upon which all our operational guidance is based. He also noted the related issues of Search and Rescue (SAR), Intervention on the High Seas (which requires consultation with the vessel's flag state as well as USCG COMDT approval) and Force Majeure (the response to which does not preclude the coastal state applying necessary restrictions and requirements).
- Other related issues include security concerns and safety issues, especially for the team inspecting the stricken vessel. There will also be issues regarding financial responsibility, which the USCG and many coastal states require.²
- CDR Tucci explained that the U.S. approach is to pre-survey possible Places of Refuge, not to pre-determine them. Besides the likely political costs of pre-determination and the fact that each situation varies in its needs, he explained that pre-determination could also trigger NEPA requirements.
- The Places of Refuge guidance which he's developed will be released by the USCG in the form of a Commandant Instruction. It is policy guidance, not a regulation, and should be incorporated into the planning process. The Guidance provides a policy discussion reflecting the points above. As enclosures it also provides a sample Place of Refuge checklist, a Place of Refuge Risk Assessment Job Aid, information on "Authorities, Responsibilities, and Roles during a Place of Refuge Incident", and a Marine Safety Center Rapid Salvage Survey guidance document.
- The purpose of the Checklist is to help gather all vessel information required to make a Places of Refuge decision. It has links for MSC/SERT, NPFC, ASA, etc. It also covers actions required of the vessel, the necessary notifications to trustees, and requires that the SSC run spill trajectories for the vessel's current location as well as for any potential Places of Refuge under consideration.
- The risk-based decision matrix computes risk according to the formula "Risk = Probability x Consequences," and relies on subject-matter experts and stakeholders to complete the evaluation. As explained in the introduction to the risk evaluation job aid, it is designed to independently evaluate the probability and consequences associated with each Place of Refuge option under consideration. The scores for each option are then combined to produce overall risk scores. Because different subject matter experts are involved in the different portions of the evaluation, portions of the evaluation may be done in parallel, rather than in sequence. For instance, the probability portion of the evaluation is primarily concerned with how towing,

² See COFR requirements for the West Coast states at:

http://www.oilspilltaskforce.org/docs/project_reports/CofrMatrix2.pdf

sea conditions, currents, wind, holding ground, the relative ease of conducting salvage and response operations, and other physical factors associated with a given Place of Refuge may affect the vessel. Accordingly, it is recommended that salvors, professional mariners, and persons with expertise in engineering, ship structure, and similar fields conduct this portion of the evaluation, although this is not intended to limit the participation of others.

- The consequence portion of the evaluation is primarily concerned with the expected harm to public health and safety, natural resources, and economic activity should an incident actually occur. Accordingly, public safety officials, natural resource trustees, and economic stakeholders should be included in the human health and safety, natural resource, and economic consequences portions respectively. Likewise, this is not intended to limit the participation of others.
- The weighting factors for the consequences tables have been calculated with a hierarchy which favors human health and safety over natural resources and natural resources over economic losses. The human health evaluation considers threats to the vessel crews, salvage and response personnel, and the general public. This hierarchy will not pre-determine the final decision however, because scores for all categories will be calculated and considered during the process.
- Natural Resources addressed by the matrix include Threatened and Endangered species, subsistence use and sensitive species, commercial species, recreational use species, habitats, and historic/cultural resources.
- Economic impacts evaluated in the risk matrix include maritime commerce and shipping, commercial fishing/aquaculture, marine tourism/recreational activities, and non-marine related activities.
- The Risk Matrix includes an Excel table to "do the math"; individual scores are derived for each POR option, and each consequence type. Decision-makers may then choose the lowest combined risk score, unless common sense dictates otherwise.
- At the time of this summary, CDR Tucci anticipated that the Places of Refuge Commandant Instructions would be published by the end of April.
- CDR Tucci's PowerPoint presentation is available at http://oilspilltaskforce.org/docs/presentations/2007/tucci_por_presentation.pdf

Potential Places of Refuge Prior Planning Process, Larry Iwamoto, Spill Prevention Section Manager, Alaska Department of Environmental Conservation

- Mr. Iwamoto explained that Alaska's Subarea Committees and RRT have developed and applied a comprehensive process to inventory, map, and collect data on "Potential Places of Refuge" (PPOR) in Alaska. The PPOR development process includes the following steps:
 1. A risk assessment and vessel traffic study;
 2. Identification of key stakeholders who are convened into a Work Group;
 3. Identification of potential sites in the area of concern;
 4. Selection and development of information for priority sites;
 5. Internal Work Group review;
 6. Public Comment; and
 7. Finalization and incorporation into the Subarea Plan.
 8. The PPOR information is reviewed and updated every 3-5 years as part of the regular Subarea Contingency Plan update.

