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FINDING OF NO SIGNIFICANT IMPACT

WRECK REMOVAL AND DEBRIS RECOVERY AT KINGMAN REEF AND PALMYRA ATOLL NATIONAL WILDLIFE REFUGES

The U.S. Fish and Wildlife Service is proposing to restore the coral reef ecosystems of Kingman Reef and Palmyra Atoll National Wildlife Refuges (NWRs) by permanently removing three sunken vessels and their associated debris in a manner that minimizes harm to the ecosystem while maintaining a high probability of success. All reasonable and potential impacts resulting from the proposed salvage operations on protected species of marine mammals and reptiles and habitat have been considered, as have possible impacts to cultural and economic resources provided by the Palmyra Atoll and Kingman Reef NWRs.

The Environmental Assessment (EA) proposed two potential actions, a No Action alternative, which maintains the status quo, and a Preferred Action alternative, which includes three related sub-actions, each a separate salvage operation at either Kingman Reef or Palmyra Atoll National Wildlife Refuge (NWR). Each sub-action is described independently because of the differences in ecological settings between Kingman Reef and Palmyra Atoll, the varying baseline impacts of the three sunken vessels on their individual locations, and the differences in the approaches proposed to remove and recover the vessels and their associated debris.

The EA was made available for public review and comment during the open period from August 22 to September 25, 2013. The EA was posted on the Palmyra Atoll NWR web page, www.fws.gov/palmyra and a public notice of availability was sent to the local newspapers and interested parties were alerted via email. Few comments were received and have been addressed in the Final EA.

As described in detail in the EA, the Service has determined that no significant impacts are likely to result from implementing the preferred alternative for the following reasons:

- The removal of the shipwrecks from the reefs as prescribed in the EA will sustain the surrounding coral reef animal and algae communities, providing for recovery of reef habitats.
- There would be no significant negative affect to resident wildlife or threatened or endangered species or habitat by implementing shipwreck removal best management practices.

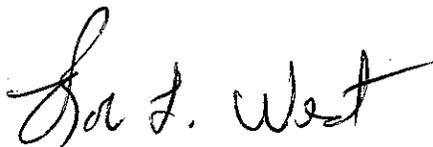
- No cultural sites would be affected by shipwreck removal actions.
- No significant effects to the demographic, economic, and social setting are expected.
- No significant effects to the wildlife-dependent public uses are expected.
- The action would contribute to the goals of the National Wildlife Refuge System by strengthening the Service's ability to provide wildlife conservation, contribute to protection and recovery of endangered species, and continue providing research opportunities.

Conclusion

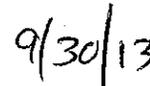
Based on review and evaluation of the information contained in the supporting references, I have determined that implementing the preferred alternative is not a major Federal action that would significantly affect the quality of the human environment, within the meaning of section 102(2)(c) of the National Environmental Policy Act of 1969, as amended. Accordingly, the Service is not required to prepare an environmental impact statement.

This Finding of No Significant Impact and supporting references are on file at the U.S Fish and Wildlife Service, Pacific Reefs National Wildlife Refuge Complex, 300 Ala Moana Blvd, rm 5-211 PO Box 50167, Honolulu Hawaii, 96850 (telephone 808-792-9560).

These documents are available to the public and can be found on the internet at:
<http://www.fws.gov/palmyraatoll/>.



Regional Chief, National Wildlife Refuge System
Portland, Oregon



Date

References: Environmental Assessment. Wreck Removal and Debris Recovery at Kingman Reef and Palmyra Atoll National Wildlife Refuges. August 2013.

ENVIRONMENTAL ASSESSMENT OF WRECK REMOVAL AND DEBRIS RECOVERY AT KINGMAN REEF AND PALMYRA ATOLL NATIONAL WILDLIFE REFUGES

Prepared for:

US Fish and Wildlife Service

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***September 28, 2013**

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Acronyms

Acronym	Definition
BMP	best management practice
CCA	crustose coralline algae
CE	categorical exclusion
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulation
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DOD	US Department of Defense
DOI	US Department of the Interior
EA	environmental assessment
EEZ	exclusive economic zone
EFH	essential fish habitat
EPA	US Environmental Protection Agency
ESA	Endangered Species Act
FR	Federal Register
F/V	fishing vessel
FWCA	Fish and Wildlife Coordination Act
GPS	global positioning system
IUCN	International Union for Conservation of Nature
IWC	International Whaling Commission
LGPLV	low-ground-pressure lifting vehicle
MLLW	mean lower low water
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NWR	National Wildlife Refuge
MMPA	Marine Mammal Protection Act
Monument	Pacific Remote Island Marine National Monument
PARC	Palmyra Atoll Research Consortium
SDTV	shallow-draft transport vessel

TNC	The Nature Conservancy
USC	US Code
USCG	US Coast Guard
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey

Executive Summary

The US Fish and Wildlife Service is proposing to restore the coral reef ecosystems of Kingman Reef and Palmyra Atoll National Wildlife Refuges (NWRs) by permanently removing three sunken vessels and their associated debris in a manner that minimizes harm to the ecosystem while maintaining a high probability of success. Coral reefs at Palmyra Atoll and Kingman Reef NWRs, within the Pacific Remote Islands Marine National Monument, are considered to be some of the most pristine coral reef environments in the world because of their relative isolation and the lack of anthropogenic inputs (e.g., coastal pollution discharges, overfishing, urban runoff). The sunken vessels have been linked to adverse physical and biogeochemical impacts on the two reef communities, and the removal of the vessels is expected to result in obvious benefits to those reef communities.

Specifically, coral in the Kingman Reef NWR has been physically abraded by a teak fishing vessel and associated debris, and iron from the debris has been linked to the proliferation of a non-native, invasive macroalga, *Derbesia tenuissima* (Kelly et al. 2012), which has overgrown and killed sensitive hard corals and crustose coralline algae at Kingman Reef.

At the Palmyra Atoll NWR, leaching iron from *F/V Hui Feng No. 1*, a sunken fishing vessel, has been linked to the proliferation of *Rhodactis howesii*, a corallimorph cnidarian that has overgrown and killed sensitive hard corals (Kelly et al. 2012; Work et al. 2008; Norström et al. 2009). Removing the shipwrecks would eliminate the source of physical impacts as well as iron from the wrecks, which are thought to be causing community-level effects. Leaving the vessels in place would result in the continued degradation of the reefs over time.

All reasonable and potential impacts resulting from the proposed salvage operations on protected species of marine mammals and reptiles have been considered as possible impacts to cultural and economic resources provided by the Palmyra Atoll and Kingman Reef NWRs. Potential impacts in the uplands of Palmyra Atoll are not expected to occur because the action would take place entirely in the marine environment. It is expected that short-term impacts caused by the operations are far outweighed by the net benefit to the biological community. Furthermore, the implementation of best management practices (BMPs) and contingency planning would minimize impacts to protected species to the maximum extent practicable. Additional factors related to specific species (e.g., frequency of site use) would further limit such impacts.

1 Introduction

1.1 REGULATORY CONSIDERATIONS

The *Ecological Assessment of Wreck Removal and Debris Recovery at Kingman Reef and Palmyra Atoll National Wildlife Refuges* has been designed to comply with requirements of the National Environmental Policy Act (NEPA) (42 USC 4321 et seq.) as well as to informally address Section 7 of the Endangered Species Act (ESA) (7 USC 136 and 16 USC 1531 et seq.) as they relate to three shipwreck salvage operations proposed by the US Fish and Wildlife Service (USFWS). The purpose of NEPA is “to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment” (40 CFR 1500.2(e)). A list of USFWS actions that typically receive categorical exclusion (CE) from further NEPA consideration is provided by USFWS (2008); this list does not include ship salvage operations or restoration actions of a similar nature. Although the proposed salvage operations are not expected to have a significant impact on any human environment and a CE was not warranted, an environmental assessment (EA) needed to be completed. Therefore, this EA identifies and assesses the direct and indirect effects on the human environment as well as cumulative impacts on that environment, as defined by the White House Council on Environmental Quality (CEQ) (40 CFR 1508).

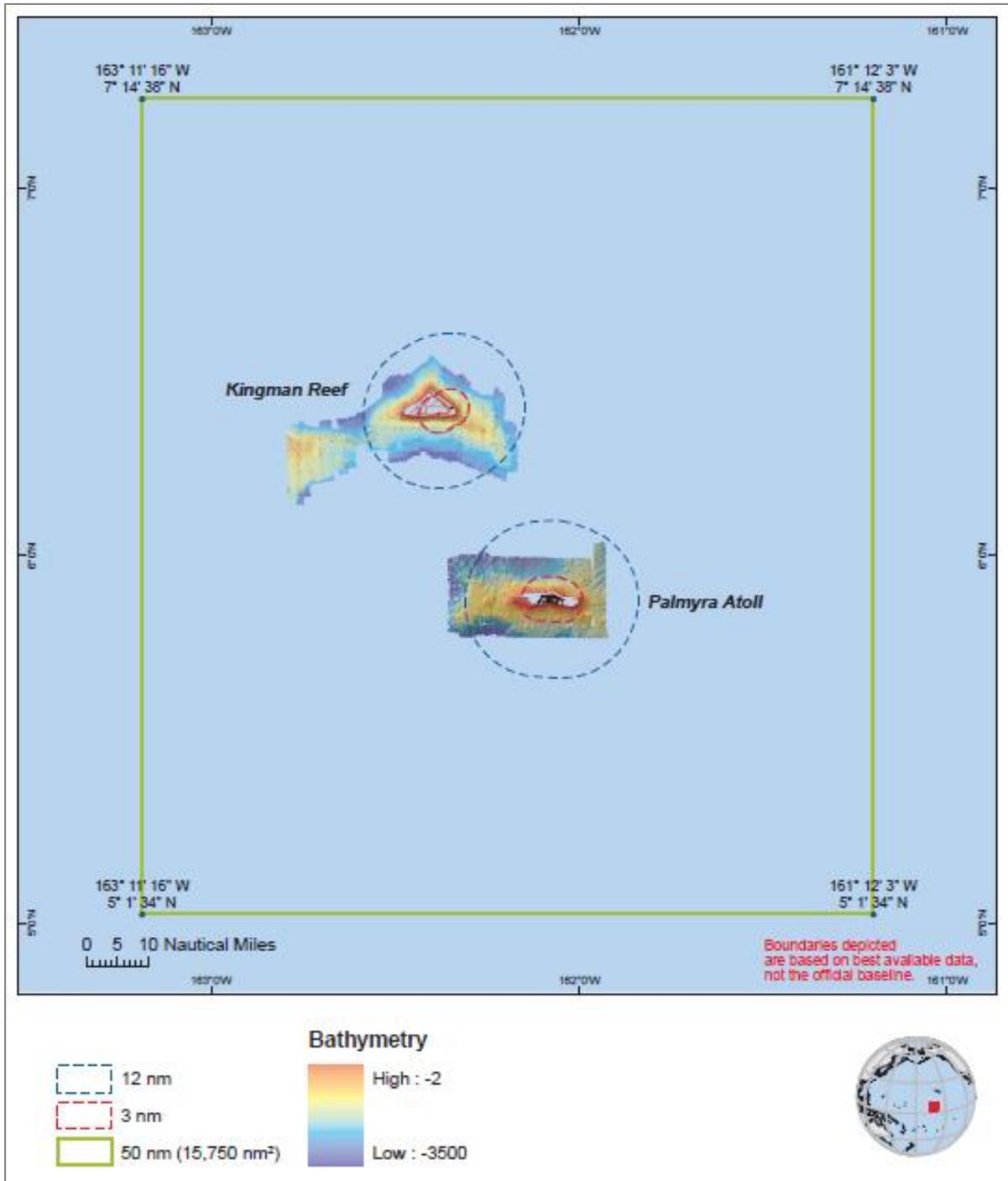
Two potential actions were assessed, a No Action alternative, which maintains the status quo, and a Preferred Action alternative, which includes three related sub-actions, each a separate salvage operation at either Kingman Reef or Palmyra Atoll National Wildlife Refuge (NWR). Each sub-action is described independently because of the differences in ecological settings between Kingman Reef and Palmyra Atoll, the varying baseline impacts of the three sunken vessels on their individual locations, and the differences in the approaches proposed to remove and recover the vessels and their associated debris.

In addition to considerations associated with NEPA, this document addresses species protected by ESA as part of an informal Section 7 consultation. The purpose of ESA is to protect federally listed species from activities that could result in “take” (i.e., harassment, physical injury, capture, impaired habitat quality, impaired reproduction, or death) or ultimately jeopardize the existence of a protected species. A comprehensive list of threatened or endangered species was provided by USFWS (and corroborated by the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NOAA Fisheries) prior to undertaking this assessment.

Species protected under the Marine Mammal Protection Act (MMPA) (16 USC 1361 et seq., as amended) and Magnuson-Stevens Fishery Conservation and Management Act

(Public Law 94-265, as amended) have been considered briefly in this EA, as was the possible degradation of water quality as defined by the Clean Water Act (CWA) (33 USC 1251 et seq., as amended).

The three proposed action areas are within the Line Islands chain of the US Minor Outlying Islands, which are outside of the jurisdiction of any state agency; therefore, the actions proposed under the Preferred Action alternative are not subject to any state regulation. On January 18, 2001, US Department of the Interior (DOI) Secretary's Order 3223 established the Kingman Reef NWR to protect the natural character, including fish, wildlife, plants, coral reef communities, and other resources of Kingman Reef and all reefs surrounding 12 nautical miles around Kingman Reef. Secretary's Order 3224 likewise established the Palmyra Atoll NWR to protect and preserve the natural character of fish, wildlife, plants, coral reef communities and other resources associated with the tidal lands, submerged lands, and waters of Palmyra Atoll out to 12 nautical miles. Pursuant to Presidential Proclamation 8336 (76 FR 18775), the Kingman Reef and Palmyra Atoll NWRs (in which the action areas are located) were made part of the Pacific Remote Islands Marine National Monument, hereafter referred to as the Monument, on January 6, 2009 (Figure 1). Secretary's Order 3284 of January 16, 2009, delegated all of the DOI management responsibility and authority for the Monument, including both Kingman Reef and Palmyra Atoll NWRs out to 50 nautical miles of mean low water to the USFWS. This broad area is far beyond and outside the proposed action areas and so is not discussed further in this EA. NOAA Fisheries also has regulatory jurisdiction over fishery-related activities beyond the 12-nautical-mile NWR boundaries to various marine species assessed in this EA (e.g., Hawaiian monk seal [*Monachus schauinslandi*]).



Source: USFWS (2013)

Figure 1. Locations of Kingman Reef and Palmyra Atoll National Wildlife Refuges

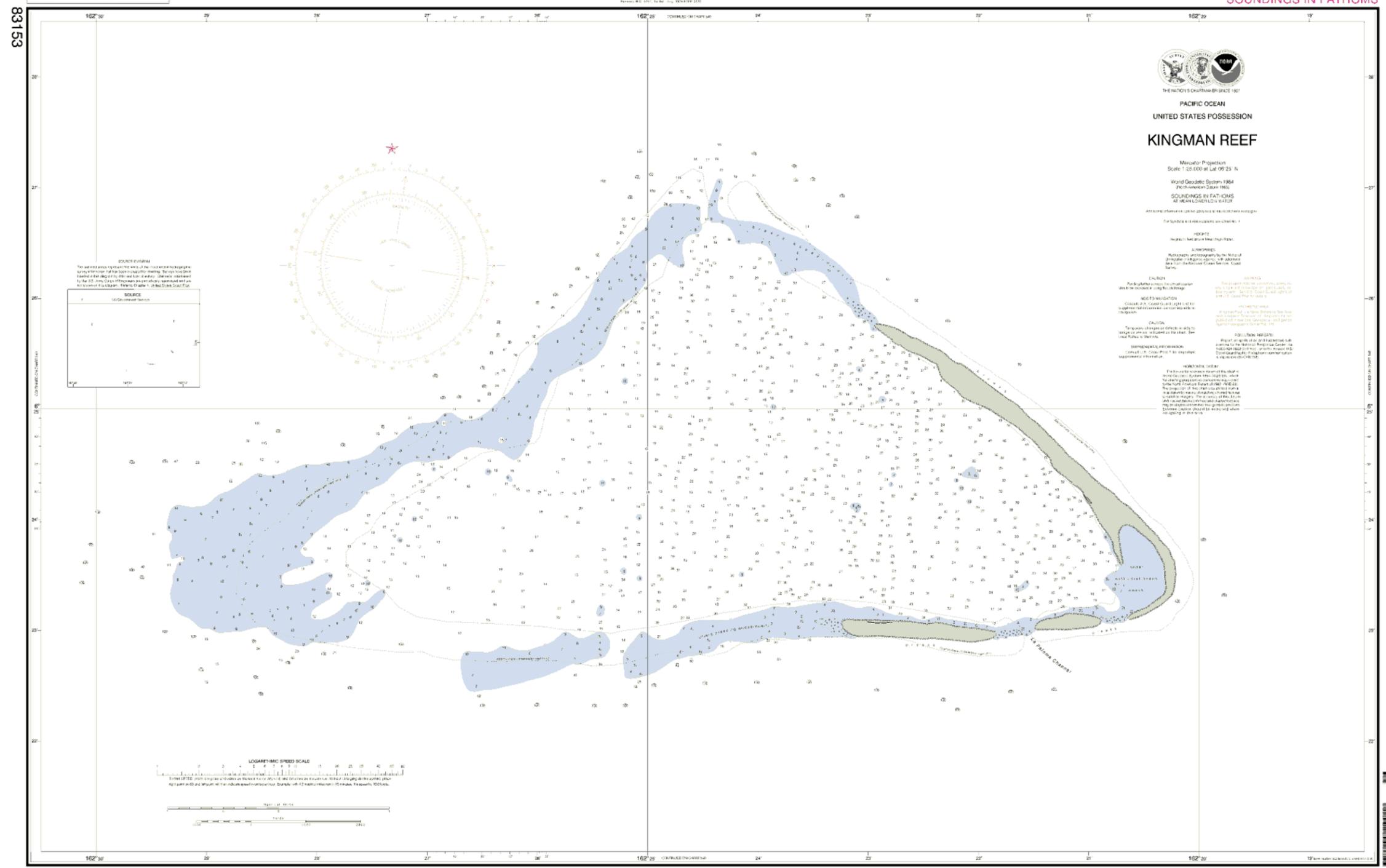
1.2 AFFECTED ENVIRONMENT

There are no permanent human residents in the vicinity of the proposed action areas. Palmyra Atoll has a very small, non-permanent human population (~20 scientists), and Kingman Reef is entirely uninhabited. Furthermore, because Kingman Reef and Palmyra Atoll were not historically inhabited by humans prior to Western contact, there are no known anthropological resources at either location.

1.2.1 Kingman Reef

Kingman Reef is a small, largely submerged equatorial landmass within the Northern Line Islands, approximately 930 nautical miles south of Hawaii and halfway between Hawaii and American Samoa (DOI 2013a). The reef is triangular in shape with a large, deep lagoon surrounded by a shallow, highly productive coral community. The entire area of the reef is approximately 1,958.01 square kilometers (Figure 2), of which only 0.01 square kilometer is emergent (USFWS 2011d). Kingman Reef is a remnant of volcanic activity that occurred between 65 and 120 million years ago (Haggerty et al. 1982; USFWS 2011c) and has since become an incredibly rich ecosystem that provides habitat to rare, endangered or threatened, and otherwise valued species of fish, invertebrates (including coral), and marine wildlife (USFWS 2011c). Kingman Reef is only 3 ft above sea level at its highest point and is frequently awash, resulting in very little upland habitat with little to no vegetation. The emergent land consists largely of dead coral and mollusk shell rubble, possibly providing only resting habitat for seabirds (DOI 2013a).

SOUNDINGS IN FATHOMS



83153

SOUNDINGS IN FATHOMS

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL COAST SERVICE
COAST SURVEY

NOTE: This chart is a reproduction of the original chart published by the U.S. Coast and Geodetic Survey. It is not to be used for navigation. The original chart is available for purchase from the U.S. Coast and Geodetic Survey. The original chart is available for purchase from the U.S. Coast and Geodetic Survey.

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Kingman Reef

83153

Source: NOAA (2008)



EA of Wreck Removal at Kingman Reef and Palmyra Atoll NWRs
*September 27, 2013
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Figure 2. Map of Kingman Reef

Kingman Reef was first recorded by Captain Edmund Fanning in 1798 and later visited by the eponymous Captain W.E. Kingman in 1853 (USFWS 2011d). It was annexed to the US in 1922 by Lorrin Thurston, and jurisdiction over the reef was assumed by the US Navy in 1934 (DOI 2013a). Kingman Reef was used as a stopover by Pan American Airlines seaplanes transiting from Hawaii to American Samoa in 1937-1938 (DOI 2013a) and by naval vessels between 1934 and 1940 (DOI 2013a), prior to development at nearby Palmyra Atoll (USFWS 2011d). In 2000, control of Kingman Reef was transferred from the US Navy to USFWS, and in 2001, the Kingman Reef NWR was created. In 2009, the NWR was added to the Monument, although USFWS maintains jurisdiction over the NWR area within 12 nautical miles of mean low water as well as the 50-nautical-mile Monument boundary. To date, there is no other record of any human use of Kingman Reef apart from scientific research.

Kingman Reef supports one of the highest biological diversities among US coral reefs, with 173 known scleractinian coral species (Maragos et al. 2008; Williams et al. 2008) and 418 known species of reef fish (Maragos et al. 2008). The benthic community at Kingman Reef is primarily composed of crustose coralline algae (CCA) and fast-growing corals, particularly *Pocillopora* spp., *Acropora* spp., *Porites lobata*, *Montipora capitata*, and *Montipora efflorescens*. A badly burned unidentified teak fishing vessel ran aground on the northeastern side of the reef, perhaps in late 2007, although the date is uncertain. The approximate coordinates of the wreck are 6.405278 north, 162.350742 west. Based on the amount of scorched wood that was present, it is speculated that the vessel caught fire many miles from the reef and was then abandoned before drifting to its current location (Palmer 2008). The remains of the vessel and associated debris continue to impact the benthic community at Kingman Reef.