- Larry then used the Prince William Sound (PWS) PPOR project as an example, noting that eight maps were developed for the risk assessment phase: Crude Oil Tanker Routes; Cruise Ship/State Ferry Traffic Routes; Frequent Fishing Vessel/Tramper Offload locations; Bulk Fuel Storage Locations (for Delivery Routes); Key Nearshore Fishing Grounds, Hatcheries, Remote Release Sites; Past Major Marine Spills; Locations of Spill Response Hubs and Depots; and Locations of Lingering Oil from Exxon Valdez.
- Other source documents included the PWS Marine Firefighting and Prevention Plan, Most Environmentally Sensitive Area (MESA) Maps, Geographic Response Strategies (GRS) for PWS, and various resource agency documents.
- Representatives of the following agencies served as Work Group members, although Larry noted that it's a good idea to invite more stakeholders than you really need in order to increase the "buy-in" for the project: U.S. Coast Guard; U.S. EPA; U.S. DOI; U.S. FWS; NOAA; U.S. Dept of Agriculture (Forest Service); PWS Response Planning Group; APSC SERVS; PWS Regional Citizens Advisory Council (RCAC); Department of Environmental Conservation; Department of Natural Resources; Department of Fish & Game; Southwest Alaska Pilots Association; Cook Inlet Regional Citizens Advisory Council; and the Chugach Alaska Corporation. Larry also stressed the importance of local knowledge in the planning process, as the local community has a wealth of information regarding tides, currents, and basic knowledge of the immediate area.
- The PPOR Work Group relies on the expertise of the local marine pilots to select the initial list of PPORs. They then reach consensus on the list of PPORs to be further developed, and each member will provide detailed information for each PPOR thus selected. Besides this input, Work Group members are expected to comment on all drafts and to provide in-kind or other resource support.
- Twenty physical and operational factors are considered for each PPOR: Maximum Vessel Size, Contact, Navigational Approach, Minimum Water Depths, Maximum Water Depths, Maximum Vessel Draft, Swing Room/Dock Face, Bottom Type, Docks/Piers, Moorings, Anchorages, Firefighting Anchorages, Grounding Sites, Prevailing Winds, Currents, Tides, Sea Conditions, Shelter from Severe Storms, Fog, and Ice.
- Larry provided copies of the PWS site assessment matrices and a key to the codes used for vessel size, swing room, bottom type, exposure, conflicting uses, ability to boom/GRS, sensitive resources, and distance to population centers. PPORs were then listed in each matrix with information on these factors as well as by an ID number and a map number, location name, and latitude and longitude. These PPORs for PWS were arranged by locations for deep draft, light draft, or shallow draft vessels, plus a list of potential grounding sites.
- His PowerPoint illustrated the maps as well as tables showing information for the twenty physical and operational factors noted above for each area map.
- Larry noted that it is always a concern whether or not to actually list cultural resource information, since the location of these sites should be protected. But there should also be a way to make the information available to qualified persons on an as-needed basis. For Alaska, the Federal and State On-Scene Coordinators feel the information is of significant value and should be included in the PPOR documents, especially when making time-critical decisions.
- He also noted that protection of fisheries and hatcheries is a major concern in Alaska.