Salvage operations at Kingman Reef will focus on the removal of the remaining 20-ft hull, which is perched on the emergent coral rubble spit in a high-energy environment that is subject to ocean surf, and the collection of associated debris that is scattered along the fore reef, reef crest, and back reef lagoon areas. The debris consists of wood, fiberglass, and metal. Marine debris is one of the primary threats to reef environments inasmuch as it damages reefs through the physical impact of mobile debris and abrasion (Bruckner et al. 2005). The debris will be removed from the fore reef, reef crest, and rubble spit, and a search for remaining debris will occur up to 100 ft underwater within a radius of 2,100 ft into the back reef and lagoon environment.

The collection of debris will involve walking along a set route to identify debris and then removing the debris either by hand or with a low-ground-pressure lifting vehicle (LGPLV). Thus, the principal impact during salvage operations will be the compaction of CCA and some potential breakage or crushing of small coral during debris collection along the spit and in the shallow water of the reef. Because many of the dominant coral species within the removal area at Kingman Reef are fast-growing species that are capable of reproducing via fragmentation, the impact of debris

removal is not expected to result in high levels of coral mortality. The release of petroleum products or other pollutants that would adversely impact the affected environment is not expected during the salvage operation at Kingman Reef. All salvage actions will be limited to the proposed action area; however, it is possible that vessels may be required to anchor in 20 ft of sea water.

1.2.2 Palmyra Atoll

Palmyra Atoll is an equatorial incorporated, unorganized territory of the United States and is located in the northern Line Islands, approximately 960 nautical miles south of Hawaii (USFWS 2011a). The atoll consists of 250 ha of emergent land on 25 lushly vegetated small islands surrounded by and enclosing approximately 6,300 ha of coral reef and lagoon habitat (USGS 2012). Palmyra Atoll's relatively pristine reef environment supports approximately 176 known species of scleractinian coral, with the highest levels of coral species diversity of any surveyed area in the Phoenix and Line Islands (USGS 2012; DOI 2013a; Maragos et al. 2008). Live coral, CCA, and rubble dominate the benthos at Palmyra Atoll, which has a greater proportion of CCA and less live coral than does Kingman Reef (Brainard et al. 2005). The lagoon and reefs of Palmyra Atoll are used as a foraging area by the green turtle (*Chelonia mydas*) and hawksbill turtle (*Eretmochelys imbricata*); several species of marine mammals frequent deeper waters (> 50 ft) offshore. Palmyra supports 24 species of International Union for Conservation of Nature (IUCN)-listed species, representing the second greatest number across the US Pacific, including the bumphead parrotfish (*Bolbometopon muricatum*) and humphead wrasse (*Cheilinus undulates*), both of which are NOAA Species of Concern (Zgliczynski et al. 2013).

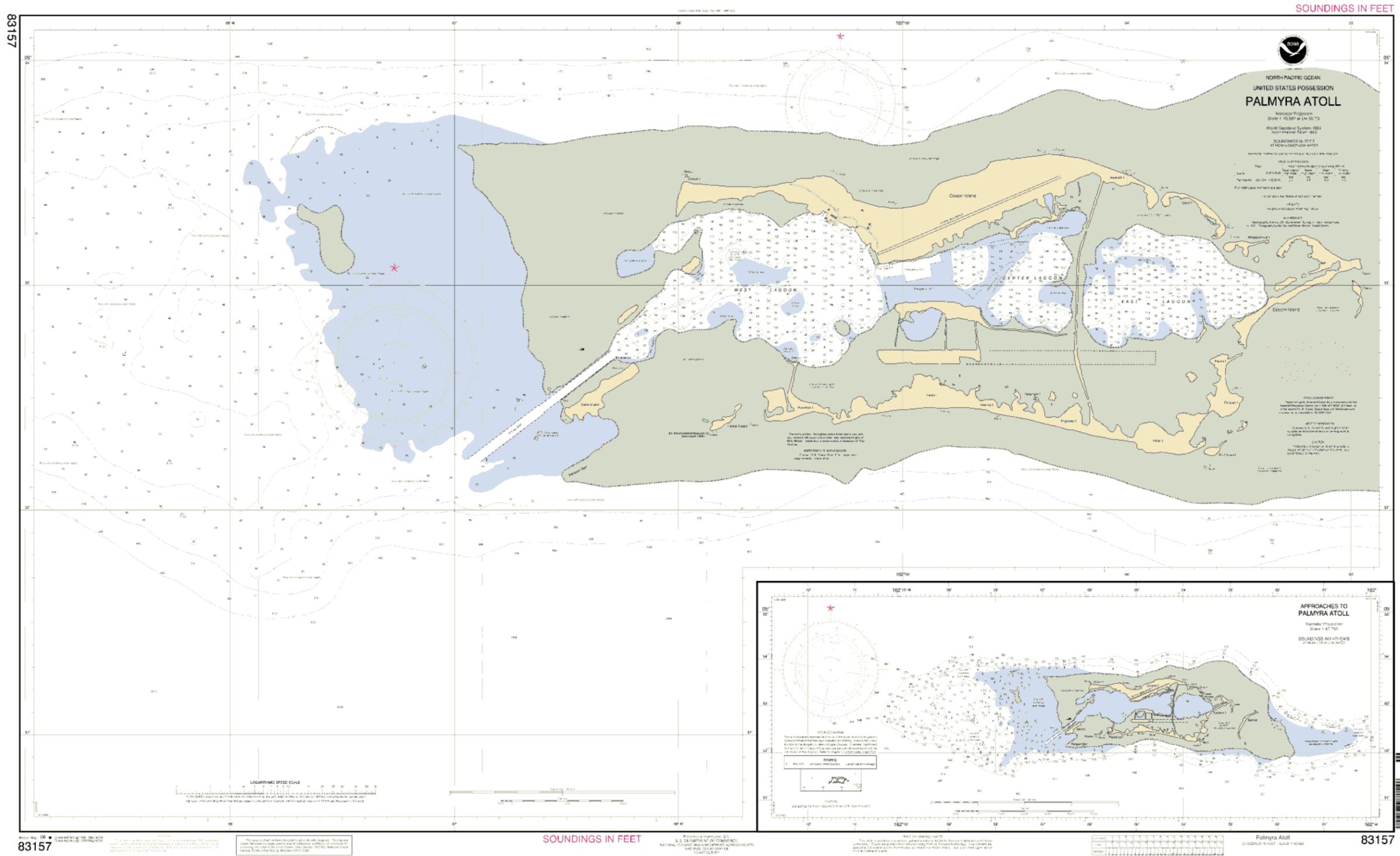
Similar to Kingman Reef, Palmyra Atoll was formed through volcanic activity that occurred between 65 and 120 million years ago and has since become a rich ecosystem that provides habitat to rare, endangered or threatened, and otherwise valued species of plants, fish, invertebrates (including corals), marine wildlife, and birds (USFWS 2011c). Palmyra Atoll has sufficient upland area to serve as important nesting or overwintering habitats for many bird species, such as various booby species, black noddy (*Anous minutus*), great frigatebird (*Fregata minor*), golden plover (*Pluvialis fulva*), and bristle-thighed curlew (*Numenius tahitiensis*) (USFWS 2011c). Upland area vegetation includes rare *Pisonia* forest (mostly *P. grandis*) and invasive coconut palm (*Cocos nucifera*) (USGS 2012). Invasive species have historically been problematic in the uplands, and a comprehensive and successful eradication of black rats (*Rattus rattus*) was undertaken in 2011 (USFWS 2011a).

First sighted in 1798 and then officially discovered in 1802, Palmyra Atoll has traded hands many times since its discovery. In 1912, Palmyra Atoll was claimed for the US. (DOI 2013b) During World War II, the US military occupied Palmyra Atoll; the largest islet, Cooper Island, was the center of military activity during that time (USGS 2012) and supported a population of 6,000 military personnel, a US naval dock, and two

airfields. It was during this time that the atoll, which originally consisted of 54 small islets, was greatly altered to accommodate naval facilities (e.g., airstrips, defensive structures, causeways), and the islands were joined to become a single, large, horseshoe-shaped island (USFWS 2011a). Over time, erosion has resulted in the fragmentation of the single island into 25 smaller islets (Figure 3). A research station, camp, and airstrip are all currently in operation on Cooper Island.¹

¹ For additional information on the complex history of Palmyra Atoll, refer to DOI (2013b).





Source: NOAA (2008)

Figure 3. Map of Palmyra Atoll

In 2000, The Nature Conservancy (TNC) of Hawaii purchased the land; and in January 2001, Palmyra Atoll and surrounding area out to 12 nautical miles was established as an NWR, placing the area under the jurisdiction of the USFWS. The atoll was added to the Monument in 2009. USFWS also consults with NOAA (and NMFS) on managing the Monument. Currently, TNC and the USFWS own and manage the land and waters of the Palmyra Atoll NWR and oversee the research done by the Palmyra Atoll Research Consortium, which has conducted scientific research within the NWR since 2004 (USGS 2012).

There are two proposed action areas at Palmyra Atoll near the western edge of emergent coral and the previously dredged channel that leads into the protected lagoons south of Cooper Island. Both areas have abundant submerged and emergent coral heads and receive very little sediment from the surrounding areas (Collen et al. 2009). The first proposed action area is the site of the sunken *Fishing Vessel (F/V) Hui Feng No. 1*, which is located at approximately 5.877222 north and 162.118889 west, approximately 2,300 ft from the channel that leads into the western lagoon. The vessel went aground northwest of the channel in 1991. It was reported that when the vessel went aground, approximately 1,500 gallons of diesel and oily bilge waste were spilled, and most of the diesel that could have been onboard (roughly 27,000 gal.) was lost (IncidentNews 2013). The US Coast Guard (USCG) Pacific Strike Team was called upon to assess the ship and remove excess waste; it was their conclusion that the sunken vessel posed little threat of further chemical release (IncidentNews 2013). However, recent research within the proposed action area has identified adverse impacts that have likely been caused by the *F/V Hui Feng No. 1*, likely as a result of iron leaching from the ship's structural elements and ground tackle (e.g., anchor) (Work et al. 2008).

The second proposed action area is northwest of the dredged channel that leads into the western lagoon, approximately 473 ft from the edge of the channel and within the area of emergent coral at the western edge of Palmyra Atoll. This is the site of a small World War II-era pontoon vessel that sank at an unknown date, but likely during US Navy operations in the 1940s. The pontoon vessel, later named *Rust Island*, and debris from the vessel is located at approximately 5.878535 north, 162.107199 west. As its name suggests, the sunken vessel has deteriorated and rusted significantly and has become somewhat covered with coarse-grained sediment at the base and on the surface, so much so that coconut trees have begun growing on the vessel. The deteriorated state of the vessel as well as the fact that the area does not receive much sediment from the surrounding area (Collen et al. 2009), lends to the belief that the vessel has been present at this location for some time. It is not clear whether *Rust Island* has had any significant effects on the surrounding ecosystem, but it is an un-natural feature with no wildlife conservation benefit; for that reason, USFWS has

requested that the vessel be removed concurrent with the removal of *F/V Hui Feng No. 1*.

Palmyra Atoll is located within waters of the United States, thus compliance with CWA is required. As such, every effort will be made to avoid impact to the surrounding environment from petroleum or suspended sediment. Best management practices (BMPs), such as “hot tapping” fuel tanks² and using emergency spill kits (which will be on hand for deployment in case of a release) will avoid and/or mitigate any potential impacts related to a chemical release. The physical presence of the sunken vessel has significantly altered the surrounding environment. Even though the salvage operation would have short-term impacts in the proposed action area, the elimination of the metal-hulled vessel is expected to have an overall positive benefit on the reef environment by removing the primary source of iron enrichment in the area. In addition, the removal of both vessels would eliminate the future risk of physical damage to Palmyra Atoll’s reefs. Finally, the removal of the vessels would facilitate development and implementation of a management plan for *R. howesii*.

1.3 THREATENED, ENDANGERED, OR OTHERWISE PROTECTED SPECIES

This section identifies federally protected species that have at some point been documented (either visually or aurally) at Palmyra Atoll and/or Kingman Reef NWRs. There are other species of conservation concern whose distribution may overlap with the proposed action areas; these species are listed in Appendix A.

Of all the species documented at Kingman Reef and/or Palmyra Atoll, only three are federally listed as threatened or endangered and therefore protected by ESA:³

- ◆ Green sea turtle (*C. mydas*)
- ◆ Hawksbill turtle (*E. imbricata*)
- ◆ Hawaiian monk seal (*M. schauinslandi*)⁴

Species that have been documented at Kingman Reef and/or Palmyra Atoll NWRs and are not protected under ESA but protected under MMPA include:

² To safely access fuel or oils trapped with submerged vessels salvors use a technique called “hot tapping”. Hot tapping (or pressure tapping) is a method by which a connection to an existing pipe or vessel (in this case, a fuel tank) is made without emptying the vessel. When a pipe or tank is hot tapped a number of valves are placed in strategic locations where fuel will collect and can then be pumped or displaced through a pipe into the receiving vessel. The procedure maintains the internal pressure of the tank while the tap is created, resulting in no net loss of product to the surrounding environment.

³ Of the 82 species of coral proposed for listing under ESA, at least 15 are known to be present at Palmyra Atoll and are expected to be present at Kingman Reef. In addition, green bumphead parrotfish (*Bobometopon muricatum*) and humphead or Napoleon wrasse (*Cheilinus undulatus*) are candidate species or species of concern.

⁴ Hawaiian monk seal (*M. schauinslandi*) is also protected under MMPA.

- ◆ Melon-headed whale (*Peponocephala electra*)
- ◆ Common bottlenose dolphin (*Tursiops truncatus*)
- ◆ False killer whale, Palmyra Atoll stock (*Pseudorca crassidens*)
- ◆ Short-finned pilot whale (*Globicephala macrorhynchus*)
- ◆ Beaked whales⁵ (*Mesoplodon* sp.)
- ◆ Gray's spinner dolphin (*Stenella longirostris*)

It has been noted that melon-headed whale and common bottlenose dolphins are commonly observed at Palmyra Atoll, whereas other species are very rarely observed (Pollock 2013c).

2 Purpose of the Preferred Action Alternative

The purpose of the Preferred Action alternative sub-actions at both Kingman Reef and Palmyra Atoll is to restore and protect the coral reef ecosystems of the Kingman Reef and Palmyra Atoll NWRs by permanently removing three sunken vessels and their associated debris in a manner that minimizes harm to the ecosystem while maintaining a high probability of success.

Physical abrasion and biological changes at Kingman Reef that have resulted from the grounding of the unidentified teak fishing vessel have been previously documented (Kelly et al. 2012). Leaching iron from debris has been linked to the proliferation of a non-native, invasive macroalga, resulting in a community-level shift away from hard coral and CCA species.

Iron leached from *F/V Hui Feng No. 1* has been linked to alterations in the hard coral community at Palmyra Atoll (Kelly et al. 2012; Work et al. 2008; Norström et al. 2009). *Rust Island* has not specifically been assessed for impacts, but the sunken vessel has the potential to cause physical or biogeochemical impacts similar to those associated with the sunken *F/V Hui Feng No. 1*.

In addition to removing the source of iron that is causing a community-level shift, the removal of the sunken vessels would also expose benthic substrate for recolonization and recruitment by coral and other reef-building organisms.

3 Need for the Preferred Action Alternative

The coral habitat at the Kingman Reef NWR has been described as “pristine” (MCBI 2008; USFWS 2011d), and the habitat at the Palmyra Atoll NWR has been said to

⁵ A new species or subspecies of beaked whale was recently identified at Palmyra Atoll as *Mesoplodon hotaula* or *M. ginkgodens hotaula*; the species is protected under MMPA and regulated by NMFS.

“constitute a wildlife habitat with significant conservation value” (Collen et al. 2009). Both refuges support communities of marine fish and invertebrates (e.g., corals) that are among the most diverse in the Pacific Ocean (USFWS 2011c; Zgliczynski et al. 2013). The high level of marine biodiversity at the Palmyra Atoll reef and Kingman Reef NWRs, particularly of coral species, is attributed to the influence of the North Equatorial Countercurrent and other nearby ocean currents, which may act as a transport mechanism, distributing coral larvae from the center of coral diversity in the western Pacific region to the atolls (Brainard et al. 2005). The Palmyra Atoll and Kingman Reef NWRs both have significantly higher coral recruitment and lower coral disease than do other communities in the Phoenix or Line Island chains, particularly those with increased anthropogenic stresses (Sandin et al. 2008; Dinsdale et al. 2008).

Although Kingman Reef and the reefs surrounding Palmyra Atoll are highly productive and relatively undisturbed, there are a number of potential stressors in the vicinity of the proposed action areas that are associated with the three sunken vessels. The purpose of this section is to identify those stressors and potential impacts in order to assess the Preferred Action alternative sub-actions in the proper environmental context.

3.1 BASELINE CONDITION: KINGMAN REEF

The shallow surf zone in the proposed action area within the Kingman Reef NWR is largely composed of dead material, shells, and coral skeletal fragments (USFWS 2011c). The benthic community at the Kingman Reef NWR primarily consists of live coral, CCA, hard bottom, and rubble (e.g., clam shells) (Miller et al. 2008). Other minor components of the benthos include sand, marine algae, and dead coral. Kingman Reef supports 173 species of scleractinian corals and 297 species of reef fishes (Maragos et al. 2008); the fish community is characterized by an inverted biomass pyramid that is dominated by apex predators, mainly shark species (Sandin et al. 2008). Kingman Reef is exposed to a relatively high-energy environment (as compared with that of Palmyra Atoll). Prevailing currents and wind have shaped the reef over time, eroding much of the volcanic island, such that the majority of the landmass and coral community are now submerged (MCBI 2008). Because Kingman Reef is largely submerged and not clearly visible, vessel groundings in the NWR are a major threat (MCBI 2008). This has been so much of a problem historically that Kingman Reef was identified on some early maps as “Danger Rock” (DOI 2013a). The grounding of the unidentified fishing vessel at Kingman Reef is but one example of this continuing threat.

The grounding of the fishing vessel at Kingman Reef has resulted in notable physical disturbance in the surrounding area, and additional physical damage from the associated scattered debris is possible. It appears that over time, the vessel has been moved by severe weather events (Kelly et al. 2012). If no action were taken to remove the sunken vessel, it would likely continue to move and could cause additional abrasion or breakage of live coral.

The presence of the sunken vessel also appears to be altering the biological community in the surrounding area (Kelly et al. 2012). Much of the machinery that was originally contained within the vessel is now dispersed across the reef as iron-rich debris. Iron is a limiting nutrient in shallow, Pacific coral-dominated systems such as that present at Kingman Reef (Kelly et al. 2012). The area in the vicinity of the shipwreck has been overrun by a filamentous green macroalga (*D. tenuissima*), suggesting a bottom-up community shift that is commonly associated with the introduction of iron into an iron-limited marine system. The dominance of the macroalga attenuates with distance from the wreck, and coral species and CCA are increasingly abundant with distance; these spatial trends strongly indicate that the vessel is the source of the community-level shift away from coral dominance. The overgrowth of corals and other benthic organisms by *D. tenuissima* to a depth of approximately 35 m has been noted (Kelly et al. 2012). It is also possible that the explosive growth of *D. tenuissima*, a species not found at the Kingman Reef NWR prior to 2007, is due to the introduction of the non-native alga by the vessel upon grounding at the reef. Another biological stressor on the coral community at Kingman Reef is the corallivorous crown-of-thorns sea star (*Acanthaster planci*), of which an outbreak was recorded between 2000 and 2004 (Timmers et al. 2012). Timmers et al. (2012) noted that outbreaks of *A. planci* appeared to be related to nutrient inputs that fuel algal growth. It is assumed that the introduction of non-native algae, the outbreak of the native sea star, and the availability of aqueous iron are all stressors on the Kingman Reef coral community, and the aggressive growth of problematic organisms is driven by the aqueous iron that is leaching from the sunken vessel and associated debris. Currently, *A. planci* is not as problematic or widespread as was observed between 2000 and 2004 (Pollock 2013b).

The degradation of coral reef habitat is known to have a lasting impact on fish assemblages. Garpe et al. (2006) observed significant shifts in multiple community structural parameters, including species abundance and taxa richness, as well as functional feeding guild abundances (e.g., the abundance of herbivorous fish species increased dramatically due to the increase in algal growth after a major coral bleaching mortality event off the coast of Tanzania). Similarly, Bellwood et al. (2006) observed a community structural shift to herbivore and generalist omnivore species that are less dependent on coral. Garpe et al. (2006) noted that fish abundance appeared to be enhanced in the short term but ultimately decreased over a long period of time (i.e., 6 years relative to 6 months), likely due to the reduction of necessary habitat complexity after coral mortality and the erosion of dead coral. Erosion is not immediate and may not influence habitat complexity in the short term, which explains why adverse impacts are not noted in the time span of less than 1 year.

This relationship between habitat complexity and fish assemblage abundance, richness, and biomass has been corroborated by Chong-Seng et al. (2012), Friedlander et al. (2003), and Syms and Jones (2000). Those fish species that are strongly associated

with coral are most significantly impacted (Garpe et al. 2006; Jones et al. 2004). Furthermore, it has been shown that such impacts on fish occur regardless of whether they are within protected areas; impacts are directly linked to the stability and complexity of the coral community (Jones et al. 2004).

Any significant impacts on fish abundance are expected to result in a reduction of the biomass available to predatory marine mammals. Thus, any degradation of coral habitat over time would be expected to result in indirect impacts on marine mammals. The extent to which impacts on mammals are directly related to coral habitat degradation is uncertain and has not been previously quantified. It has been predicted that long-term fish harvest will result in diminished marine mammal populations worldwide (DeMaster et al. 2001), so it is reasonable to assume that local impacts on fish populations will similarly reduce the foraging capacity of an area for marine mammals. Because there are no major fisheries in the vicinity of the proposed action area at Kingman Reef, significant indirect impacts to marine mammals associated with fishing activities are unlikely. The reef system at Kingman Reef is currently among the most pristine and productive in the world, so known effects associated with the baseline condition are largely limited to the area immediately impacted by the sunken vessel.

In general, marine turtles are threatened by the presence of debris in forage habitat, because debris may be incidentally ingested or can pose an entanglement hazard leading to drowning (NOAA Fisheries 2011). Although the debris from the sunken vessel at Kingman Reef is typically large (e.g., wooden planks, fiberglass fish hold), smaller fragments could be ingested by and potentially harm sea turtles. Juvenile green sea turtles are omnivorous and often feed at shallow depths on snails, ctenophores, and vegetation (Bjorndal 1997) and thus could accidentally ingest debris while foraging. Adult green sea turtles graze selectively on marine vegetation (although they may consume some animal matter) (Bjorndal 1997) and so are less likely to ingest non-specific debris. As adults, hawksbill sea turtles feed primarily on sponges, but juveniles consume woody plant remains, whole barnacles, fish eggs, tunicate, crab larvae, and algae (Bjorndal 1997). NMFS and USFWS (1998) noted that marine debris (in addition to environmental contamination) poses only a minor threat to species at Kingman Reef and Palmyra Atoll. However, the threat cannot be completely dismissed given the non-specific feeding habit of these species. Furthermore, it has been reported (Richardson et al. 1990) that turtles associate with marine debris because it provides some sort of protective cover from predators; this behavior has been specifically linked to buoyant flotsam (e.g., plastic containers, dead animals, coconuts), of which there is little or none at the Kingman Reef proposed action area. The majority of observed debris is submerged on the reef or washed up on the reef crest and emergent spit.

Other potential baseline impacts to green sea turtles (USFWS 1987) include development; beach erosion; beach mining; seagrass, reef, and algal forage habitat degradation; natural disasters; environmental contaminants; and fisheries-related impacts. None of these are particularly prevalent within the proposed action areas at Kingman Reef (or Palmyra Atoll) because most are not allowed within the NWR. Thus, these potential impacts are not consistent with the environmental baseline condition at these locations. Based on the current environmental condition of the Kingman Reef (as well as Palmyra Atoll), natural disasters and reef degradation (and environmental contamination to a limited extent) are the most likely stressors of marine turtle species (as well as marine mammals, fish, and invertebrates, including coral) present in the proposed action area(s). Currently, there is no human presence at Kingman Reef, except for an occasional use for research purposes. Temporary access to the NWR is restricted through the use of permits, which are issued by the USFWS. Thus, baseline impacts associated with human activity (including fishing, whaling, and any substantial amount of pollution) on species present Kingman Reef are minimal.

3.2 BASELINE CONDITION: PALMYRA ATOLL

The coral flats that surround Palmyra Atoll support a reef environment that is more diverse than those at other Line Islands (USGS 2012). In addition, the atoll's reefs have a lower prevalence of coral disease than do the other US remote island territories, with the exception of Kingman Reef (Miller et al. 2008). Two species of marine turtles, the green sea turtle (*C. mydas*) and hawksbill sea turtle (*E. imbricata*), both of which are ESA-listed, forage on *Caulerpa* and *Chlorophyta* algae in the shallow nearshore waters and lagoons of Palmyra Atoll. Almost 20 genera of algae have been observed at Palmyra Atoll (USFWS 2011a). The surrounding coral reefs support approximately 173 species of scleractinian corals and 297 species of reef fishes (Maragos et al. 2008; Kenyon et al. 2010; Williams et al. 2008). *Pocillopora*, *Porites*, *Acropora*, *Montipora*, and *Pavona* are the most abundant genera of coral at Palmyra Atoll. Approximately 15 of these species are currently under consideration for inclusion on the threatened or endangered species lists.

Other marine invertebrates include giant clams (*Tridacna squamosa*, *T. maxima*), anemones, sea urchins, sea stars, sea cucumbers, pearl oysters, conch, octopuses, hermit crabs, lobsters, and large crabs (Brainard et al. 2005), although giant clams are not abundant in the waters of Palmyra Atoll (NMFS 2004).

Cetaceans frequent the waters of Palmyra Atoll, but they do not enter the lagoons or forage in the nearshore shallow waters (Pollock 2013a). The ESA-listed Hawaiian monk seal (*M. schauinslandi*) was reportedly sighted at Palmyra Atoll decades ago, although Palmyra Atoll is not within their usual range (USFWS 2011a). All marine mammals are federally protected under the MMPA. Other species that are potentially present at Palmyra Atoll are listed in Appendix A.

Threats to the Palmyra Atoll reefs include climate change; ocean acidification; marine debris; tropical storms; invasive species, including the corallimorph, *R. howesii*; and physical damage resulting from the two vessels (i.e., *F/V Hui Feng No. 1* and *Rust Island*) that are currently shipwrecked on the reef. Currently, the principal concern at Palmyra Atoll is the rapid expansion and dominance of corallimorph species, particularly *Rhodactis howesii*, over the predominantly hard coral community (Work et al. 2008). It has been estimated that as of 2007, 100 ha of the reef had been overrun by *R. howesii* (Work et al. 2008). Corallimorph have overgrown benthic organisms around the *F/V Hui Feng No. 1* and now occupy over 2 km² at Palmyra Atoll, although the density of corallimorph decreases with distance from the shipwreck (USFWS 2011a). Consistent with other research in the South Pacific, the loss of live coral cover at Palmyra Atoll has been associated with a decline of fish species richness (Chong-Seng et al. 2012; Williams et al. 2012).

Corallimorph species outcompete many other coral species in at least two ways. First, they have elongated marginal tentacles that can be used to kill nearby coral (Chadwick and Adams 1991; Langmead and Chadwick-Furman 1999; Williams 1991). Second, they have multiple modes of reproduction, allowing for relatively rapid and successful propagation under a variety of conditions (Chadwick-Furman and Spiegel 2000). The shift from hard corals to corallimorph species is expected to result in direct negative impacts on fish and marine turtles, as well as indirect negative impacts on marine mammals.

Additional stressors at Palmyra Atoll are associated with the temporary presence of researchers. According to USFWS (Pollock 2013a), vessels often transit the western lagoon area (Figure 3) in order to conduct research on the reefs beyond the lagoon. These vessels are small (16 ft) Carolina skiffs with 20- to 60- horsepower, four-stroke outboard engines, which introduce some noise pollution into the marine environment. Noise pollution is known to significantly alter the behavior of marine mammals, which often use and respond to underwater communication or echolocation (Weilgart 2007). Fish species are also affected, inasmuch as they have been reported to respond to environmental noise from outboard motors (Sara et al. 2007; Scholik and Yan 2002). Alterations in behavior have been linked to strandings in whale species (Weilgart 2007)⁶ and may result in suboptimal schooling behavior in fish (Sara et al. 2007), which could potentially result in reduced predator avoidance in the vicinity of Palmyra Atoll. It must be noted that whale strandings have been observed to follow extreme levels of noise such as those produced by naval submarine sonar, high-impact

⁶ Weilgart (2007) provided a review of impacts that result primarily from chronic noise interference from naval vessels (i.e., sonar). Impacts from such noise represent a worst-case scenario and are not likely to occur at Palmyra Atoll. Smaller vessels outfitted with outboard motors produce underwater noise pollution at Palmyra Atoll, which is expected to result in short-term, acute exposures to noise.

pile driving, or underwater explosions (Weilgart 2007); the levels of noise produced by four-stroke outboard engines is minimal by comparison.

In addition, vessel traffic poses a significant risk to coral and marine wildlife through physical contact or ship strikes. Ship strikes are a significant threat to marine mammal species (Carretta et al. 2013; Chadwick-Furman and Spiegel 2000) and are likely a threat to sea turtles. Sea turtle species are known to use the dredged channel that leads to the western lagoon (Pollock 2013c), so research vessel traffic in this area could affect habitat use by these species. To decrease any impact on sea turtles, research vessels are restricted to speeds of less than 8 knots while in the channel. Marine mammals are not observed in areas with increased boat traffic, such as the dredged channel (Pollock 2013c, d, a), although the restriction on boating speed is assumed to protect marine mammals as well.

4 Alternatives

THIS SECTION DESCRIBES THE PROPOSED ALTERNATIVES, WHICH INCLUDE A NO ACTION ALTERNATIVE (SECTION 4.1), WHICH WOULD MAINTAIN THE STATUS QUO, AND A PREFERRED ACTION ALTERNATIVE (SECTION 4.2), WHICH IS INTENDED TO AMELIORATE KNOWN IMPACTS ON THE REEF SYSTEMS THAT ARE ASSOCIATED WITH THE BASELINE CONDITION (AS DISCUSSED IN SECTION 3) (I.E., IMPACTS RELATED TO THE SUNKEN VESSELS). THE PREFERRED ACTION ALTERNATIVE CONSISTS OF THREE CONNECTED SUB-ACTIONS. EACH SUB-ACTION (SECTIONS 4.2.1 THROUGH 4.2.3) CORRESPONDS TO A SALVAGE OPERATION THAT TARGETS ONE OF THE THREE SUNKEN VESSELS.

4.1 No Action Alternative

Under the No Action alternative, the shipwreck (i.e., the unidentified teak fishing vessel) and associated debris field at Kingman Reef and the two shipwrecks at Palmyra Atoll (i.e., *F/V Hui Feng No. 1* and *Rust Island*) would be left in place.

At Kingman Reef, the shipwreck debris is considered to be a primary threat because of its physical and chemical impacts on the surrounding reef. The wreckage is located in a high-energy environment and would continue to cause physical damage due to movement by wind and waves. Persistent physical impacts to reefs from shipwrecks reduce topographic complexity and the structure of reef fish and invertebrate communities (Bruckner et al. 2005). Iron released from the vessel has led to the expansion of invasive *D. tenuissima* and an associated phase shift away from hard coral and CCA (Kelly et al. 2012); if left in place, this expansion would continue, and the reef would be further degraded.

The *F/V Hui Feng No. 1* was shipwrecked at Palmyra Atoll in 1991, and since that time, the reef community in the area of the vessel has changed dramatically, shifting from a coral-dominated to a corallimorpharian-dominated ecosystem (Work et al. 2008). Iron-

enrichment from the deteriorating vessel has supported the rapid expansion of *R. howesii* and subsequent phase shifts on the reef. In addition to the biogeochemical impact, the *F/V Hui Feng No. 1* wreck has had a negative physical impact on the existing reef community and structure.

The *Rust Island* vessel does not pose a known threat to the community at the Palmyra Atoll NWR, but its removal would allow for restoration of biological growth under the vessel. The vessel provides no conservation benefit.

Unlike shipwrecks in the Caribbean or Gulf of Mexico, the sunken vessels at Kingman Reef and Palmyra Atoll are on calcium carbonate coral reef platforms located in the iron-poor central Pacific region and as such do not serve as an important substrate for coral recruit settlement. Under the No Action alternative, these vessels would be left in place and continue to negatively impact the coral reef structure and community at Palmyra Atoll.

4.2 PREFERRED ACTION ALTERNATIVE

The Preferred Action alternative consists of the removal of all three vessels located at both Kingman Reef (i.e., the unidentified fishing vessel) and Palmyra Atoll (i.e., *F/V Hui Feng No. 1* and *Rust Island*) during three separate but connected salvage operations referred to as sub-actions. Salvage operations would begin at Kingman Reef in order to avoid transporting any corallimorph fragments from the Palmyra Atoll salvage sites to Kingman Reef. Thus, the order of salvage operations would proceed from the vessel at Kingman Reef to the *F/V Hui Feng No. 1* and then to *Rust Island*. Because the *F/V Hui Feng No. 1* and *Rust Island* are located in close proximity, it is possible that salvage work on those vessels could occur simultaneously. This section describes the salvage operation procedures at each proposed action area.

The locations of the vessels and water depths at both locations (i.e., Palmyra Atoll and Kingman Reef NWRs) present a number of challenges to vessel removal. Thus, BMPs would be implemented to avoid damage to the reefs during salvage operations:

- ◆ Specially designed shallow-draft transport vessels (SDTVs) would be used to provide transport between the shallow reef and barges (Figure 4).
- ◆ An LGPLV would be used to allow for the removal of debris from shallow water areas with minimal impact to coral (Figure 5).
- ◆ Underwater surveys would be used to identify appropriate access routes for the SDTVs.
- ◆ All salvage material would be recycled and/or disposed of properly within the continental US.

- ◆ An emergency spill response plan has been prepared, and a dedicated skiff with trained responders and appropriate spill response equipment would be ready and available for deployment onsite.
- ◆ Onsite capacity for restoration (e.g., trained coral expert with knowledge of restoration methods, necessary equipment) would be available in the event that coral are damaged and need to be reattached to the substrate or there is a need to salvage coral from marine debris (in the event that coral has colonized debris and is broken during debris salvage).
- ◆ In the event of inclement weather, operations would be suspended, and all equipment would be moved to protected lagoons and secured with appropriate mooring devices.
- ◆ Use of silt curtains or other sediment control devices is not a part of this action. FWS, in consultation with the U.S. Geological Survey and the National Marine Fisheries Service, considered implementing these tools in this action but determined that the greater environmental benefit is to not use them due to increased potential as entanglement hazards for specially-protected species and other wildlife, especially species such as sharks and turtles. Silt curtains and other sediment controls devices also have the potential for causing coral and substrate damage due to unpredictable sea state.

Slipsheet for Figure 4 (11 x 17)

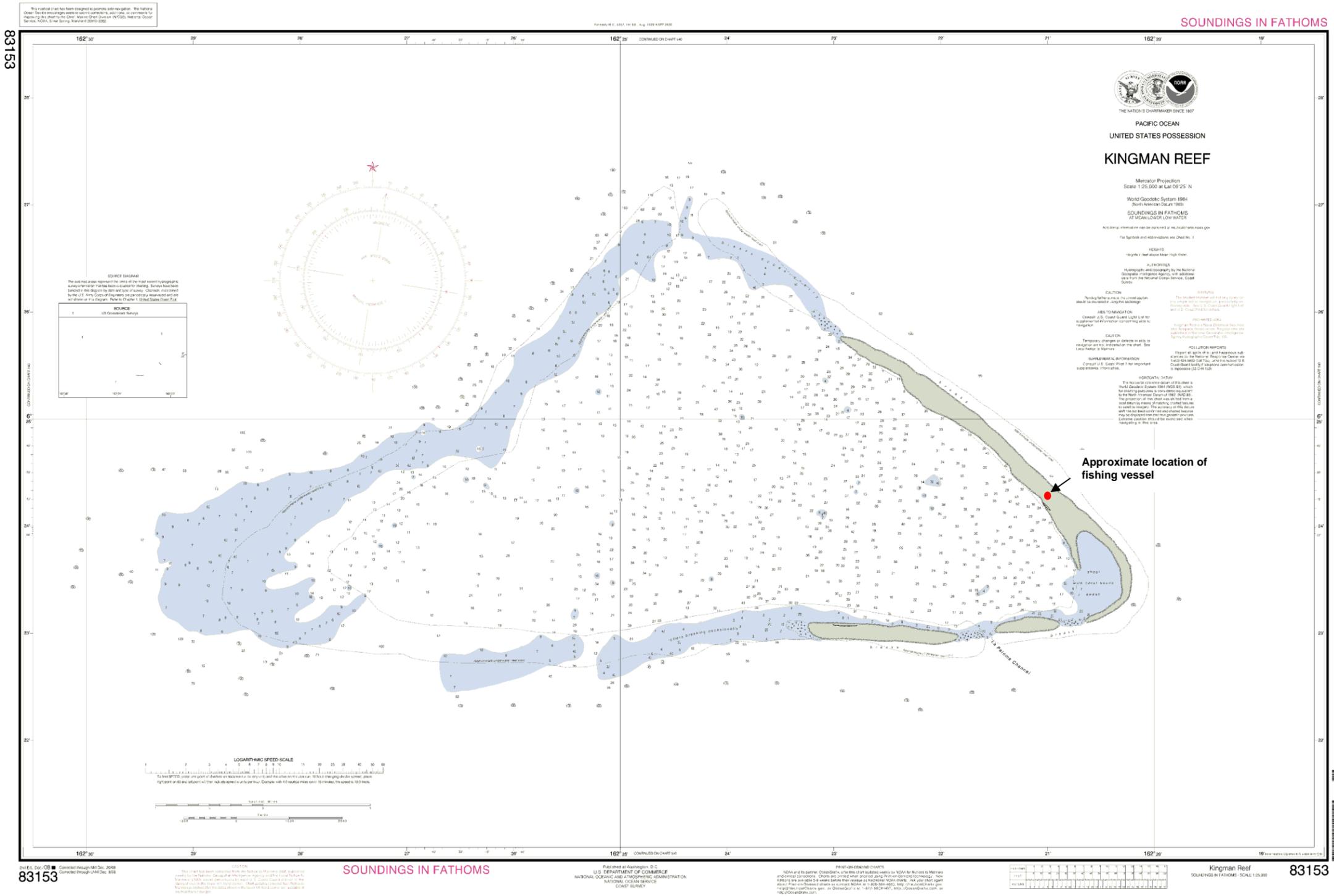
Figure 4. Schematic of shallow-draft transport vessel

Slipsheet for Figure 5 (11 x 17)

Figure 5. Schematic of low-ground-pressure lifting vehicle

4.2.1 Sub-Action A – Kingman Reef fishing vessel salvage

Over time, the deterioration of the unidentified fishing vessel at Kingman Reef has resulted in a highly dispersed debris field. Approximately 20 ft of the vessel's remaining hull is perched on the emergent coral rubble spit; other parts of the wreck, including insulation, the fiberglass fish hold, the engine block, wood, and steel components, are scattered throughout the fore and back reef areas. During a brief fly-over of the proposed action area at Kingman Reef, it was noted that only the machinery, running gear, and heavier components of the refrigeration system were located in the vicinity of the original grounding (Global Diving & Salvage 2013). Figure 6 identifies the approximate location of the vessel in relation to the reef. Additional information is presented in Appendix C.



Source: NOAA (2008)



EA of Wreck Removal at Kingman Reef and Palmyra Atoll NWRs
 *September 27, 2013
 31

Figure 6. Location of the Kingman Reef fishing vessel

The general operating procedure for the removal of the wreck and debris at Kingman Reef would occur as follows:

1. The tugboat *Sarah C* would use a stern anchor to secure the barge 185-3 in the lagoon. The barge would feature an on-board crane that has a 140-ft radius.
2. The search area would be surveyed by foot on designated routes and, if necessary, with SDTVs. A global positional system (GPS) device and temporary buoys would be used to mark the locations of debris.
3. The barge would slowly be moved close to the spit into approximately 20 ft of water and then stabilized using either a land anchor or sea anchor, thus avoiding contact with coral inside the lagoon.
4. The barge's crane would be used to lift debris from the spit and submerged areas.
5. After the majority of the smaller debris had been removed, the LGPLV would be deployed to the spit to lift heavier debris.
6. If debris were located on the seaward side of the reef, it would be rigged onto the LGPLV by divers and hauled over the emergent spit and to the barge using a winch attached to the barge.
7. Divers equipped with metal detectors would make a final search for additional debris, within a 2,100-ft radius and up to 100 ft deep.⁷

4.2.2 Sub-Action B – F/V Hui Feng No. 1 Salvage

The *F/V Hui Feng No. 1* is located in 20 ft mean lower low water (MLLW), northeast of the dredged channel at Palmyra Atoll (Figure 7). The vessel is 121 ft long, weighs 200 short tons, and is resting starboard side up. The technical approach to remove the *F/V Hui Feng No. 1* (Global Diving & Salvage 2013) would minimize the use of anchors and anchor lines to hold the elevated platform in place in order to avoid impacts to live coral in the vicinity of the proposed action area. All machinery on the vessel is expected to be in place and for the most part intact; the amount of petroleum that remains onboard the vessel is unknown. There is little sediment accumulation within the vessel; thus impacts related to suspended sediment would likely be minimal. The removal of the vessel would prevent further physical impact on the reef.

⁷ Much of the debris on the lagoon side is in deeper water (30 to 60 ft). Searching for and collecting this material will require a substantial amount of time.

Slipsheet for Figure 7 (11 x 17)

Figure 7. Palmyra Atoll Sub-Action B and Sub-Action C proposed action areas

The general operating procedure for the removal of the *F/V Hui Feng No. 1* would be as follows:

1. The tugboat *Sarah C* and barges 185-1 and 185-3 would be stationed in the dredged channel. A survey would be conducted by means of either snorkeling or scuba to guide anchor placement and avoid any impact to coral. The intent would be to anchor the barges in the already impacted channel.
2. A survey would be performed between the barges and the salvage site in order to identify any live coral that might be impacted by the elevated platform or transit routes. Surveyed transit routes would be marked with temporary buoys.
3. The 185-3 crane barge would launch the 40-ft x 20-ft elevated platform. The platform would be in a “light” configuration, with only the jacks, a single leg, and the crane on board.⁸ Both SDTVs would move the platform to the work site at high tide. One leg of the platform would be deployed to the sea floor, and the platform would be temporarily moored to the wreck to hold its position. The remaining legs of the elevated platform would be loaded onto an SDTV and brought to the platform, loaded aboard the platform, and assembled using the platform’s crane. The elevated platform would jack up to a height above the combination of high tide and surf (estimated to be 5 ft above low water). The SDTVs would bring the environmental protection, pollution response, underwater cutting, and dive gear to the platform.
4. Divers would assess the condition of the shipwreck and access the tank areas in order to determine the tank contents. If necessary, divers would “hot tap” the tanks and remove any remnant petroleum product prior to the salvage of the vessel. Per the emergency spill and response plan (Global Diving & Salvage 2013), pollution containment equipment would be available onsite and ready to deploy in the event of a petroleum product release.
5. Because refloating the *F/V Hui Feng No. 1* could further impact live coral, the vessel would be cut into approximately 22 sections and removed using a crane, which would place the sections on the SDTVs for transport to the barge anchored in the channel. Each SDTV can hold 10 short tons of material with only a 1.5-ft draft. The SDTVs would be powered by long-tail motors to minimize any potential physical impact to the reef. To the extent possible, exothermic cutting torches would be used to cut the vessel into sections; however mechanical saws and abrasive wheels could also be used when necessary. Exothermic torches would be preferable because they generate minimal sound underwater.