- Larry reiterated that these are all potential places of refuge, not pre-designated places of refuge. He noted that there are always concerns regarding a "Not in My Backyard" (NIMBY) response to an incident, but pre-planning is the best way to prevent that.
- He explained that the Alaska Department of Environmental Conservation (ADEC) had funded the overall project using a contractor. The PWS RCAC provided the media blitz and also handled the public comment process, and other agencies attended meetings, reviewed draft documents and provided input. The U.S. Coast Guard provided aircraft support for aerial photos.
- Both Prince William Sound and Kodiak are huge areas, requiring quite a few maps. 16 were developed for PWS and 11 for Kodiak. Mr. Iwamoto estimated the average cost per map for PWS at \$2,000 each and \$3,200 for the Kodiak maps; the difference seems to have been that the U.S. Coast Guard provided the aerial support for PWS but not for Kodiak. Each map contains multiple PPORs, and for PWS, the 16 maps incorporated 66 PPORs, while for Kodiak, the 11 maps include a total of 97 PPORs.
- He noted that the PPOR guidance has been applied in the following drills: the PWS Tanker Drill (2004), the Southeast PREP Drill (2006), the PWS Tanker Drill (2006), and the PWS Tanker Drill (2007).
- The basic Alaska RRT PPOR guidelines have also been used in four actual incidents including the State Ferry *M/V LeConte* grounding in SE Alaska (2004); the *M/V Selendang Ayu* grounding (2004); the *T/V Seabulk Pride* incident (2006); and the *M/V Cougar Ace* incident (2006).
- Larry concluded by explaining that PPOR inventories have been completed for Prince William Sound and Kodiak, while additional work is underway to revisit and expand on the basic Cook Inlet PPORs, including the outer Kenai Coast. A PPOR project for the Aleutian Islands is also underway, with SE Alaska identified for future PPOR work.
- Larry Iwamoto's PowerPoint presentation is available at http://oilspilltaskforce.org/docs/presentations/2007/iwamoto_presentation.pdf

Open discussion: *Planning and Decision-Making issues*

- Some participants expressed concerns about the risk ranking scoring in the USCG job aid, fearing that consensus would be difficult. The U.S. Navy representative disagreed, however, stating that use of this tool would resolve all decision-making difficulties.
- The representative from Sause Brothers (tug and towing operators) asked the government decision-makers to keep in mind the salvage goals of the vessel operators.
- The question was also raised of who owns and maintains the final products; Larry Iwamoto clarified that this was the SubArea Committees in Alaska.
- Ellen Faurot Daniels of the California Coastal Commission captured the following discussion points on flip-charts:
 - Keep in mind issues of salvage, 201s, and IAPs when we talk about linkages and decision-making.
 - There are long sections of California coastline not served by large ports. As a matter of fact, many small harbors are already identified in the California Harbor and Safety Code as places of refuge (this has been around for awhile, and is not the same as our larger planning process, and does not replace it; there was even a question as to whether the H&S Code sections refer to recreational vessels only).
 - Keep Navy and other military operational areas and needs in mind during PPOR planning.

- Reference PACAREA POR Guidelines (www.oilspilltaskforce.org) or the Region 9 POR Guideline appendices for other lists of considerations for PPOR planning.
- Innocent passage and foreign vessel issues will be different than domestic, and the USCG authorities might be different.
- Regarding MEXUS/JRT connections, CDR Tucci noted that the USCG Job Aid hasn't yet been shared with Mexico. It has been shared with Canada, but Transport Canada has not yet adopted it as they are developing their own national guidelines based on the IMO guidelines. Jean Cameron also noted that the Canadians had participated in the development of the Pacific Area guidelines and were endeavoring to be consistent with that document.

Next Steps

- Ellen Faurot Daniels proposed a working subcommittee to develop a work plan and timeline for PPOR planning in California. They will decide what type of information to collect, identify possible sources, and how to utilize Area Committees and local stakeholders, and who can bring resources to the table for the process.
- Representatives from the NW Area Committee and USCG District 14 agreed to begin PPOR planning in their areas.

EDITOR'S NOTES:

A National Response Team work group is also currently drafting Places of Refuge decision-making and planning guidelines. They have used the IMO, Pacific States/BC/USCG Pacific Area, and the Alaska RRT documents as guidance. Marc Hodges of NOAA chairs the NRT workgroup assigned to this project (Marc.Hodges@noaa.gov). Once completed, their *Guidelines for Places of Refuge Decision-Making* will be available on NRT the web site at www.nrt.org

As demonstrated at this Workshop and by the NRT effort, there are now a number of tools available to help decision-makers and planners address the issue of Places of Refuge. All use the IMO guidelines as a foundation, and therefore are essentially consistent. Local Area Planners should adopt whichever Guidelines they consider best for their purposes, and proceed with the most critical first step, which is to identify Potential Places of Refuge and collect information on these PPORs in order to have that information immediately available during an emergency decision-making situation. Early involvement of local stakeholders in this process will also serve to educate them regarding the decision-making process and their access to that process. In addition, Area Planners should make ongoing efforts to brief elected officials and the media regarding the planning and decision-making process.