⁸ The designed floating draft using this configuration is 4 ft.

6. Upon completion of the vessel removal, divers equipped with metal detectors would conduct a search for any remaining debris.

Slipsheet for Figure 8 (11 x 17)

Figure 8. Schematic of elevated platform to be used at Palmyra Atoll

Slipsheet for Figure 9 (11 x 17)

Figure 9. Positions of elevated platform during Sub-Action B

4.2.3 Sub-Action C—*Rust Island* Salvage

The pontoon vessel *Rust Island* is submerged at a depth of 4 to 8 ft and is located in close proximity to the *F/V Hui Feng No. 1* (Figure 6), approximately 200 yds from the dredged channel. The vessel is 64.3 ft by 28 ft and consists of 40 square pontoons and 8 somewhat triangular pontoons. The location and degraded condition of the vessel, as well as the sediment that has built up on the vessel present challenges for the salvage operation. In addition, live coral is abundant along the route to the proposed action area, creating a challenge for SDTV transit.

The general operating procedure for the proposed removal of the *Rust Island* is as follows:

1. The path between the shipwreck and barges 185-1 and 185-3 would be surveyed (by divers or via boat) for emergent coral heads (within 2 ft of surface), and temporary buoys would be used to mark the locations of the coral.
2. The salvage of the pontoon vessel would first be attempted by using the built-in connection system to separate the pontoons. If the connection system were no longer functional, exothermic torches would be used to cut the pontoons into sections; if necessary, hydraulic and/or pneumatic cutting saws would be used.
3. As sections of the vessel were separated or cut, a hydraulic crane would lift the sections and move them to the SDTVs, which would have long-tail engines and an 18-in. draft. The removal of the modular sections would likely occur above the surface of the water, and the sections would be transported to the barge located in the channel. If long-tail engines could not be used to power the SDTVs because the water was too shallow, a floating polypropylene line attached to a winch on barge 185-3 would be attached to the SDTV and used to “reel in” the SDTV.
4. The cutting and transport of pontoon sections would continue until the *Rust Island* salvage was complete.
5. Divers equipped with metal detectors would conduct an underwater survey to locate additional debris to 80 ft outward from extent of former location of the shipwreck. All metal and debris > 6 in. would be transported to the barge for disposal.

6 Environmental Effects

This section presents an assessment of the potential environmental effects of the proposed alternatives, including the No Action alternative, on habitat, the coral community, and protected wildlife. BMPs designed to minimize or mitigate effects on these resources are also discussed below.

Terrestrial habitat and wildlife are not discussed at length for either the No Action alternative or the Preferred Action alternative because any potential effects are limited to the marine environment. Also, it should be noted that no ESA-listed species of birds are expected to be present at Kingman Reef. The proposed action area at Kingman Reef would include portions of the emergent rubble spit; however, this area is not thought to provide necessary habitat for any terrestrial species. It is possible that seabirds could use Kingman Reef for resting habitat; however impacts related to the proposed Sub-Action A would be only temporary and would not affect a large number of individuals. For this reason, Sub-Action A is not expected to impact terrestrial species or necessary terrestrial habitat at Kingman Reef. The proposed action areas at Palmyra Atoll are wholly contained within the marine environment, and habitat and wildlife outside of the proposed action areas at Palmyra Atoll are not expected to be impacted by either Sub-Action B or Sub-Action C. Palmyra Atoll is used by migratory bird species, and visual and/or noise disturbances would be limited in duration to approximately 1 month at Palmyra Atoll and up to 10 days at Kingman Reef. The bristle-thighed curlew (*N. tahitiensis*) is known to overwinter on Palmyra Atoll, during which time it molts and is much less mobile. However, the proposed alternatives are not expected to disturb this species, which uses upland habitat that is some distance from the proposed action areas (Pollock 2013b).

The introduction of invasive species (such as occurred previously with *D. tenuissima*) would be mitigated through the use of proper decontamination procedures (i.e., pressure washing, rinsing gear with dilute bleach solution) and quarantine measures. To limit the transfer of corallimorphs from Palmyra Atoll to other areas, the salvage actions at Palmyra Atoll would be conducted after the actions at Kingman Reef.

In some instances, the descriptions of effects and mitigating measures presented herein may be repeated in multiple sections because the affected species are generally similar in physiology, have similar diets, use similar forage habitats, and seasonally overlap with other species within the proposed action areas.

6.1 NO ACTION ALTERNATIVE

The ongoing physical and biogeochemical effects caused by the sunken vessels at both Kingman Reef and Palmyra Atoll are described in Section 3. Under the No Action alternative, it is assumed that this baseline condition would continue. However, it is also expected that certain effects, specifically the expansion of the filamentous green macroalga *D. tenuissima* at Kingman Reef and the corallimorph *R. howesii* at Palmyra Atoll, would not only continue but increase over time (Kelly et al. 2012; Work et al. 2008). Potential direct and indirect effects on fish, sea turtles, and marine mammals related to the degradation of coral habitat (Section 3) would also be expected to continue and increase under the No Action alternative.

6.2 PREFERRED ACTION ALTERNATIVE

6.2.1 Sub-Action A – Kingman Reef salvage

6.2.1.1 *Habitat Effects*

The salvage of the shipwreck (i.e., the unidentified teak fishing vessel) at Kingman Reef would provide long-term habitat benefits through the removal of ongoing physical and biogeochemical impacts. However, the proposed Sub-Action A would potentially cause short-term effects, as detailed below:

- ◆ Underwater noise effects associated with exothermic cutting torches, saws, sledgehammers, and boat motors would be expected.
- ◆ If placement of anchors on the dry rubble spit were to be impracticable, it may be necessary to place additional stern anchors, which could potentially damage or displace some corals in deeper water.
- ◆ Above-water noise effects associated with diesel generators, crane operation, and limited tugboat engine noise would be expected. Above-water noise could temporarily degrade resting habitat for sea turtles at Kingman Reef.
- ◆ Overhead shading created by barges while stationed in the channel or lagoon could cause temporary behavior change in wildlife (e.g., habitat use).
- ◆ Overhead lighting could temporarily attract wildlife during nighttime hours. Work would not be conducted during nighttime hours, but operators would live onsite throughout operations. Intense lighting (such as that required during nighttime work) would not be required at night; rather, lighting would be restricted to deck lights on the barges. Lights would not be directed at the water.
- ◆ There would be a potential for effects related to the transport of invasive species; however, this potential would be minimized through the performance of a thorough hull cleaning of the tug and barges to remove marine growth prior to their departure from Long Beach, California. The vessels would undergo a thorough inspection prior to equipment mobilization in Honolulu, Hawaii, and appropriate salvage operation sequencing (i.e., the vessel at Kingman Reef would be salvaged first to avoid the transport of corallimorph fragments from Palmyra Atoll to Kingman Reef) would be followed.
- ◆ Effects on air quality would likely be minimal because all proposed vessels would be US Environmental Protection Agency (EPA) Tier II compliant and would be certified to the State of California air quality standards.

6.2.1.2 Coral Effects

Sub-Action A could have some short-term physical effects on coral species in the proposed action area. The technical approach for Sub-Action A (Global Diving & Salvage 2013) calls for the placement of anchors in the dry rubble spit, which would be preferable because it would not impact coral species. However, if the placement of anchors in the dry rubble spit were to be impracticable, it might be necessary to place additional stern anchors, which could potentially damage or displace some corals in deeper water. The steep, interior side of the reef where anchors would be placed in this contingency is relatively unstable and supports a much less extensive coral formation; therefore, the placement of anchors in this location would minimize the impacts due to anchoring (were anchoring in the spit not possible). The dry rubble spit and sandy areas underwater are preferred locations for anchoring, as such efforts will be made to avoid coral impact via selective placement of anchors.

Physical effects by marine debris and biogeochemical inputs pose threats to the marine environment at Kingman Reef. Kingman Reef is one of the most pristine reef environments in the world; however, the shipwreck and associated debris pose a threat to the nearby coral species. Of the 59 coral species proposed for ESA listing (Appendix A), approximately 16 are known to be present at Kingman Reef. The exact locations of these colonies is unknown (Pollock 2013a). The removal of the shipwreck would eliminate threats to these species. This would likely result in a net benefit for the entire community that would far outweigh the potential impacts to coral. The benthic community at Kingman Reef is primarily composed of CCA and fast-growing corals that could recolonize anchor points within a matter of years.

6.2.1.3 Wildlife Effects

6.2.1.3.1 Marine Reptiles

Green sea turtle and hawksbill sea turtle are both found at Kingman Reef (Pollock 2013c)⁹ and likely feed in the benthic zone as adults (Bjorndal 1997). Green sea turtles have been observed on the exposed rubble spit along the eastern portion of the reef, resting and basking in the sun (USFWS 2011b). The proposed area of Sub-Action A is within the lagoon from 20 ft in depth to the rubble spit, so the action area might overlap with sea turtle resting habitat. It is likely that, during the proposed work schedule, green and hawksbill sea turtles would be in the area of the Kingman Reef NWR based on their presence year-round at nearby Palmyra Atoll NWR (Pollock 2013c).

Identified potential impacts to these species caused by the proposed salvage action include ship strike, the production of underwater noise, temporary entanglement in

⁹ Other species of sea turtles may transit the area but have not been specifically observed to date. These species are identified in Appendix A.

lines, and temporary behavioral changes caused by human presence and activity. Chemical impacts are assumed to be highly unlikely and are discussed only briefly here. Similarly, significant impacts related to lighting the barges at night is only briefly noted, inasmuch as the impacts of such lighting would be temporary and minimal. Each of these impacts would be discussed, along with measures for mitigating or minimizing impacts to marine reptiles.

Ship strikes are possible in the central lagoon at Kingman Reef, where turtles might be actively foraging in the benthic zone. Turtles at the surface in the area of the *Sarah C* tugboat, the SDTVs, or the materials barge could collide with the ships and be injured. Ship strikes involving sea turtles have not been noted previously in the Kingman Reef NWR, potentially because of the wary nature of these species¹⁰ (Pollock 2013c) as well as the infrequent presence of ships. In the event of a sea turtle sighting by salvage operators, any and all boat activity would cease, and the sea turtle(s) would be allowed to transit the area without injury or harassment. Proactive monitoring of the area would limit unnecessary interactions with sea turtles. Also, limiting boat speeds to a few knots (as is currently done at Palmyra Atoll) would reduce the likelihood of serious injury to sea turtles. If all BMPs were to be observed, ship strikes could be entirely avoided or the severity of unlikely strikes could be minimized.

Underwater noise impacts on sea turtles have been discussed infrequently in the past (Samuel et al. 2005), although there is some indication that exposure to ambient anthropogenic noise may cause behavioral impacts on sea turtles (Bartol et al. 1999),¹¹ particularly near coastal cities (Samuel et al. 2005). With regard to the proposed salvage action, the use of vessel motors and underwater cutting tools during the action would only be temporary, inconstant, and largely limited to up to 10 days. In the event that a sea turtle were to be spotted during the salvage operation, all boating and cutting activity would cease until the turtle had transited the area. Although noise would not be entirely muted by ceasing operations while the animal was in the vicinity of the action area, the noise would be minimized to the maximum extent practicable. Significant impacts on behavior are not expected due to the relatively low intensity of noise produced by the equipment proposed for use at Kingman Reef. For example, exothermic cutting saws produce very little underwater noise and have been specifically selected for use to minimize wildlife impacts.

Entanglement of sea turtles in lines used to operate the LGPLV or SDTVs or to position the work platform would be possible although unlikely, and entanglement could result in drowning. Floating lines would be used to minimize physical contact with coral and wildlife; sea turtles that forage within the benthic zone would be less likely to interact with lines at the surface. If turtles were to haul out during Sub-Action

¹⁰ A lack of appropriate reporting is also possible.

¹¹ Bartol et al. (1999) primarily discussed loggerhead turtles (*Caretta caretta*) and neurological responses as opposed to behavioral responses.

A, they could come into contact with floating lines, but this would be highly unlikely due to the wariness of sea turtle species in the area; it would be more likely that turtles would avoid the action area altogether due to human presence (Pollock 2013c). Regardless, lines would be periodically monitored for entangled turtles. If entanglement were to occur, it would be only temporary because the entangled individual would be visible at the surface (i.e., caught in floating lines) and could easily be found and freed. In the event that a sea turtle were to be observed in the action area, all activity would cease so that the turtle could transit the area. If a sea turtle were to become entangled in lines during that time, immediate response would be possible.

The chemical exposure of sea turtles at Kingman Reef to spilled material from the sunken vessel would be highly unlikely. The vessel is not expected to have petroleum product left on board, because it either burned in the onboard fire or was released over time as the ship deteriorated.

During hours of darkness, some lighting would be required on barges to provide visibility for operators living onsite. No salvage operations would take place at night, and so intense lighting would not be required. No lighting would be pointed directly into the water but would likely alter habitat for sea turtles somewhat during the night, particularly if they were to use the shallow waters near the action area to rest. Although lighting has been related to impacts on adult sea turtle nesting behavior, as well as the behavior of recent hatchling, nesting does not occur at Kingman Reef (Pollock 2013a, c). Such impacts are therefore not expected. Impacts related to disturbance during resting would be limited to the brief duration of operations and would only affect shallow waters in the immediate vicinity of the barges.

Human presence and activity would be necessary for the completion of the proposed salvage action. Sea turtles would likely avoid the action area altogether while humans were present (Pollock 2013c). Avoidance of ideal habitat could result in suboptimal foraging, and disturbance¹² from resting habitat (i.e., exposed rubble spit) could increase sea turtles' energy expenditure and physical stress. Green turtles feed primarily on vegetation as adults and could forage near the action area, which has become overgrown with *D. tenuissima*. Such disturbance would be largely unavoidable but would be limited in duration to up to 10 days. The effect would not likely be permanent, and turtles would be free to return to the proposed action area once the proposed action had been completed. Furthermore, the action area would constitute only a small fraction of the entire NWR where green and hawksbill turtles would be able to forage without being disturbed.

¹² Note that "disturbance" as discussed here is not intended to mean harassment for the purpose of deterrence. Rather, disturbance is the unintentional exclusion of timid wildlife from a location resulting solely from human presence and activity.

6.2.1.3.2 Marine Mammals

Many species of cetaceans have been observed or audibly recorded in the vicinity of the Kingman Reef NWR:¹³ melon-headed whale (*P. electra*), false killer whale (*P. crassidens*), common bottlenose dolphin (*T. truncatus*), and Gray's spinner dolphin (*S. longirostris*). Many of these species were primarily observed near the more extensively studied Palmyra Atoll NWR (Roch et al. 2011; Baumann-Pickering et al. 2010a; Baumann-Pickering et al. 2010b; Martien et al. 2011; Aschettino et al. 2012; Brownell et al. 2009; Pollock 2013d, a), but these observations are relevant because the atoll is geographically similar to the Kingman Reef NWR.¹⁴ USFWS (2011b) also noted that the common bottlenose dolphin (*T. truncatus*) and melon-headed whale (*P. electra*) frequent Kingman Reef. All cetacean species are protected under MMPA, but none of the observed species are listed under ESA. The IUCN lists all of the identified species above as being of "Least Concern" for conservation. Many of these species are potentially present near Kingman Reef during the entire year and may be near the Sub-Action A proposed action area during salvage operations (Pollock 2013d, a). Only melon-headed whale and common bottlenose dolphin frequent the area (Pollock 2013a); all other species are observed only infrequently.

To date, the endangered Hawaiian monk seal (*M. schauinslandi*) has never been observed at Kingman Reef, and its presence there is improbable. Kingman Reef is well outside their main range (NOAA Fisheries 2012b). General distribution maps provided by NOAA and satellite tracking conducted by NMFS both indicate that the Hawaiian monk seal has a limited range that excludes Kingman Reef (as well as Palmyra Atoll) (NOAA Fisheries 2012b). For these reasons, it is expected that Hawaiian monk seals would not be present at Kingman Reef and thus would not be directly or indirectly impacted by salvage operations in the Sub-Action A proposed action area.

Identified effects of the proposed salvage operation on cetacean species include ship strikes, the production of acute¹⁵ underwater noise, temporary entanglement in lines, and human activity that could result in temporary behavioral changes. Each of these effects is discussed here, along with measures for mitigating or minimizing effects to marine mammals. Chemical effects at Kingman Reef are highly unlikely and thus are discussed only briefly.

¹³ Other species of marine mammals may transit the Kingman Reef NWR; these species are identified in Appendix A. It is not expected that these species will be present in the immediate vicinity of the proposed action area.

¹⁴ The lack of site-specific documentation of the presence of cetaceans at Kingman Reef is a source of uncertainty.

¹⁵ In this context, "acute" means that the exposure of animals to noise will be short-term, limited to the brief duration of the proposed action (i.e., up to 10 days).

The Sub-Action A proposed action area is within the lagoon to the fore reef, from 100ft in depth to the rubble spit and the location of the wrecked vessel; this area is unlikely to overlap with marine mammal forage habitat. Ship strikes are not likely in the central lagoon at Kingman Reef, where cetaceans have generally not been observed (Pollock 2013a). Specifically, melon-headed whales and common bottlenose dolphins have been observed at the outer areas of Kingman Reef, which would be far removed from the proposed Sub-Action A area. Habitat use by many cetacean species is generally limited to the steep sea floor relief and extensive shelf area waters where fish school (Stacey et al. 1994; Australian DSEWPC 2013) or to open ocean or deep water (NOAA Fisheries 2012d), as opposed to shallow reefs. Gray's spinner dolphin (*S. longirostris*) actively forages in deeper areas at night (NOAA Fisheries 2012e), when salvage operations would cease. Ship strikes could occur during transit to and from Hawaii; mobilization at Kingman Reef, prior to entering the lagoon; or demobilization to Palmyra Atoll. Boat noise has been reported to attract dolphins that "bow ride" (Richardson et al. 1995).

Monitoring of a vessel's perimeter and general area during transit would allow response maneuvers to be implemented (including coming to a full stop if necessary) in order to avoid any approaching cetaceans. Also, it has been noted that cetaceans are very fast and would be able to outmaneuver any slow-moving vessel in the area (Pollock 2013a). By limiting boat speeds in the area, ship strikes could be minimized in likelihood or severity. Most of a vessel's movements during Sub-Action A would be limited to very shallow waters within the lagoon, where cetaceans would not likely be present. No ship strikes of cetaceans have been recorded near Kingman Reef (IWC 2012; Jensen and Silber 2004), which is likely due to the depth at which most cetaceans forage as well as the infrequent presence of ships in the area. The majority of ship strikes noted by the International Whaling Commission (IWC) (2012) occurred in coastal areas that have extensive maritime activity.

If a cetacean were to be sighted during operations, all vessel activity would cease, and the cetacean would be allowed to transit the area without injury or harassment. Proactive monitoring of the proposed action area would be performed to limit unnecessary interactions with wildlife. The cetacean species that are thought to be present near Kingman Reef are typically present in social groups of at least two or more individuals but can congregate in groups as large as hundreds or thousands of individuals, depending on the location; these groups may also consist of more than one species (NOAA Fisheries 2012a, e, 2013, 2012c; Leatherwood et al. 1989). Thus, spotting cetaceans should be reasonably easy. For these reasons, ship strikes involving cetacean species at Kingman Reef would not likely occur as a result of the proposed salvage action.

The effect of underwater noise on cetaceans has been studied fairly extensively, and these studies indicate that exposure to ambient anthropogenic underwater noise might

cause injury to or behavioral effects on some species of cetaceans (Weilgart 2007; Buckstaff 2004; Simard et al. 2010; Southall et al. 2007), particularly near coastal cities. Given that the proposed action area would be in the Kingman Reef NWR (and thus protected from maritime activities) and removed from any anthropogenic sources of noise, chronic or ambient exposure would be unlikely. With regard to the proposed salvage action, the noise produced by vessel motors and underwater cutting tools during salvage would be only temporary, sporadic, and primarily limited to a period of up to 10 days.

It is possible that acute exposure to intense underwater noise could have an impact on cetacean species, particularly if they were in close proximity to the noise source (Bailey et al. 2010). Southall et al. (2007) reported behavioral effects on or injuries to cetacean species at various noise levels. Of the cetaceans that were classified as hearing “mid-frequency” noise, including all of the species identified here, few individuals were found to be behaviorally effected at ~100 db, whereas more were impacted at a higher noise levels (i.e., > 110 to 180 db).¹⁶ None were impacted when exposed to noise levels < 100 db (Southall et al. 2007). Levels of noise produced by the equipment proposed for use at Kingman Reef would range from 93.5 to 97 db (e.g., the saws) at a distance of 3 ft. The noise would dissipate with distance from the source, so it is unlikely that there would be severe impacts on behavior or direct injury from noise produced as part of the salvage operation. As previously discussed, it is unlikely that cetacean species would be in the immediate vicinity of the proposed action area. In order to minimize the creation of underwater noise, exothermic saws would be the preferred method for cutting.¹⁷ In the event that one or more cetaceans were to be spotted during the salvage operation, operators would cease all vessel and cutting activity until the cetacean had transited the area. Although noise would not be entirely eliminated by ceasing operations while an animal was in the vicinity of the proposed action area, it would be minimized to the maximum extent practicable.

The entanglement of marine mammals in lines used to operate the LGPLV or SDTVs would be possible although highly unlikely. Serious entanglement could result in drowning, although this would typically involve entanglement in submerged lines, ghost nets, or other marine debris related to fishing (Moore et al. 2009), which would be unrelated to the salvage operations at the Sub-Action A proposed action area. Floating lines would be used during Sub-Action A because cetaceans that forage below the ocean surface (i.e., in the pelagic zone) would be less likely to interact with lines at the surface. Lines would be periodically monitored for entangled mammals. In

¹⁶ Other cetaceans that could transit the area (Appendix A) might belong to the mid-range group, the low-frequency group (e.g., *Balaenoptera* and *Megaptera* genera), or the high-frequency group (e.g., *Kogia* genus). These species were not impacted at the 100-db level but were impacted at higher levels of noise (Southall et al. 2007).

¹⁷ Underwater exothermic saws reportedly sound like bubbles or escaping gas, which is not expected to significantly interfere with cetacean behavior or communication (Lawrence 2013).

the event that a cetacean were to be observed in the proposed action area, all activity would cease, and the animal would be allowed to transit the area without injury or harassment. If a marine mammal were to become entangled during transit of the site, it would be immediately released.

The chemical exposure of marine mammals at Kingman Reef is highly unlikely. As discussed in Section 6.2.1.3.1, it is expected that no petroleum product remains onboard the sunken unidentified teak fishing vessel.

Human activity would be necessary for the completion of the proposed salvage operation. Most cetacean species would likely avoid the proposed action area while humans were present, although some (e.g., “bow riding” dolphins) might be curious and approach the proposed action area from the seaward side of the reef. As previously stated, all activity in the proposed action area would cease if cetaceans were to be spotted in the area. Cetacean species primarily forage over open ocean, shelf areas and steep slopes where fish school (Stacey et al. 1994; Australian DSEWPC 2013; NOAA Fisheries 2012d), so the reef within the Sub-Action A proposed action area does not provide optimal forage habitat for cetaceans. Similarly, the proposed action area is not recognized as an area used for breeding, nursing, or rearing. Therefore, it is not expected that exclusion from that specific area would result in undue stress. Wildlife disturbance, although unavoidable, would be limited in duration to a period of up to 10 days. Once the salvage operation had been completed, cetaceans would again be able to access the proposed action area for whatever reason. Note that the proposed action area constitutes only a small fraction of the entire Kingman Reef NWR.

6.2.1.3.3 Seabirds

Palmyra Atoll and Kingman Reef host much higher densities of marine birds than do offshore waters in the Monument. This is particularly evident at Palmyra, where at least 10 species of seabirds breed and may be present year-round. At Kingman Reef, the islets are primarily used for roosting; however, bird density is still high in the area. The Migratory Bird Treaty Act protects all of the seabird species at Palmyra Atoll and Kingman Reef. Mass mortalities of marine birds colliding with lighted vessels or lighthouses have been documented; there have been several cases of bird fallout related to artificial light on the decks of vessels stopped at Palmyra Atoll. Seabirds are accustomed to environments with few obstacles and no artificial light. However, they may be attracted to light because they associate it with bioluminescent prey. At Palmyra Atoll, the frequent rain and mist in the air combined with artificial lights in unexpected locations seems to exacerbate the disorientation of marine birds, specifically when departing to or returning from offshore foraging grounds. Birds traveling after dark at Palmyra Atoll frequently collide with lighted vessels anchored, moored or operating near the atoll. The probability of birds colliding with or “falling out” on the decks of any of the craft being used in Sub-Actions A, B, or C as work

platforms or for living space is high if external lights are not kept to the minimum required by law during the operation. Seabirds that land on decks or work surfaces are vulnerable to injury, crushing, or soiling from rust or oil, which can compromise the water repellency of their plumage. Protocols should be in place to handle, clean (if necessary), and release downed birds that may fall onto project craft.

During hours of darkness, some lighting would be required on barges to provide visibility for operators living onsite. No salvage operations would take place at night, and so intense lighting would not be required. No lighting would be pointed directly into the sky or water, but even the limited lighting planned for safety on the work platform or other vessels may attract birds near the action area. Impacts related to lighting would be limited to the brief duration of operations and would only affect the immediate vicinity of the barges. To avoid unnecessary impacts on seabirds, light on board the vessels and barges would be the minimal amount practicable required for safety of the salvage crew.

6.2.2 Sub-Action B – F/V Hui Feng No. 1 Salvage

6.2.2.1 Habitat Effects

Habitat effects anticipated under Sub-Action B are expected to be similar to those described for Sub-Action A (Section 6.2.1.1) with the addition of the following:

- ◆ Physical effects would be limited to up to eight 36-in.-diameter holes for the jack-up legs of the elevated platform during salvage operations at Palmyra Atoll. These holes would compact coral skeleton covered with corallimorph but would not physically impact live coral. Although rugosity would be altered in these areas, the effect would occur in an already significantly altered environment and would allow for future restoration actions. Where possible and practicable, efforts will be made to place the jack-up legs of the elevated platform in sand to avoid impacts to live coral and reef structure.
- ◆ Sedimentation could occur, specifically during the *Rust Island* removal, due to potential disturbance of accumulated sediment in and around the degraded pontoons. The wreck is located in an area of good water flow (Pollock 2013a), and the sediment is coarse-grained. The release of sediment from the pontoons would likely have only a temporary effect, because corals would be able to slough off coarse sediment that settles on live tissue.
- ◆ Release of petroleum hydrocarbon products could occur during the process of hot tapping the fuel tanks. To minimize the risk of a release of petroleum hydrocarbons, containment or sorbent booms will be deployed while the crew hot taps the fuel tanks. Following successful removal of any remaining petroleum product on board the vessel, the containment or sorbent booms will

be removed for the next phase of the project to avoid potential entanglement in the equipment by sharks, sea turtles, or other marine organisms.

6.2.2.2 Coral Effects

Sub-Action B would have the potential to effect coral in the vicinity of the proposed action area. Of the 59 coral species proposed for ESA listing (Appendix A), approximately 16 are known to exist at Palmyra Atoll, however the exact locations of these colonies are unknown (Pollock 2013d, a). Reef habitat in the immediate vicinity of the Sub-Action B area is a near monoculture of the invasive *R. howesii* over dead coral skeleton and shipwreck debris. Potential effects to the environment would include the compaction of corallimorph-covered coral skeletons by the eight 36-in.-diameter jack-up legs of the elevated platform that would be deployed adjacent to the *F/V Hui Feng No. 1* (Figure 8) and any potential petroleum release. However, these effects are unlikely to significantly affect coral in the vicinity of the Sub-Action B proposed action area. The elevated platform adjacent to the sunken vessel would be equipped with emergency spill and response equipment as specified in the pollution mitigation and response plan (Global Diving & Salvage 2013) (Appendix C). In addition, personnel trained in responding to marine oil spills would be on hand to contain a petroleum release and recover released petroleum.

The jack-up legs of the elevated platform would be placed in sand or corallimorph covered substrate and would only affect reef structure that had already been impacted by corallimorphs. Measures would be taken to avoid impact with live coral along SDTV routes, by marking safe routes, and relocating corals that could potentially be impacted. If it were determined that specific coral colonies were in danger of being impacted, these colonies would be relocated to a suitable habitat outside of the action area, or back into the action area once removal operations were complete. With the above named precautions and best management practices, permanent physical impacts on coral species would not be expected during Sub-Action B. Furthermore, the removal of the wreck would mitigate the more pressing threat to coral species, the expansion of *R. howesii*, by eliminating the source of iron associated with corallimorph growth and facilitating the implementation of a corallimorph management program at Palmyra Atoll.

6.2.2.3 Wildlife Effects

6.2.2.3.1 Marine Reptiles

Sea turtles have been observed at Palmyra Atoll throughout the year and will therefore be present during salvage operations (Pollock 2013a, c). Green sea and hawksbill sea turtles are known to use Palmyra Atoll for foraging (USFWS 2011d) and have been observed in the dredged channel near the Sub-Action B proposed action area (Pollock 2013c). Systematic surveys conducted between 2008-2011 (Sterling et al. 2013) indicated that turtles are distributed unevenly across the atoll, with “hot spots”

of abundance noted on the coral flats surrounding the atoll. During the 6 seasons of this study, from 2008-2013, turtles were found to be abundant on the western flats and were also observed during snorkel surveys on the Western Terrace. Ad hoc observations and analysis of capture data show that the turtles on the western terrace are larger and slower moving than elsewhere in the atoll. Data from turtles with acoustic transmitters show that 14 of 26 turtles tagged between September 2009- and August 2011 were detected by the 17 acoustic receivers that are within 1km of the proposed work sites (receivers are between 0.12 and 0.71 km of the shipwrecks), further indicating that these habitats are used by sea turtles.

Also, hawksbill sea turtles in the area appeared to be much less abundant than green sea turtles, with several juveniles and adults observed throughout the atoll, and in the action area, during the same study (Sterling et al. [in press]). While turtles are resilient animals, the salvage activities do have the potential to be disruptive to their normal behaviors, however, long term impacts are unlikely. Because there is an abundance of turtles near the Sub-Action B proposed action area and BMPs will be implemented during all salvage operations, the exposure of green sea and hawksbill sea turtles to most of the impacts identified in Section 6.2.1.3.1 (i.e., ship strikes, temporary entanglement in lines, possible chemical exposure, and human activity that could result in temporary behavioral changes) would be unlikely. The production of underwater noise would be likely during Sub-Action B; however, this effect would be limited in duration (i.e., approximately 1 month), and noise-producing activities would cease if turtles were to be observed in the proposed action area.

Ship strikes would also be possible, given that the majority of the larger vessels would be moored within the dredged channel, where turtles have previously been observed (Pollock 2013c, d). However, the baseline condition (Section 3.1.2) takes into account periodic research vessel traffic, so ship traffic associated with Sub-Action B would not be greatly increased. No ship strikes involving marine reptiles have been reported to date, in part due to the limitation on ship speed imposed by USFWS. Proactive monitoring of the proposed action area for marine reptiles, ceasing activities in the event that a marine reptile is sighted, and ensuring that vessels are piloted slowly should minimize or mitigate the likelihood and severity of ship strikes in the proposed action area.

The *F/V Hui Feng No. 1* is not expected to be a source of petroleum hydrocarbon contamination (IncidentNews 2013), but remnant diesel could be spilled were there to be a catastrophic failure during the hot-tapping of the fuel tanks. It is thought that the vessel contained approximately 27,000 gal. of diesel, of which only 1,500 gal. (primarily bilge waste) were spilled upon grounding (IncidentNews 2013). If the initial estimate of onboard diesel fuel is correct, it is expected that the vessel could still contain diesel fuel. If contamination were to occur and not be quickly contained, then the exposure of sea turtles could occur over a broad area, resulting in health effects or

death (Hall et al. 1983). However, the potential for a fuel spill would be minimized through the use of hot-tapping methods prior to salvage operations and the availability of personnel trained in spill response and spill containment and recovery equipment as described in Appendix C.

While work is performed on the fuel tanks of the *F/V Hui Feng No. 1*, petroleum hydrocarbon containment equipment (e.g., containment or sorbent booms, sorbent pads) will be deployed to contain any incidental spill that occurs while hot tapping the fuel tanks. The oil containment equipment will be removed after the tanks are emptied to avoid any potential entanglement by sea turtles, sharks, or other marine organisms in the containment equipment.

6.2.2.3.2 Marine Mammals

Many species of cetaceans¹⁸ have been observed or audibly recorded in the vicinity of Palmyra Atoll: melon-headed whale (*P. electra*), short-finned pilot whale (*G. macrorhynchus*), false killer whale (*P. crassidens*), common bottlenose dolphin (*T. truncatus*), and Gray's spinner dolphin (*S. longirostris*) (Roch et al. 2011; Baumann-Pickering et al. 2010a; Baumann-Pickering et al. 2010b; Martien et al. 2011; USGS 2012; Aschettino et al. 2012; Brownell et al. 2009; Pollock 2013d, a). Melon-headed whales and common bottlenose dolphins are commonly observed in the area (Pollock 2013a), and short-finned pilot whales (*G. macrorhynchus*) have been occasionally observed (USFWS 2011a). Others are infrequently observed. All cetacean species are protected under MMPA, but none of the previously documented species are listed under ESA. IUCN has classified all of the above-listed species as being of "Least Concern" for conservation. Many of the species are likely present near Palmyra Atoll throughout the entire year and could be in the vicinity of the Sub-Action B proposed action area during salvage operations (Pollock 2013a).

It is not impossible that the endangered Hawaiian monk seal (*M. schauinslandi*) could be encountered at Palmyra Atoll, but such an encounter would be very unlikely. Palmyra Atoll is well outside their main range (NOAA Fisheries 2012b), and Hawaiian monk seals have not been observed in the area for well over a decade (Pollock 2013a, d). General distribution maps provided by NOAA and satellite tracking conducted by NMFS indicate that the Hawaiian monk seal has a limited range that excludes Palmyra Atoll (NOAA Fisheries 2012b). Furthermore, the species has no critical habitat near the Palmyra Atoll (NMFS 2007). For these reasons, it is expected that Hawaiian monk seals would not be encountered in the proposed action area or directly or indirectly impacted by salvage operations associated with Sub-Action B.

¹⁸ Other species of marine mammals might transit the Palmyra Atoll NWR; these species are identified in Appendix A. It is not expected that these species would be present in the immediate vicinity of the proposed action area.

Identified potential effects of the proposed salvage operation on cetacean species include ship strikes, the production of underwater noise, temporary entanglement in lines, possible chemical exposure (in the event of an uncontained spill), and human activity that could result in temporary behavioral changes. Each of these effects was discussed at length with respect to Sub-Action A (Section 6.2.1.3.2); differences between the effects likely at Palmyra Atoll and Kingman Reef are discussed below.

The Sub-Action B proposed action area would be over shallow reef with numerous emergent coral heads. It is unlikely that this area overlaps with marine mammal forage habitat at Palmyra Atoll. Ship strikes would not be likely to occur during salvage operations in the proposed action area or while transiting to the dredged channel to the south, where cetaceans have not generally been observed (Pollock 2013a). Based on the general habitat preferences of cetaceans (Section 6.2.1.3.2) and the location of areas where they have been observed (Australian DSEWPC 2013; Pollock 2013a; NOAA Fisheries 2012d; Stacey et al. 1994), ship strikes during the Sub-Action B salvage operations would be highly unlikely. Ship strikes could potentially occur during mobilization to Palmyra Atoll from Kingman Reef, prior to entering the dredged channel or during demobilization to Hawaii. In some cases, the production of boat noise attracts dolphins that “bow ride” (Richardson et al. 1995). However, monitoring the perimeter and general area of the ship during transit would allow for the implementation of responsive maneuvers (including coming to a full stop if necessary) in order to avoid approaching cetaceans. It has been noted that many species of cetaceans, particularly those that are associated with bow riding, are highly maneuverable and fast and would be able to avoid ships moving at reduced speeds (Pollock 2013a). Therefore, adherence to the limitations on boat speeds imposed by USFWS at Palmyra Atoll (i.e., < 8 knots) would reduce the potential for ship strikes in this specific area. Regardless, all vessel movement during Sub-Action B would be limited to very shallow waters, where cetaceans would not likely be present. Furthermore, ship strikes of cetaceans near Palmyra Atoll have not been reported previously (IWC 2012; Jensen and Silber 2004), likely due to the depth at which most cetaceans forage and the infrequent presence of ships in the area (as well as the imposed reduction in speed). Research vessels do operate periodically in the area (Section 3.1.2), and no ship strikes associated with these vessels have been reported to date. For all of these reasons, as well as the implementation of BMPs previously noted (Section 6.2.1.3.2), ship strikes involving cetacean species in the area of Sub-Action B would not be likely.

The exposure of marine mammals to underwater noise at Palmyra Atoll is expected to be similar to that at Kingman Reef (Section 6.2.1.3.2), with the exception of the diesel-powered hydraulic unit that is used above the sea surface to jack up the elevated platform, which produces noise of 100.1 db at 3 ft. In general, it is not expected that cetaceans will be very close to the proposed action areas but could rather be affected by underwater noise at a distance. It is possible that acute exposure to noise > 100 db,

which is known to be associated with behavioral effects (Southall et al. 2007), could result from the operation of the diesel-powered hydraulic unit used to jack up the elevated platform in the Sub-Action B proposed action area. However, it is unlikely that the noise produced by this equipment would exceed baseline noise levels underwater, inasmuch as the diesel-powered unit would be used on the barge. The process of jacking up the platform would be very brief and so would not be expected to have a marked impact on cetaceans in the surrounding area.

The chemical exposure of marine mammals to spilled material from the sunken vessel at Palmyra Atoll is possible, although unlikely. The vessel is not expected to have much petroleum product (i.e., diesel fuel) left on board (IncidentNews 2013). However, it is entirely possible that small amounts of residual petroleum products remain within the vessel. Effects to wildlife from a chemical spill and mitigation measures to be implemented in the event of a spill in the Sub-Action B proposed action area are expected to be similar to those described for Sub-Action A (Section 6.2.1.3.2).

Human activity would be necessary for the completion of the salvage operations proposed under the Preferred Action alternative. Most cetaceans would be expected to avoid the proposed action area while humans were present, and the shallow depth in the proposed action area of Sub-Action B should limit “bow riding” dolphins from approaching the site. As stated previously, all activity in the proposed action area would cease if cetaceans were to be spotted nearby. Because these species are often wary of human activity, it is unlikely that they would approach the proposed action area. Cetacean species largely forage in open ocean or over shelf and steep slopes where fish school (Stacey et al. 1994; Australian DSEWPC 2013; NOAA Fisheries 2012d), so optimal forage habitat is not within the Sub-Action B proposed action area (i.e., shallow, emergent coral reef). Disturbance, although unavoidable, would be limited in duration to approximately 1 month. The effect would be expected to be of a low magnitude because exclusion from necessary breeding, nursing, resting, or forage habitat would not occur. The effect would not likely be permanent.

6.2.2.3.3 Seabirds

Palmyra Atoll and Kingman Reef host much higher densities of marine birds than do offshore waters in the Monument. This is particularly evident at Palmyra Atoll where at least 10 species of seabirds breed and may be present year-round. At Kingman Reef, the islets are primarily used for roosting; however, bird density is still high in the area. The Migratory Bird Treaty Act protects all of the seabird species at Palmyra Atoll and Kingman Reef. Mass mortalities of marine birds colliding with lighted vessels or lighthouses have been documented; there have been several cases of bird fallout related to artificial light on the decks of vessels stopped at Palmyra Atoll. Seabirds are accustomed to environments with few obstacles and no artificial light. However, they may be attracted to light because they associate it with bioluminescent prey. At

Palmyra Atoll, the frequent rain and mist in the air combined with artificial lights in unexpected locations seems to exacerbate the disorientation of marine birds, specifically when departing to or returning from offshore foraging grounds. Birds traveling after dark at Palmyra Atoll frequently collide with lighted vessels anchored, moored or operating near the atoll. The probability of birds colliding with or “falling out” on the decks of any of the craft being used in Sub-Actions A, B, or C as work platforms or for living space is high if external lights are not kept to the minimum required by law during the operation. Seabirds that land on decks or work surfaces are vulnerable to injury, crushing, or soiling from rust or oil which can compromise the water repellency of their plumage. Protocols should be in place to handle, clean (if necessary), and release downed birds that may fall onto project craft.

During hours of darkness, some lighting would be required on barges to provide visibility for operators living onsite. No salvage operations would take place at night, and so intense lighting would not be required. No lighting would be pointed directly into the sky or water but even the limited lighting planned for safety on the work platform or other vessels may attract birds near the action area. Impacts related to lighting would be limited to the brief duration of operations and would only affect the immediate vicinity of the barges. To avoid unnecessary impacts on seabirds, light on board the vessels and barges would be the minimal amount practicable required for safety of the salvage crew.

6.2.3 Sub-Action C – Rust Island salvage

6.2.3.1 Habitat Effects

Habitat effects anticipated under Sub-Action C would be similar to those discussed for Sub-Action B (Section 6.2.2.1).

6.2.3.2 Coral Effects

Coral effects anticipated under Sub-Action C would be similar to those described for Sub-Action B (Section 6.2.2.2).

6.2.3.3 Wildlife Effects

6.2.3.3.1 Marine Reptiles

Marine reptile effects anticipated under Sub-Action C would be similar to those discussed for Sub-Action B (Section 6.2.2.3.1).

6.2.3.3.2 Marine Mammals

Marine mammal effects anticipated under Sub-Action C would be similar to those discussed for Sub-Action B (Section 6.2.2.3.2).

6.2.3.3.3 Seabirds

Seabird effects anticipated under Sub-Action C would be similar to those discussed for Sub-Action B (Section 6.2.2.3.3).

6.3 SUMMARY OF ENVIRONMENTAL EFFECTS BY ALTERNATIVE

Environmental effects are summarized by alternative and sub-action in Table 1.

Table 1. Summary of possible adverse impacts of alternatives

Alternative	Potential Effect					
	Kingman Reef			Palmyra Atoll		
	Habitat/ Water Quality	Coral Community	Wildlife	Habitat/ Water Quality	Coral Community	Wildlife
No Action Alternative	physical erosion of reef structure caused by ship and debris; continual supply of iron to water column as vessels degrade; accidental ingestion of debris	physical abrasion and crushing of coral by ship and debris; leeching of iron, causing coral community shift and proliferation of <i>D. tenuissima</i> ; potential outbreaks of <i>A. planci</i>	indirect effects on food web through habitat and coral impacts; degradation of potential forage habitat	continual supply of iron to water column as vessels degrade; physical effects to habitat	physical wear from ship; leeching of iron, causing coral community shift and proliferation of corallimorphs	effects on food web through habitat and coral effects with resulting degradation of forage habitat
Preferred Action alternative – Sub-Action A, Kingman Reef fishing vessel salvage	underwater noise; localized degradation of coral structure at anchor points	localized mortality of coral at anchor points	underwater noise; entanglement; ship strike; disturbance due to presence of humans; disturbance due to deck lights	na	na	na
Preferred Action alternative – Sub-Action B, <i>F/V Hui Feng No. 1</i> salvage	na	na	na	underwater noise; petroleum release; crushing or breaking of coral structure	petroleum exposure; physical crushing or breaking of coral	underwater noise; disturbance due to presence of humans; petroleum exposure; entanglement; ship strike; disturbance due to deck lighting
Preferred Action alternative – Sub-Action C, <i>Rust Island</i> salvage	na	na	na	underwater noise; sediment resuspension; sedimentation of coral; physical crushing or breaking of coral	sedimentation of coral; physical crushing or breaking of coral	underwater noise; disturbance due to presence of humans; petroleum exposure; entanglement; ship strike; disturbance due to deck lighting

na – not applicable

Bold identifies a temporary impact that would be likely to occur; all others would be possible but highly unlikely due to various mitigating factors or procedural controls.



6.4 CUMULATIVE IMPACTS

The CEQ guidance (1997) identifies four basic types of effects that can lead to cumulative impacts:

- ◆ **Type 1** – Repeated additive effects on a resource from a single project
- ◆ **Type 2** – Stressors from a single project that have an interactive net effect on a resource
- ◆ **Type 3** – Additive effects on a resource arising from multiple sources
- ◆ **Type 4** – Effects arising from multiple sources that affect resources in an interactive fashion

Although the salvage operations at Kingman Reef and Palmyra Atoll would have temporary adverse impacts on individuals (mostly coral), cumulative impacts on the community would not be expected. Noise levels during salvage operations would not be substantially different from current underwater noise levels from boat traffic at the sites. The research station currently operates a 26-ft ocean-going vessel and five 16-ft Carolina skiffs powered by 20- to 60-horsepower engines. In addition, research activities in this environment have included the use of pneumatic and hydraulic drilling and the installation of permanent transects using hammers. Thus, the use of saws or motors during salvage operations would be comparable to work already performed in the vicinity of the shipwrecks, particularly at Palmyra Atoll. All actions would occur during a finite period of time (i.e., up to 10 days at Kingman Reef and approximately 1 month at Palmyra Atoll) and would not represent a chronic noise disturbance. The proposed actions would also not be repeated over time; the shipwrecks would be salvaged only once.

The risk of physical damage to coral from the shipwrecks already exists in the environment, and the preferred alternative would remove the greatest physical threat to the reefs. Strict adherence to BMPs, including surveying transit routes prior to salvage operations, minimal use of anchor lines and anchors in coral substrate, and adherence to and rapid implementation of an emergency spill and response plan would avoid and minimize threats to coral reefs during the removal of the vessels. No significant impacts would be expected to occur during the Preferred Action.

It should be noted that the concurrence of USFWS and the Palmyra Atoll Research Consortium (PARC) operations with the proposed salvage actions (Sub-Actions B and C) represents a possible additive source for impacts at Palmyra Atoll NWR. Specifically, the presence of humans would be increased during the actions. The fact that no ship strikes have occurred as a result of boat traffic at Palmyra Atoll to date suggests that the increased presence of boat traffic during the Preferred Action would not pose an additive source for ship strikes.

Other noted potential impacts, such as exposure to chemicals, entanglement in lines, or underwater noise, are not considered to be additive. Rather, the exposure to chemicals and entanglement in lines would be limited only to the salvage operations. Underwater noise, although it could be more diffuse with additional vessels in the water, would not increase in intensity and thus not result in significant impacts (i.e., strandings).

6.5 SIGNIFICANT UNAVOIDABLE NEGATIVE EFFECTS

No significant unavoidable negative effects have been identified for protected species. Temporary impacts resulting in non-significant adverse effects have been noted in earlier sections (Table 1), but these impacts would not result in a significant adverse effect relative to baseline conditions. Only problematic corallimorph species under the elevated platform in the area of Sub-Action B would be significantly impacted and then only within the footprint of the eight 36-in.-diameter holes. This footprint is very small relative to the size of the refuge, as well as the area within the refuge that is colonized by corallimorphs. In addition, whenever possible, the jack-up legs will be placed in sand or barren substrate. Because the ultimate goal of the restoration effort at Palmyra Atoll is to limit the aggressive growth of these species, this negative impact could alternatively be viewed as a positive effect on the biodiversity of the overall community. Similarly, Sub-actions A and C would not result in significant unavoidable negative effects on protected species.

6.6 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND LONG-TERM PRODUCTIVITY

The Palmyra Atoll and Kingman Reef NWRs are considered to be some of the most pristine reef environments in the world because of their relative isolation and the lack of anthropogenic inputs (e.g., coastal pollution discharges, overfishing, urban runoff). The three shipwrecks have negatively impacted the physical, biological, and biogeochemical environments at Palmyra Atoll and Kingman Reef. At Palmyra Atoll, the wrecks have enriched the marine environment with iron, a limiting nutrient for autotrophs in Pacific coral reef communities, thus encouraging aggressive growth of the corallimorph *R. howesii* at Palmyra Atoll and the macroalga *D. tenuissima* at Kingman Reef. The rapid spread of corallimorph has initiated a dramatic phase shift in the reef community at Palmyra Atoll from a diverse coral-dominated environment to a corallimorph-dominated one. As a result, the resident fish assemblage within the impacted area has also changed. At Kingman Reef, marine debris from the fishing vessel has damaged the physical structure of the reef in addition to leached iron, with an associated phase shift away from CCA and hard corals to algae-dominated communities.

Although salvage operations would have short-term effects related to underwater noise, the physical presence of the vessels and barges, and the impact of the jack-up legs on the dead coral skeleton substrate, the removal of the three vessels would provide a

longer-term benefit to the coral reef ecosystem at Palmyra Atoll and Kingman Reef. Salvage operations performed under each sub-action would remove physical and biogeochemical hazards from the reefs and provide an opportunity for the management of problematic species of corallimorph or macroalgae (as applicable).

6.7 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Certain irreversible and irretrievable funds and resources would be required in order to complete the proposed Preferred Alternative connected actions. The cost of labor and all associated requirements for maintaining a crew onboard a barge (e.g., food, toiletries, emergency equipment, personal protective equipment) would be paid or otherwise consumed by the contractor. Similarly, fuel and other consumables associated with the operation of machinery and disposal of salvaged material would be exhausted during the salvage operations.

6.8 CULTURAL AND ECONOMIC IMPACTS OF ALTERNATIVES

6.8.1 No Action alternative

Kingman Reef and Palmyra Atoll have no indigenous peoples and no known cultural resources that require protection. Therefore, cultural resources of anthropological interest can be excluded from further consideration.

Under the No Action alternative, habitat impacts -- specifically phase shifts in the coral community to corallimorph or macroalgal species from the stable hard coral and CCA community -- would be allowed to continue and would be expected to worsen over time. The degradation of the natural community, one that is widely considered the "pristine" baseline for comparison with those of degraded reefs, is expected to have a negative impact on the scientific community at the Kingman Reef and Palmyra Atoll NWRs, which relies heavily on grant money and donations in order to continue scientific research. Research conducted in the area provides insight into reef ecology, biology, and biogeochemistry, as well as the impacts of climate change, on the ecosystem. Without such research, observations made by Work et al. (2008) or Kelly et al. (2012) may not have been possible, and the known impacts at Palmyra Atoll and Kingman Reef would have gone unnoticed.

Given that all NWRs are intended to provide for the conservation, management, and, where appropriate, restoration of both natural and cultural resources in perpetuity, allowing these resources to continue to degrade (i.e., No Action alternative) is directly opposed to the mission of the NWR system in general and specifically the purpose of the Palmyra Atoll and Kingman Reef NWRs (according to language in 16 USC 460k-460l, 668dd-668ee, and 742f).

6.8.2 Preferred Action Alternative

Kingman Reef and Palmyra Atoll have no indigenous peoples and no known cultural resources that require protection. Therefore, cultural resources can be excluded from further consideration.

The Preferred Action alternative is expected to have a positive net impact on the natural communities at both Kingman Reef and Palmyra Atoll, resulting in a positive economic impact in the form of continued research funding and donations. It is assumed that by providing for healthier communities at both locations, these areas would continue to be used as a “pristine” baseline for comparison with those at degraded reefs and would stimulate donor interest and generate grant funding for the scientific community.

7 Consultation and Coordination

The NEPA scoping process (40 CFR 1501.7) was used to determine the scope of the analysis and identify potential issues and opportunities related to the Preferred Action alternative. A summary of the scoping and public involvement process for the proposed actions follows. The NEPA scoping process for the removal of shipwrecks from Palmyra Atoll and Kingman Reef NWRs involved both internal and external scoping. The internal scoping process included a review of the biological, physical, and social issues associated with removing shipwrecks from Palmyra Atoll and Kingman Reef. The external scoping process involved consultation with cooperative and regulatory agencies that have specialized expertise or a stake in the outcome of the project.

Refuge managers explored multiple options for shipwreck removal, including the coordination of draft project proposals with NOAA for an American Recovery and Reinvestment Act project, as well as requesting a professional training exercise from the US Department of Defense (DOD) military readiness program. Both options were identified as potential means for removing the shipwrecks from Palmyra Atoll and Kingman Reef.

Scientists from the US Geological Survey (USGS), University of Hawaii, and PARC have conducted scientific studies on the effects of the shipwrecks, documenting the need for their removal. A non-governmental organization, the Marine Conservation Institute, sponsored an online petition for the DOI and USFWS to remove the wrecks (Youle 2011); this was the extent of public involvement.

7.1 REGULATORY FRAMEWORK

The following federal codes of regulation, proclamations, and executive orders are potentially relevant to the proposed Preferred Action alternative:

- ◆ Antiquities Act (16 USC 431 *et seq.*), which provides statutory authority for the establishment of national monuments

- ◆ Proclamation 8336, January 6, 2009 – Establishment of Palmyra Atoll and Kingman Reef as a part of the Monument
- ◆ Clean Water Act of 1972, as amended (33 USC 1251 *et seq.*)
- ◆ Endangered Species Act of 1973, as amended (16 USC 1531 *et seq.*)
- ◆ Executive Order 13186 of January 10, 2001 – Responsibilities of Federal Agencies to Protect Migratory Birds
- ◆ Executive Order 13112 of February 3, 1999 – Invasive Species
- ◆ Executive Order 13089 of June 11, 1998 – Coral Reef Protection
- ◆ Executive Order 13158 of May 26, 1998 – Marine Protected Areas
- ◆ Executive Order 11990 of May 24, 1977 – Protection of Wetlands
- ◆ Executive Order 12898 of February 11, 1994 – Environmental Justice
- ◆ Executive Order 11514 of March 5, 1970 – Protection and Enhancement of Environmental Quality
- ◆ Executive Order 12962 of June 9, 1995 – Recreational Fisheries
- ◆ Federal Insecticide, Fungicide, and Rodenticide Act of 1947, as amended (7 USC 136 *et seq.*)
- ◆ Fish and Wildlife Act of 1956 (16 USC 742f, 16 USC 661 *et seq.*)
- ◆ Marine Mammal Protection Act of 1972 (16 USC 1361 *et seq.*)
- ◆ Migratory Bird Treaty Act of 1918, as amended (16 USC 703-712, July 3, 1918)
- ◆ National Environmental Policy Act of 1969 (42 USC 4331 *et seq.*)
- ◆ National Historic Preservation Act of 1966, as amended through 2000, (16 USC 470 *et seq.*)
- ◆ Archeological Resources Protection Act (16 USC 470aa-mm)
- ◆ National Wildlife Refuge System Administration Act of 1966, as amended, (16 USC 668dd-ee)
- ◆ Refuge Recreation Act (16 USC 460k-3)
- ◆ Rivers and Harbors Act (33 USC 401 *et seq.*)
- ◆ Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended (16 USC 38 *et seq.*)
- ◆ Coastal Zone Management Act (16 USC 1451 *et seq.*, 15 CFR 923)
- ◆ Public Law 106-554 – Information Quality

- ◆ Paper Reduction Act (44 USC 3501 *et seq.*)

All the regulations listed above were considered during the compilation of this EA and the development of the technical approach for the Preferred Action. All measures would be taken to comply with the regulations listed above as appropriate to the Preferred Action alternative.

7.2 AGENCY SCOPING AND REVIEW

A planning team consisting of USFWS biologists, ecologists, engineers, contract specialists, and managers developed the scope of work for the project. During its development, over the course of years, team members met and communicated with scientists and managers from NOAA, USGS, USCG, and DOD, underwater salvors, marine engineers, non-governmental organizations, universities, and members of the public to discuss the project and operational needs.

8 Response to comments on the Draft EA

Comments were received from The American Museum of Natural History regarding marine reptiles.

Comment #1:

The closest emergent land from the work site is Strawn Island, where turtle nesting activity was documented in May and June 2013. Operation teams should not use Strawn as a staging area for equipment or any activity during the wreck removal to avoid disrupting nesting habitat. Land-based staging areas should be restricted to the wharf adjacent to the workshop.

FWS reply:

The emergent land closest to the work site and action area is Sand Island. However, the operations team will not be staging any equipment on refuge lands. The removal of the Hui Feng and Rust Island will be completely ship based, and there will be no staging of equipment on any of the Refuge Islands. If, in the event that the salvage company does need a land based staging area, the ripple wharf on Cooper Island will be used.

Comment #2:

Even from 08-11, we had 60 of 211 captures in West – and post 2011 with the addition of rodeo capture method, the western flats should be considered a hotspot. We did not census Western Terrace in the surveys and do not go that far out for rodeo capture. We do observe turtles there during snorkel tow surveys and while snorkeling. Since the channel hasn't been specifically surveyed for turtles in the above-mentioned study, it cannot be stated that there is a relatively low abundance of turtles in that area near the

proposed action area. Standardized transects need to be completed to determine the importance of this channel habitat. During exploratory snorkeling of the area, we have observed several turtles, manta rays, and sharks. Two different juvenile hawksbill individuals, a species thought to be rare in PA, have been photographed while snorkeling in the action areas. While turtles are resilient species, the salvage activities do have the potential to be disruptive to their normal behaviors.

FWS reply:

The above data have been entered into the final EA and the text has been changed.

Sea turtles have been observed at Palmyra Atoll throughout the year and will therefore be present during salvage operations (Pollock 2013a, c). Green sea and hawksbill sea turtles are known to use Palmyra Atoll for foraging (USFWS 2011d) and have been observed in the dredged channel near the Sub-Action B proposed action area (Pollock 2013c). Systematic surveys conducted between 2008-2011 (Sterling et al. 2013) indicated that turtles are distributed unevenly across the atoll, with “hot spots” of abundance noted on the coral flats surrounding the atoll. During the 6 seasons of this study, from 2008-2013, turtles were found to be abundant on the western flats and were also observed during snorkel surveys on the Western Terrace. Ad hoc observations and analysis of capture data show that the turtles on the western terrace are larger and slower moving than elsewhere in the atoll. Data from turtles with acoustic transmitters show that 14 of 26 turtles tagged between September 2009- and August 2011 were detected by the 17 acoustic receivers that are within 1km of the proposed work sites (receivers are between 0.12 and 0.71 km of the shipwrecks), further indicating that these habitats are used by sea turtles.

Also, hawksbill sea turtles in the area appeared to be much less abundant than green sea turtles, with several juveniles and adults observed throughout the atoll, and in the action area, during the same study (Sterling et al. [in press]). While turtles are resilient animals, the salvage activities do have the potential to be disruptive to their normal behaviors, however, long term impacts are unlikely. Because there is an abundance of turtles near the Sub-Action B proposed action area and BMPs will be implemented during all salvage operations, the exposure of green sea and hawksbill sea turtles to most of the impacts identified in Section 6.2.1.3.1 (i.e., ship strikes, temporary entanglement in lines, possible chemical exposure, and human activity that could result in temporary behavioral changes) would be unlikely.

Comment #3: Included concerns about the acoustic receivers near the action area.

FWS reply:

Some of these receivers near the action area have already been moved or temporarily removed by PARC members. Any receivers within the action area that may be damaged will be marked and flagged accordingly. The acoustic receivers are deeper than the draft of the transit vessels and should not be impacted.

9 List of Preparers

This document was prepared by David DeVilbiss, Kerry Walsh, and Andrew Lawrence of Global Diving and Salvage, Inc.; Martin Curtin of Curtin Maritime, Corp.; and Kathleen Hurley, Brian Church, and Ron Gouguet of Windward Environmental LLC. Additional input and review was provided by Amanda Pollock, Susan White, and Mark Harris of USFWS.

10 Agencies, Organizations, and Persons Consulted

Amanda Pollock of USFWS, manager at Palmyra Atoll NWR, was consulted in the preparation of this EA. Also, Amanda Pollock will consult informally with NMFS as part of an informal Section 7 consultation for the two protected species of sea turtles and the Hawaiian monk seal.

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APPENDIX A. LIST OF SPECIES OF CONSERVATION
CONCERN KNOWN TO TRANSIT PALMYRA ATOLL AND
KINGMAN REEF

Appendix A. List of Species of Conservation Concern Known to Transit Palmyra Atoll and Kingman Reef

The purpose of this appendix is to present all the possible species of special conservation concern that may be present within the Kingman Reef or Palmyra Atoll National Wildlife Refuges (NWRs) during the year. Many of the species provided in the lists below have not been physically observed in the area, but the species are known to have generalized distributions that overlap with the NWRs. These species are noted in main text of the *Ecological Assessment of Wreck Removal: Debris Recovery at Kingman Reef and F/V Hui Feng No. 1 and 'Rust Island' Removals at Palmyra Atoll*, but they are not discussed in any detail. 'Special conservation concern' as used here means that the species qualify for at least one of the following criteria:

- ◆ Federally listed as threatened or endangered or having critical habitat within Kingman Reef or Palmyra Atoll NWR¹ and therefore protected by the Endangered Species Act of 1973 (ESA), as amended
- ◆ Internationally listed as threatened or endangered by groups such as the International Union of Conservation of Nature (IUCN) or the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- ◆ Marine mammal and therefore protected by the Marine Mammal Protection Act of 1972 (MMPA), as amended
- ◆ Birds cited by the United States Fish and Wildlife Service as Birds of Conservation Concern (BCC)
- ◆ Species of coral which have been proposed for listing under ESA
- ◆ Species of fish with federally listed Essential Fish Habitat (EFH) and therefore protected under the Magnuson-Stevens Fishery Conservation and Management Act of 1976²

Table 1. Key mammalian species potentially present at Palmyra Atoll and Kingman Reef

Common Name	Latin Name	Status	Present in the action areas?
Risso's dolphin	<i>Grampus griseus</i>	MMPA-protected	No documented sightings, possible overlap of distribution
Fraser's dolphin/ Sarawak dolphin	<i>Lagenodelphis hosei</i>	MMPA-protected	No documented sightings, possible overlap of distribution
Gray's spinner dolphin	<i>Stenella longirostris</i>	MMPA-protected	Documented at Palmyra Atoll and Kingman Reef

¹ There are no species with listed critical habitat within Kingman Reef and Palmyra Atoll NWRs.

² There are no species with listed EFH within Kingman Reef and Palmyra Atoll NWRs.

Common Name	Latin Name	Status	Present in the action areas?
Striped dolphin	<i>Stenella coeruleoalba</i>	MMPA-protected	No documented sightings, possible overlap of distribution
Ginkgo-toothed beaked whale ^a	<i>Mesoplodon ginkgodens</i>	MMPA-protected	Documented at Palmyra Atoll but observed very infrequently
Blainville's beaked whale	<i>Mesoplodon densirostris</i>	MMPA-protected	No documented sightings, possible overlap of distribution
Rough-toothed dolphin	<i>Steno bredanensis</i>	MMPA-protected	No documented sightings, possible overlap of distribution
Common bottlenose dolphin	<i>Tursiops truncatus</i>	MMPA-protected	Documented at Palmyra Atoll and Kingman Reef
Pantropical spotted dolphin	<i>Stenella attenuata</i>	MMPA-protected	No documented sightings, possible overlap of distribution
False killer whale, Palmyra Atoll stock	<i>Pseudorca crassidens</i>	MMPA-protected	Documented at Palmyra Atoll
Pygmy killer whale	<i>Feresa attenuata</i>	MMPA-protected	No documented sightings, possible overlap of distribution
Short-finned pilot whale	<i>Globicephala macrorhynchus</i>	MMPA-protected	Documented at Palmyra Atoll
Pygmy sperm whale, Hawaiian stock	<i>Kogia breviceps</i>	MMPA-protected	No documented sightings, possible overlap of distribution
Dwarf sperm whale, Hawaiian stock	<i>Kogia sima</i>	MMPA-protected	No documented sightings, possible overlap of distribution
Blue whale, Central North Pacific stock	<i>Balaenoptera musculus musculus</i>	ESA-endangered; MMPA-depleted	No documented sightings, possible overlap of distribution (offshore)
Minke whale, Hawaiian Stock	<i>Balaenoptera acutorostrata scammoni</i>	MMPA-protected	No documented sightings, possible overlap of distribution
Humpback whale, IUCN Oceania subpopulation	<i>Megaptera novaeangliae</i>	MMPA-protected, IUCN-endangered	No documented sightings, possible overlap of distribution
Melon-headed whale	<i>Peponocephala electra</i>	MMPA-protected	Documented at Palmyra Atoll and Kingman Reef
Cuvier's beaked whale	<i>Ziphius cavirostris</i>	MMPA-protected	No documented sightings, possible overlap of distribution
Longman's beaked whale	<i>Indopacetus pacificus</i>	MMPA-protected	No documented sightings, possible overlap of distribution
Hawaiian monk seal	<i>Monachus schauinslandi</i>	ESA-critically endangered; MMPA-depleted	Documented at Palmyra Atoll, but viewed very infrequently

^a A new species or subspecies of beaked whale was recently identified at Palmyra Atoll as *Mesoplodon hotaula* or *M. ginkgodens hotaula*; in any case, the species is protected under MMPA and regulated by NMFS.

Distributions of marine mammals are largely based on maps provided by Carretta et al. (2013) and information found on the NOAA website (i.e., global distribution maps) (NOAA Fisheries 2012a, b, c, d, e, 2013).

ESA – Endangered Species Act

MMPA – Marine Mammal Protection Act of 1972; all species of marine mammals are protected by this statute

Table 2. Key avian species potentially present at Palmyra Atoll and Kingman Reef

Common Name	Latin Name	Status ^a	Present in the action areas?
Laysan albatross	<i>Phoebastria immutabilis</i>	BCC; IUCN-near threatened	No documented sightings, possible overlap of distribution
Black-footed albatross	<i>Phoebastria nigripes</i>	BCC; IUCN-vulnerable	No documented sightings, possible overlap of distribution
Phoenix petrel	<i>Pterodroma alba</i>	BCC; IUCN-endangered	No documented sightings, possible overlap of distribution
Christmas shearwater	<i>Puffinus nativitatis</i>	BCC	No documented sightings, possible overlap of distribution
Polynesian storm-petrel	<i>Nesofregatta fuliginosa</i>	BCC; IUCN-endangered	No documented sightings, possible overlap of distribution
Bristle-thighed curlew	<i>Numenius tahitiensis</i>	BCC; IUCN-vulnerable	Documented at Palmyra Atoll

^a USFWS does not have legal statute to regulate species identified as Birds of Conservation Concern
 BCC – Birds of Conservation Concern as listed by USFWS (2008)
 ESA – Endangered Species Act
 IUCN – International Union for Conservation of Nature; species listed as vulnerable by the IUCN are not protected under any United States statute
 USFWS – United States Fish and Wildlife Service

Table 3. Key herptile species potentially present at Palmyra Atoll and Kingman Reef

Common Name	Latin Name	Status	Present in the action areas?
Green sea turtle	<i>Chelonia mydas</i>	ESA-threatened; CITES-listed	Documented at Palmyra Atoll
Hawksbill sea turtle	<i>Eretmochelys imbricata</i>	ESA-endangered; CITES-listed	Documented at Palmyra Atoll
Olive Ridley sea turtle	<i>Lepidochelys olivacea</i>	ESA-endangered	No documented sightings, possible overlap of distribution
Leatherback sea turtle	<i>Dermochelys coriacea</i>	ESA-endangered	No documented sightings, possible overlap of distribution

CITES – Convention on International Trade in Endangered Species of Wild Fauna and Flora
 ESA – Endangered Species Act
 NMFS – National Marine Fisheries Service

Table 4. Key fish species potentially present at Palmyra Atoll and Kingman Reef

Common Name	Latin Name	Status	Present in the action areas?
Humphead wrasse	<i>Cheilinus undulatus</i>	CITES-listed	Documented at Palmyra Atoll
Whale shark	<i>Rhincodon typus</i>	CITES-listed	No documented sightings, possible overlap of distribution (offshore)
Blacktip reef shark	<i>Carcharhinus melanopterus</i>	IUCN—near threatened	Documented at Palmyra Atoll

Table 5. Key coral species potentially present at Palmyra Atoll and Kingman Reef

Latin Name	Status
<i>Acropora jacquelineae</i>	ESA-proposed endangered
<i>Acropora lokani</i>	ESA-proposed endangered
<i>Acropora rudis</i>	ESA-proposed endangered
<i>Anacropora spinosa</i>	ESA-proposed endangered
<i>Euphyllia paradviva</i>	ESA-proposed endangered
<i>Millepora foveolata</i>	ESA-proposed endangered
<i>Pocillopora elegans</i> (East Pacific)	ESA-proposed endangered
<i>Acanthastrea brevis</i>	ESA-proposed threatened
<i>Acanthastrea hemprichii</i>	ESA-proposed threatened
<i>Acanthastrea ishigakiensis</i>	ESA-proposed threatened
<i>Acanthastrea regularis</i>	ESA-proposed threatened
<i>Acropora aculeus</i>	ESA-proposed threatened; CITES-listed
<i>Acropora acuminata</i>	ESA-proposed threatened; CITES-listed
<i>Acropora aspera</i>	ESA-proposed threatened; CITES-listed
<i>Acropora dendrum</i>	ESA-proposed threatened
<i>Acropora donei</i>	ESA-proposed threatened
<i>Acropora globiceps</i>	ESA-proposed threatened
<i>Acropora horrida</i>	ESA-proposed threatened
<i>Acropora listeria</i>	ESA-proposed threatened
<i>Acropora microclados</i>	ESA-proposed threatened
<i>Acropora palmerae</i>	ESA-proposed threatened
<i>Acropora paniculata</i>	ESA-proposed threatened; CITES-listed
<i>Acropora pharaonis</i>	ESA-proposed threatened
<i>Acropora polystoma</i>	ESA-proposed threatened; CITES-listed
<i>Acropora retusa</i>	ESA-proposed threatened
<i>Acropora speciosa</i>	ESA-proposed threatened
<i>Acropora striata</i>	ESA-proposed threatened
<i>Acropora tenella</i>	ESA-proposed threatened
<i>Acropora vaughani</i>	ESA-proposed threatened; CITES-listed

Latin Name	Status
<i>Acropora verweyi</i>	ESA-proposed threatened
<i>Alveopora allingi</i>	ESA-proposed threatened
<i>Alveopora fenestrata</i>	ESA-proposed threatened
<i>Alveopora verrilliana</i>	ESA-proposed threatened; CITES-listed
<i>Anacropora puertogalerae</i>	ESA-proposed threatened
<i>Astreopora cucullata</i>	ESA-proposed threatened
<i>Barabattoia laddi</i>	ESA-proposed threatened
<i>Caulastrea echinulata</i>	ESA-proposed threatened
<i>Euphyllia cristata</i>	ESA-proposed threatened
<i>Euphyllia paraancora</i>	ESA-proposed threatened
<i>Isopora crateriformis</i>	ESA-proposed threatened
<i>Isopora cuneata</i>	ESA-proposed threatened
<i>Millepora tuberosa</i>	ESA-proposed threatened
<i>Montipora angulate</i>	ESA-proposed threatened
<i>Montipora australiensis</i>	ESA-proposed threatened
<i>Montipora calcarea</i>	ESA-proposed threatened
<i>Montipora calculata</i>	ESA-proposed threatened
<i>Montipora dilatata/ flabellata/ turgescens</i>	ESA-proposed threatened
<i>Montipora lobulata</i>	ESA-proposed threatened
<i>Montipora patula/ verrilli</i>	ESA-proposed threatened
<i>Pachyseris rugosa</i>	ESA-proposed threatened
<i>Pavona diffluens</i>	ESA-proposed threatened
<i>Pectinia alcornis</i>	ESA-proposed threatened
<i>Physogyra lichtensteini</i>	ESA-proposed threatened
<i>Pocillopora danae</i>	ESA-proposed threatened
<i>Pocillopora elegans</i> (Indo-Pacific)	ESA-proposed threatened
<i>Porites horizontalata</i>	ESA-proposed threatened
<i>Porites napopora</i>	ESA-proposed threatened
<i>Porites nigrescens</i>	ESA-proposed threatened
<i>Seriatopora aculeate</i>	ESA-proposed threatened

Note: This complete listing of species represents all coral species currently proposed for listing as either threatened or endangered in the Pacific Ocean. The presence of these species in the action areas is unclear. Species proposed for listing under ESA are not technically protected against take.

ESA – Endangered Species Act; proposed species are not currently protected by this act

References

- Carretta JV, Oleson E, Weller DW, Lang AR, Forney KA, Baker J, Hanson B, Martien K, Muto MM, Lowry MS, Barlow J, Lynch D, Carswell L, Brownell RL, Jr, Mattila DK, Hill MC. 2013. US Pacific marine mammal stock assessments: 2012. NOAA-TM-NMFS-SWFSC-504. Southwest Fisheries Science Center, National Marine Fisheries Service, LaJolla, CA.
- NOAA Fisheries. 2012a. Bottlenose dolphin (*Tursiops truncatus*). Office of Protected Resources, species information [online]. National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Silver Spring, MD. Available from: <http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/bottlenosedolphin.htm>.
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- NOAA Fisheries. 2012c. Melon-headed whale (*Peponocephala electra*). Office of Protected Resources, species information [online]. National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Silver Spring, MD. Updated 12/12/12. Available from: <http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/melonheadedwhale.htm>.
- NOAA Fisheries. 2012d. Short-finned pilot whale (*Globicephala macrorhynchus*). Office of Protected Resources, species information [online]. National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Silver Spring, MD. Available from: http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/pilotwhale_shortfinned.htm.
- NOAA Fisheries. 2012e. Spinner dolphin (*Stenella longirostris*). Office of Protected Resources, species information [online]. National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Silver Spring, MD. Updated 12/12/12. Available from: <http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/spinnerdolphin.htm>.
- NOAA Fisheries. 2013. Melon-headed whale, scientific name: *Peponocephala electra* [online]. Pacific Islands Regional Office, NOAA Fisheries Service, National

Oceanic and Atmospheric Administration, Honolulu, HI. [Cited 5/8/13.]
Available from: http://www.fpir.noaa.gov/PRD/prd_melonheaded.html.

USFWS. 2008. Birds of conservation concern 2008. US Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, VA.

APPENDIX B. SCOPE OF WORK PROVIDED BY USFWS

SOLICITATION, OFFER AND AWARD		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)	RATING	PAGE OF PAGES 1 3	
2. CONTRACT NUMBER	3. SOLICITATION NUMBER F12PS01171		4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)	5. DATE ISSUED 09/25/2012	6. REQUISITION/PURCHASE NUMBER
7. ISSUED BY CODE F01 FWS, DIVISION OF CONTRACTING AND GE EASTSIDE FEDERAL COMPLEX 911 NE 11TH AVENUE PORTLAND OR 97232-4181			8. ADDRESS OFFER TO (If other than Item 7)		

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

SOLICITATION

9. Sealed offers in original and 2 copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if hand carried, in the depository located in _____ until 1500 PD local time 10/25/2012
(Hour) (Date)

CAUTION: LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:	A. NAME KARL LAUTZENHEISER	B. TELEPHONE (NO COLLECT CALLS)			C. E-MAIL ADDRESS karl_lautzenheiser@fws.gov
		AREA CODE 503	NUMBER 231-2052	EXT.	

11. TABLE OF CONTENTS

(X)	SEC.	DESCRIPTION	PAGE(S)	(X)	SEC.	DESCRIPTION	PAGE(S)
PART I - THE SCHEDULE				PART II - CONTRACT CLAUSES			
<input checked="" type="checkbox"/>	A	SOLICITATION/CONTRACT FORM	2	<input checked="" type="checkbox"/>	I	CONTRACT CLAUSES	11-19
<input checked="" type="checkbox"/>	B	SUPPLIES OR SERVICES AND PRICES/COSTS	3	PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH.			
<input checked="" type="checkbox"/>	C	DESCRIPTION/SPECS./WORK STATEMENT	4	<input checked="" type="checkbox"/>	J	LIST OF ATTACHMENTS	20
<input type="checkbox"/>	D	PACKAGING AND MARKING		PART IV - REPRESENTATIONS AND INSTRUCTIONS			
<input checked="" type="checkbox"/>	E	INSPECTION AND ACCEPTANCE	5	<input checked="" type="checkbox"/>	K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS	21-26
<input checked="" type="checkbox"/>	F	DELIVERIES OR PERFORMANCE	6	<input checked="" type="checkbox"/>	L	INSTRS., CONDS., AND NOTICES TO OFFERORS	27-31
<input checked="" type="checkbox"/>	G	CONTRACT ADMINISTRATION DATA	7-8	<input checked="" type="checkbox"/>	M	EVALUATION FACTORS FOR AWARD	32
<input checked="" type="checkbox"/>	H	SPECIAL CONTRACT REQUIREMENTS	9-10				

OFFER (Must be fully completed by offeror)

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232.8)	<input type="checkbox"/> 10 CALENDAR DAYS (%)	<input type="checkbox"/> 20 CALENDAR DAYS (%)	<input type="checkbox"/> 30 CALENDAR DAYS (%)	<input type="checkbox"/> CALENDAR DAYS (%)
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14. ACKNOWLEDGEMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE

15A. NAME AND ADDRESS OF OFFEROR	CODE	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)
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15B. TELEPHONE NUMBER AREA CODE NUMBER EXT.	15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE. <input type="checkbox"/>	17. SIGNATURE	18. OFFER DATE
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AWARD (To be completed by government)

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION	
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304 (c) () <input type="checkbox"/> 41 U.S.C. 253 (c) ()		23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	ITEM
24. ADMINISTERED BY (If other than Item 7)	CODE	25. PAYMENT WILL BE MADE BY	CODE
26. NAME OF CONTRACTING OFFICER (Type or print) KARL LAUTZENHEISER		27. UNITED STATES OF AMERICA (Signature of Contracting Officer)	28. AWARD DATE

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.
AUTHORIZED FOR LOCAL REPRODUCTION
Previous edition is unusable

NAME OF OFFEROR OR CONTRACTOR

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
00010	<p>TITLE: Palmyra Atoll and Kingman Reef NWR Shipwreck Debris Removal</p> <p>Duns No. _____ (to be completed by offeror)</p> <p>Contractor POC: _____ Phone: _____ Email: _____</p> <p>Technical POC: Mark Harris Phone: 503-231-2209 Email: Mark_Harris@fws.gov</p> <p>Refuge POC: Amanda Meyer Phone: 808-792-9551 Email: Amanad_Meyer@fws.gov</p> <p>Contracting POC: Karl Lautzenheiser Phone: 503-231-2052 Email: Karl_Lautzenheiser@fws.gov Delivery: 12/30/2013 Delivery Location Code: 0008350430 FWS KLAMATH BSN NWR COMPLX 4009 HILL ROAD TULELAKE CA 96134-9758 US</p> <p>FOB: Destination</p> <p>Palmyra Atoll and Kingman Reef NWR Shipwreck Debris Removal</p> <p>See attached Statement of Work</p> <p>Period of Performance: 01/01/2013 to 12/30/2013.</p> <p>SOLICITATION DOCUMENTS AND ATTACHMENTS:</p> <ol style="list-style-type: none"> 1. Solicitation - Standard Form 33 (3 pages) 2. Attach 1- Notice to Offerors (8 pages) 3. Attach 2-Solicitation provision and clauses (32 pages) 4. Attach 3-Section M-Award Evaluation Factors (8 pages) 5. Attach 4- Statement of Work (Section 01010, General Requirements) (22 pages) 6. Attach 5-Past Performance Questionnaire (5 pages) 7. Attach 6-Subcontracting Plan (only applicable to Large Businesses submitting <p>Continued ...</p>				

NAME OF OFFEROR OR CONTRACTOR

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
8.	a proposal under Phase II) (10 pages) Attach 7-Questionnaire of Offerors Responsibility (word document to complete and return by all contractors under Phase I) (1 page)				
9.	Attach 8-Past and Current Contractor Info (word document to complete and return by all contractors under Phase I) (1 page)				



United States Department of the Interior

FISH AND WILDLIFE SERVICE

911 NE 11th Avenue
Portland, Oregon 97232-4181



In Reply Refer To:

NOTICE TO OFFERORS

SOLICITATION NO: **F12PS01171**

DESCRIPTION: Shipwrecks Removal at Palmyra Atoll and Kingman Reef National Wildlife located approximately 1,000 miles south of Honolulu Hawaii

REQUIREMENT IS UNRESTRICTED and will be open to any size business. Applicable NAICS Code is 488330. The small business size standard for NAICS code 488330 is \$35.5 million.

SITE VISIT: For those contractors selected under the Phase I evaluation to attend the site visit and submit a proposal under Phase II, at least one contractor representative will be able to attend the site visit and possibly up to two personnel per contractor if seating is available. Contractors selected must provide the names of a primary and secondary person planning on attending the site visit to the Contracting Officer within two days after notification of the selection notification. The Contracting Officer will notify the Contractor at least fourteen days in advance as to who will be able to attend. Personnel attending the site visit will be required to have passports.

**Please note that this flight schedule is dependent upon any weather delays that may occur. Contractors will be responsible for covering the cost of flying to Honolulu and any overnight accommodations. Contractors will also be responsible for overnight accommodations and food on Palmyra.

PAYROLLS UNDER SERVICE CONTRACT ACT: Not applicable to this requirement

ACCESS TO THE STATEMENT OF WORK AND OTHER ATTACHMENTS, will be available through the FedBizOpps web site (<https://www.fbo.gov>), but may be accessed more easily and will be available for viewing through the following FTP website:

http://www.fws.gov/filedownloads/ftp_r1cgs_solicitations/F12PS01171/

REQUEST FOR INFORMATION (RFI'S) FOR PHASE I: Questions pertaining to proposals submitted under Phase I are required by the close of business on October 10, 2012 and should be directed to the following individual:

Karl_Lautzenheiser@fws.gov

Questions received will be compiled and answers provided by issuance of an amendment thereafter.

REQUEST FOR INFORMATION (RFI'S) FOR PHASE II: A date for the submission of questions pertaining to proposals submitted under Phase II will be definitized after completion of the site visit and will also be directed to the following individual:

Karl_Lautzenheiser@fws.gov

Questions received will be compiled and answers provided by issuance of an amendment thereafter.

BONDING: Contractors selected under Phase I evaluations will be the only firms eligible to attend the site visit and submit a proposal for Phase II. Firms submitting a proposal for Phase II will be required to submit a bid bond for at least twenty (20) percent of bid price, but shall not exceed \$3 million with their proposal submission (See 52.228-1). The successful awardee for Phase II will be required to submit a one hundred (100) percent payment and performance bond within 15 calendar days after award of the contract. The one hundred percent payment and performance bond amount will equate to the initial award amount for the entire project.

PASSPORTS: Contractors selected under Phase I to attend the site visit will be required to have passports as will all employees of the successful awardee selected under Phase II for contract award.

CCR and ORCA REGISTRATION: Successful awardee will need to be active in the Central Contractor Registration (CCR) database and complete Online Representations and Certifications (ORCA). These can be completed through the System for Award Management web site of: <https://www.sam.gov/portal/public/SAM/>

PROPOSAL DUE DATE FOR PHASE I October 25, 2012, 3 PM PDT

PROPOSAL DUE DATE FOR PHASE II Date to be definitized after completion of the site visit. Currently anticipated to be approximately three weeks after completion of the site visit.

BASIS FOR AWARD: See evaluation factors in Section M

SEND PROPOSAL TO:

US Fish and Wildlife Service
CGS-MS 10181 Attn: Karl Lautzenheiser
911 NE 11th Ave
Portland, OR 97232-4181

FACSIMILE OR EMAIL RESPONSE FOR PHASE I ALLOWED: Facsimile and/or email responses are allowable for responses to Phase I proposal submission. Email responses are preferred. The email address and/or fax numbers to send proposal information to is as follows:

Email Address: Karl_Lautzenheiser@fws.gov
Fax Number(s): 503-231-6259 or 503-231-2333

FACSIMILE OR EMAIL RESPONSE FOR PHASE II ARE NOT ALLOWED: Facsimile and/or email responses against Phase II proposal submission will not be allowed (as original signature is required on bid guarantee that needs to be submitted with proposal).

For Further Information:

Technical Contact: Mark Harris (503) 231-2209
Contracting Contact: Karl Lautzenheiser (503) 231-2052

INSTRUCTIONS TO OFFEROR

- 1. BEFORE SUBMITTING AN OFFER, READ THE ENTIRE SOLICITATION PACKAGE CAREFULLY.**
- 2. OFFEROR MUST BE REGISTERED WITH CENTRAL CONTRACTOR REGISTRATION (CCR) AND COMPLETE ONLINE REPRESENTATIONS AND CERTIFICATIONS (ORCA) AT THE SYSTEM FOR AWARD MANAGEMNET WEB SITE OF: <https://www.sam.gov/portal/public/SAM/>**
- 3. TO SUBMIT AN OFFER READ AND RETURN THE NECESSARY INFORMATION LISTED IN THE NOTICE TO OFFERORS.**
- 4. AWARD FOR CONTRACTORS SELECTED UNDER PHASE I TO ATTEND THE SITE VISIT AND SUBMIT A PROPOSAL WILL BE BEST VALUE BASED UPON THE EVALUATION CRITERIA FOR PHASE II AS ADDRESSED IN SECTION M OF THE SOLICITATION.**

NOTICE TO OFFERORS - PROPOSAL PREPARATION INSTRUCTIONS (Also see provision 52.215-1 in Section L)

A. GENERAL INSTRUCTIONS:

1. Offers will be evaluated using the criteria under Section M, "Evaluation Factors for Award." Noncompliance with the Request for Proposal (RFP) requirements will raise serious questions regarding an offeror's technical and/or cost performance and may be grounds to eliminate the proposal from consideration for contract award.
2. In this procurement, the RFP provides an initial Statement of Work (SOW). In the response to the RFP for Phase I, the Offeror's Experience Data (Factor 1), and Past Performance Data (Factor 2) volume shall demonstrate an understanding of the technical requirements in the SOW and the challenges unique to the shipwreck debris removal on Palmyra Atoll and Kingman Reef National Wildlife Refuge (NWR).
3. Offerors are advised that their proposals are presumed to represent their best efforts and most complete responses to this solicitation. **Cursory responses or responses which merely reiterate the contents of the RFP/SOW will be considered unacceptable.** Assurance of past performance and experience data for proposal submission against Phase I that clearly demonstrate and support the offeror's claims are essential. The absence of such evidence will adversely influence evaluation of the proposal. **Any offeror that misses the required delivery date will be deemed unresponsive.**
4. Offerors that are chosen to attend the site visit and provide a proposal for Phase II are again advised that their proposals are presumed to represent their best efforts and most complete responses to this solicitation. Cursory responses or responses which merely reiterate the contents of the RFP/SOW will be considered unacceptable. Responses to the technical approach (Factor 3) for Phase II should show a thorough understanding of all aspects of the project and the challenges required to complete project requirements as addressed in Statement of Work. The absence of such evidence will adversely influence evaluation of the proposal. **Any offeror that misses the required delivery date will be deemed unresponsive.**

5. Offerors submitting a proposal under Phase II must ensure that no pricing information is displayed in the technical approach (Factor 3) volume.

6. Contract award may be made without discussions. Offerors are encouraged to present their best technical and price arrangements in their initial proposal submission.

7. **All solicitation amendments must be acknowledged in accordance with Section L, FAR 52.215-1, Instruction to Offerors—Competitive Acquisition for an offeror to be considered responsive.**

8. Proposals shall not contain classified information.

B. PURPOSE:

The instructions in this notice to offerors prescribe the format of proposals, and describe the approach for the development and presentation of the proposed data. The proposal shall include all of the information requested in the specific instructions. Failure to include all information requested may adversely affect the evaluation. A proposal that merely reiterates or promises to accomplish the requirements of the SOW will be considered unacceptable. A proposal that is orderly and sufficiently documented will enable the Government to easily understand and perform a thorough and fair evaluation.

C. INSTRUCTIONS FOR PREPARATION OF RESPONSE TO SOLICITATION FOR PHASE I: The offeror's response to the solicitation sections below shall be provided for Phase I. Sections A, K and L of the solicitation must be completed as follows:

Section A - Complete in its entirety the "Offeror" portion of the Standard Form 33. An official having the authority to bind your company contractually must sign the SF 33 in accordance with FAR 4.102. One copy of the SF 33 must bear an original signature. Please include Duns number in block 15A as well.

Section H (attachment 2) – Complete key personnel under clause LSM 14-Key Personnel and provide as part of required information under evaluation factor 2.

Section K (attachment 2) – Complete Clause 10181.22- Questionnaire of Offerors Responsibility, 10181.30 Past and Current Contract Information and 52.204-08 Online Representation and Certifications (ORCA).

Section L (attachment 2) - Submit all required information in accordance with attachment 5 titled "Past Performance Rating Questionnaire". Mark all packages "SOURCE SELECTION SENSITIVE." Please note that this questionnaire must be received by the Contracting Officer on or before the closing date of the solicitation. Any questionnaire's received after the closing date will be sent back to the Contractor.

Section M (attachment 3) – Provide all information cited under evaluation factors 1 and 2 for experience and past performance data as requested therein.

All solicitation amendments must be acknowledged in accordance with Section L, FAR 52.215-1, Instruction to Offerors—Competitive Acquisition for an offeror to be considered responsive.

D. PROPOSAL FORMAT FOR PHASE I: A complete proposal for Phase I consists of one (1) volume that covers the two (2) evaluation factors of 1) Experience Data (Factor 1); and 2) Past Performance Data (Factor 2). Evaluators will read only up to the maximum number of pages specified. Proposals shall reflect quality rather than quantity. The construction of each volume shall not require extensive searching throughout the document(s) to locate and evaluate any items or area. The subcategories of information in each of the volumes should be highlighted for ease of evaluating the information contained therein.

E. INSTRUCTIONS FOR PREPARATION OF RESPONSE TO SOLICITATION FOR PHASE II: The offeror's response to the solicitation sections below shall be provided for Phase II. Technical approach and Section B of the solicitation must be completed as follows:

Section B (attachment 3) – Schedule of Items – Complete a separate volume to address evaluation factor 4, price. Provide lump sum for project, along with detailed cost breakdown of price elements that comprise each work element. For ease of administration, unit and extended amounts shall be rounded to whole dollar amounts.

Section M (attachment 3) – Complete a separate volume to address evaluation factor 3, technical approach and evaluation 4, price.

All solicitation amendments must be acknowledged in accordance with Section L, FAR 52.215-1, Instruction to Offerors—Competitive Acquisition for an offeror to be considered responsive.

F. PROPOSAL FORMAT FOR PHASE II: A complete proposal for Phase II consists of two (2) volumes. The first volume will include cover the technical approach (Factor 3) and the second volume will contain all pricing data (Factor 4). Evaluators will read only up to the maximum number of pages specified. Proposals shall reflect quality rather than quantity. The construction of each volume shall not require extensive searching throughout the document(s) to locate and evaluate any items or area. The subcategories of information in each of the volumes should be highlighted for ease of evaluating the information contained therein.

G. PROPOSAL LIMITATION: The Experience Data and Past Performance Data volume for Phase I shall not exceed the page limits stated below. The Technical Approach volume and Price volume shall not exceed the page limits stated below too. If page limits are exceeded, the pages in excess of the limit shall be removed and returned, unread, to the offeror. The Government will not accept any changes to the contractor's proposal after the closing date of the solicitation (See FAR 15.208 for further information regarding late proposals).

(a) **Page Limit Includes:** All appendices, charts, graphs, diagrams, tables, photographs, drawings, etc.

(b) **Page Limit Does Not Include the Price Volume.** The covers for volumes, tables of contents, indices, title pages, cross reference indices, and section dividers/tables will not be included in the page count if they are inserted solely to provide ease to the reader in locating parts/sections of the proposal. They will be counted if they contain any other information, i.e., diagrams, extraneous data, etc. Pages marked "This page intentionally left blank" will not be counted.

(c) **What Counts As A Page?** A page shall be an 8.5 X 11" sheet of paper (minimum of ½" margins). Fold-outs will be counted as the appropriate number of pages based on an 8.5 X 11" sheet of paper. The Government recommends that contractors number each page in order to eliminate any confusion. In the event a contractor creates an ambiguity, the Government may exercise its own discretion in counting pages. Two pages may be printed on one sheet of paper, but will count as 2 pages. The background color of each page of the proposal submission shall be white or ivory stock only. All material must be contained within the page limit identified for each volume, unless otherwise specified. **Offerors are instructed to specifically identify and section off all pages that are not included in the overall page count.** Page counts are provided as mandatory limits to assist in the evaluation of each proposal. Excess pages will not be evaluated.

3. **Text:** Type size will not be smaller than Microsoft Word Times New Roman 11 point font, normal proportional spacing. Text lines will be single spaced.

4. **Illustrations and Tables:** Foldout pages up to 11 X 17" will be allowed. For page count purposes, foldout pages will count as two 8.5 x 11" pages. Foldouts of charts, tables, or diagrams shall not exceed 11 x 17". All information (except for document numbers, page numbers, etc.) shall be provided within an image area of 9 x 15.5". For page count purposes, each printed side of a foldout page shall count as two pages. Figure callouts shall be legible and shall be at least six (6) points in height after final reduction. Figure callouts may be single spaced. Photo-reduced foldout pages will not be used to circumvent the stated page limitations.

5. **Binding:** Each volume of the proposal will be separately bound in standard loose-leaf, three-ring binder. The number of copies for each volume is specified below. Elaborate format and binding are neither necessary nor desirable. All binders will be capable of lying flat when opened. The cover and spine of each binder will clearly identify the offeror's name; volume number; RFP number, RFP title and copy number (e.g. copy 3 of 6). The original for each volume will be clearly identified on the cover and the spine. All binders will allow for easy removal and replacement of pages.

6. **Indexing:** Each volume will contain a "Table of Contents" for that volume of the proposal. The "Table of Contents" will identify major areas, paragraphs and subparagraphs by number and title as well as by page number and volume locations. Tab indexing will be used to identify sections as appropriate.

7. **Exceptions:** Offerors are advised that taking exception to any of the requirements specified in this solicitation may result in their proposal being found unacceptable. As the Government reserves the right to award without discussions, offerors run the risk of their proposal being found unacceptable as a result of exceptions to solicitation requirements. Clarification of Government requirements should be handled by submitting a question/recommended change prior to the site visit. If the offeror still finds it necessary to take exception to any of the requirements specified in this solicitation, clearly indicate each such exception in the Attachment 1

appropriate volume along with a complete explanation of why the exception was taken and what benefit accrues to the Government. All exceptions to the solicitation requirements (Sections A through M, to include the PWS) and supporting rationale shall be identified as such and consolidated into an overview section of the subject volume. An overview section is only required if the offeror takes exception to any requirement in the solicitation (the overview section will not be included in the proposal limitation described above). Exception to solicitation requirements may require the Government to amend the solicitation to reflect a changed requirement. **In the event the offeror takes no exception to the stated requirements, a statement to this effect shall be included in the subject volume.**

8. **Copies/Page Limit:** Copies of each volume shall be submitted in accordance with the chart below. The number of copies shall include the original. **Additionally, we are requesting electronic copies (as specified below) of all of the proposal information for each volume.** Electronic copies shall be submitted on a CD ROM using Microsoft Word (version 6.0 or newer). Electronic copies for the Price/Cost volume must be submitted on CD ROM using either Microsoft Word (version 6.0 or newer) and/or Excel 5.0 ("Read Only" files are acceptable). All disks shall be virus checked prior to submission. The Contractor shall certify the type and date of virus program utilized. **Replacement CD ROM will be required to update the final proposal resulting from any discussions.** All text shall be single spaced and printed black on white paper (black and white requirement does not apply to graphics, photos, etc.; company stationary and logo's are acceptable). Paper shall not exceed 8 ½ inches by 11 inches and printing shall be easily readable (for example 12-pitch type or 10 point proportional spacing.) Cross-references should be utilized to preclude unnecessary duplication of data between sections. Copy requirements and page limitations are as follows:

<u>VOL</u>	<u>TITLE</u>	<u>HARD COPIES</u>	<u>DISK/CD ROM</u>	<u>PAGE LIMITATION</u>
PHASE I				
I.	EXPERIENCE AND PAST PERFORMANCE DATA	2	1	30 Pages Maximum (SEE NOTE 1)
PHASE II				
II.	TECHNICAL APPROACH	2	1	30 Pages Maximum (SEE NOTE 2)
III.	PRICE	2	1	No Page Limit (SEE NOTE 3)

NOTE 1: The total number of pages for Volume I (Experience and Past Performance Data) is a maximum of 30 pages. Two pages maximum per project for past performance and experience data (total of 30 pages max for those factors). This does not include the Past Performance References submitted in subparagraph I.2 below. IAW specific instructions for past performance volume, responses for each of the past performance references are limited to three (3) pages per reference/contract.

NOTE 2: The total number of pages for Volume II (Technical Approach) is 30 pages.

NOTE 3: There is no page limitation for Volume III (Price).

I. SPECIFIC INSTRUCTIONS:

1. VOLUME I – EXPERIENCE AND PAST PERFORMANCE DATA (FACTORS 1 AND 2)

(a) The Past Performance and Experience Data Volume shall, at a minimum, be prepared in a form consistent with the evaluation criteria for award set forth in Section M of this solicitation. The volume shall be prepared in an orderly format and in sufficient detail to enable the Government to make a thorough evaluation of the contractor's technical competence and ability to comply with the contract task requirements specified in the Statement of Work.

(b) To facilitate evaluation, the Past Performance and Experience Data Volume should be specific, detailed, and complete to clearly and fully demonstrate that the offeror has a thorough understanding of the requirements for the accomplishment of the effort. Statements that the offeror understands, can, or will comply with the SOW (including referenced publications, Regulations, etc.); statements paraphrasing the SOW or parts thereof (including applicable publications, Regulations, etc.); and phrases such as "standard procedures will be employed" or "well known techniques will be used," etc., will be considered unacceptable. **Offerors should note that data submitted prior to the proposal submission will not be considered in the Government's evaluation. Therefore, such data should not be relied upon nor incorporated in the Past Performance and Experience Data by reference.**

(c) **PAST PERFORMANCE REFERENCES:**

(1) Offerors shall submit Past Performance References for the last five (5) current and completed contract efforts similar to the Government's Palmyra Atoll and Kingman Reef National Wildlife Refuge (NWR) shipwreck debris removal requirement. References must involve services relating to work performed under a similar type contract. Each of these references must be from separate contracts. The references shall be no more than ten (10) years old. Of the five (5) references submitted, the offeror shall include a representative number (proportional to the amount and complexity of work) of current and completed contracts for all planned major subcontractors who are a significant part of the proposed team. The offeror shall also submit a complete list of all contracts and subcontracts currently in process. A "Major Subcontractor" includes, but is not limited to, those subcontractors whose effort on this acquisition is projected to be 15% or more of the fixed price value over the life of the contract. Past Performance references may include those entered into by the Federal Government, agencies of state and local governments, and commercial (private) customers. Offerors that are newly formed entities without prior contracts should list contracts and subcontracts required above that all key personnel have worked on. The below information must be included in the Section K, Clause 10181.30 Past and Current Contract Information Questionnaire:

1. Contractor (Company/Division/Business Element)
2. Contract Number
3. Contract Type
4. Prime or Sub Contractor
5. Project Title
6. Project Title/Description of Work
7. Contract Amount
8. Period of Performance
9. Contracting Activity, Procuring Contracting Officer (PCO) and Administrative Contracting Officer (ACO) (if different from PCO) or Commercial Equivalent (Name, address, phone number, fax number and email address if known)
10. Point of Contact (POC)/Program Manager (Name, address, phone number, fax number and email address if known)
11. List of major subcontractors

(2) The burden for providing up-to-date PM/PCO/ACO information rests with the offeror. The government will not seek out corrections to incomplete or insufficient information on behalf of offerors. Unverifiable information will not be considered in past performance assessment. Offerors are responsible to provide the Past Performance questionnaire directly to the points of contacts listed above.

(3) Attached to the RFP is the attachment titled Past Performance Rating Questionnaire (to be used as part of the past performance evaluation). The top portion of the questionnaire shall be completed by the Offeror for each of the contracts identified. The Offeror shall then send the questionnaire to the appropriate POC (most likely the Program Manager). The questionnaires will be completed by the POC (not the offeror) and returned directly to the Contracting Officer (Karl.Lautzenheiser@fws.gov). **The responses received will be used as part of the Government's evaluation of past performance.** Offerors are responsible to ensure responses are received by the CO by the closing date of the solicitation for phase I. In addition, the Government may choose additional contracts and have a questionnaire filled out by the respective POC.

2. PAST PERFORMANCE: For each of the five (5) references provided in paragraph (c) (1) above, the Past Performance Volume shall provide and comply with the following:

(a) Offerors shall explain what aspects of the contract are deemed relevant to the proposed effort and identify how each contract ranks, in terms of relevancy, with respect to the other contracts addressed in the volume. In determining relevancy, the offeror should address contracts for the same or similar services, considering such areas as: the nature and complexity of the service involved, the required levels of technology, contract type, and location of work to be performed. Offerors are advised that the Government may use all data provided by the offeror in this volume and data obtained from other sources in the development of performance confidence assessments. Past performance information on contracts not listed by the offeror, or that of planned subcontractors, may also be evaluated. Other references identified (other than those identified by the offeror), may be contacted to verify past performance information received for that offeror. While the Government may elect to consider data obtained from other sources, the burden of providing current, accurate and complete past performance information rests with the offeror.

(b) Offerors shall provide information they feel is valuable to the Government's evaluation of Past Performance in accordance with Section M, Part 3.3, Evaluation Factor 2, Past Performance. In addition, offerors are given the opportunity to recommend other information that will provide recent relevant information. The offeror may provide information on problems encountered on any of the contracts and subcontracts identified above and corrective actions taken to resolve these problems. This may include, but is not limited to, a discussion of efforts accomplished by the offeror to resolve problems encountered

Attachment 1

on present or prior contracts as well as efforts to identify and manage program risk. Merely having problems does not automatically equate to a lower confidence rating, since the problems encountered may have been on a more complex program, or an offeror may have subsequently demonstrated the ability to overcome the problems encountered. The offeror is required to clearly demonstrate management actions employed in overcoming problems. This may allow the offeror to be assessed a higher confidence rating. For example, submittal of quality performance indicators or other management indicators that clearly support that an offeror has overcome past problems may be helpful. Categorize the information provided according to their relevance to the Past Performance evaluation factors contained in Section M. Offerors should not provide general information on their performance on the identified contracts. General performance information will be obtained from the references.

(c) The offeror may describe any quality awards or certifications that indicate the offeror possesses a high-quality process for developing and producing the services provided. Identify that segment of the company (one division or the entire company) that received the award or certification. Describe when the award or certification was bestowed. If the award or certification is over three years old, present evidence that the qualifications still apply.

(d) In accordance with FAR 15.305(a)(2), in the case of an offeror without a record of relevant past performance or for whom information on past performance is not available, the offeror will not be evaluated favorably or unfavorably on past performance. For evaluation purposes in accordance with Section M, Part 3.3, Factor 2, Past Performance, offerors would receive a "neutral" rating which reflects neither a favorable nor an unfavorable evaluation on past performance.

(e) Information contained within the Past Performance Information Retrieval System (PPIRS) may be used to supplement the Past Performance evaluation.

3. Volume II – Technical Approach (Factor 3)

The Government will evaluate technically acceptable proposals based upon an acceptable work plan approach that shows an understanding of all aspects of the project and the challenges required to complete this project as addressed in the Statement of Work for this project. Refer to key issues to address as cited for evaluation factor 3.

4. VOLUME III – PRICE (FACTOR 4)

(a) Price will be evaluated in accordance Section M, Part 4.3, Factor 4, Price. The Contracting Officer has determined that certified cost or pricing data is not required for this solicitation. However, information other than cost or pricing data is required to assess the offeror's price reasonableness, realism, and completeness in accordance with Section M, Part 4.3, Factor 4, Price.

(b) Offerors shall provide unit pricing for each work element of the proposal and a total extended amount. To allow for price adjustments and establishment of reasonable rates for future change orders, offerors shall provide pricing information to support their established overhead rate that would be applied to any future change order(s) and a proposed percentage rate that would be applied to any future change orders encountered. The Government reserves the right to request additional price information if needed to conduct the evaluation. Offeror's pricing formats are acceptable, provided they display the information requested herein.

(c) Data beyond that required by this instruction need not be submitted, unless you consider it essential to document or support your price position. All information relating to pricing data documentation must be included in the section of the proposal designated as the Price Volume.

(d) Award of this contract may be made without discussions. Offerors are encouraged to submit their best price to the Government in their initial cost proposal. Note that unrealistically low or high proposed costs or prices may be grounds for eliminating a proposal from competition either on the basis that the offeror does not understand the requirement or has made an unrealistic proposal.

(e) Offerors shall identify any price risks associated with their proposal, along with the suggested approaches for resolving or avoiding the identified risks.

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Part I – Section A

Solicitation/Contract Form

52.209-2 Prohibition on Contracting with Inverted Domestic Corporations--Representation. (MAY 2011)

52.209-10 Prohibition on Contracting with Inverted Domestic Corporations. (MAY 2012)

52.236-3 Site Investigation and Conditions Affecting the Work (APR 1984)

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

(End of clause)

52.236-7 Permits and Responsibilities. (NOV 1991)

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

(End of clause)

Part I – Section B

Supplies or Services/Prices

Pricing to be provided under Phase II (evaluation factor 4) and is applicable only to those eligible firms selected under Phase I to attend the site visit and able to submit a proposal for Phase II. Volume 3 is one of the volumes to be submitted with a total figure and breakdown of prices for each work element.

Part I – Section C

Description/Specifications

The Contractor shall furnish the necessary personnel, material, equipment, services and facilities (except as otherwise specified) to perform the Statement of Work.

To view the Statement of Work and other associated solicitation documents, visit the website as follows:

http://www.fws.gov/filedownloads/ftp_rl cgs_solicitations/F12PS01171/

Part I – Section E
Inspection and Acceptance

52.242-15 Stop-Work Order (AUG 1989)

52.246-4 Inspection of Services—Fixed-Price (AUG 1996)

(a) *Definition.* “Services,” as used in this clause, includes services performed, workmanship, and material furnished or utilized in the performance of services.

(b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.

(c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all times and places during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.

(d) If the Government performs inspections or tests on the premises of the Contractor or a subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, at no increase in contract price, all reasonable facilities and assistance for the safe and convenient performance of these duties.

(e) If any of the services do not conform with contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, at no increase in contract amount. When the defects in services cannot be corrected by reperformance, the Government may—

(1) Require the Contractor to take necessary action to ensure that future performance conforms to contract requirements; and

(2) Reduce the contract price to reflect the reduced value of the services performed.

(f) If the Contractor fails to promptly perform the services again or to take the necessary action to ensure future performance in conformity with contract requirements, the Government may—

(1) By contract or otherwise, perform the services and charge to the Contractor any cost incurred by the Government that is directly related to the performance of such service; or

(2) Terminate the contract for default.

(End of clause)

Part I – Section F

Deliveries or Performance

52.211-10 Commencement, Prosecution, and Completion of Work. (APR 1984)

The Contractor shall be required to (a) commence work under this contract within fifteen (15) calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than December 13, 2013. The time stated for completion shall include final cleanup of the premises.

(End of clause)

Part I – Section G

Contract Administration Data

DOI ELECTRONIC INVOICING Electronic Invoicing and Payment Requirements - Invoice Processing Platform (IPP) (September 2011)

Payment requests must be submitted electronically through the U. S. Department of the Treasury's Invoice Processing Platform System (IPP).

"Payment request" means any request for contract financing payment or invoice payment by the Contractor. To constitute a proper invoice, the payment request must comply with the requirements identified in the applicable Prompt Payment clause included in the contract, or the clause 52.212-4 Contract Terms and Conditions - Commercial Items included in commercial item contracts. The IPP website address is: <https://www.ipp.gov>.

Under this contract, the following documents are required to be submitted as an attachment to the IPP invoice [CO to edit and include the documentation required under this contract]:

The Contractor must use the IPP website to register, access and use IPP for submitting requests for payment. The Contractor Government Business Point of Contact (as listed in CCR) will receive enrollment instructions via email from the Federal Reserve Bank of Boston (FRBB) within 3 - 5 business days of the contract award date. Contractor assistance with enrollment can be obtained by contacting the IPP Production Helpdesk via email ippgroup@bos.frb.org or phone (866) 973-3131.

If the Contractor is unable to comply with the requirement to use IPP for submitting invoices for payment, the Contractor must submit a waiver request in writing to the Contracting Officer with its proposal or quotation.

(End of Template)

CONTRACTOR PERFORMANCE ASSESSMENT REPORTING SYSTEM (JULY 2010)

- (A) FAR 42.1502 DIRECTS ALL Federal agencies to collect past performance information on contracts. The Department of the Interior (DOI) has implemented the Contractor Performance Assessments Reporting System, (CPARS) to comply with this regulation. One or more past performance evaluations will be conducted in order to record your contract performance as required by FAR 42.15.
- (b) The Past performance evaluation process is a totally paperless process using CPARS. CPARS is a web-based system that allows for electronic processing of the performance evaluation report. Once the report is processed, it is available in the Past Performance Information Retrieval System, (PPIRS) for Government use in evaluating past performance as part of a source selection action.
- (c) We request that you furnish the Contracting Officer with the name, position title, phone number, and email address for each person designated to have access to your firm's past performance evaluation(s) for the contract no later than **30 days after award**. Each person granted access will have the ability to provide comments in the Contractor portion of the report and state whether or not the Contractor agrees with the evaluation, before returning the report to the Assessing Official. The report information must be protected as source selection sensitive information not releasable to the public.
- (d) When your Contractor Representative(s) (Past Performance Points of Contact) are registered in CPARS, they will receive an automatically-generated email with detailed login

instructions. Further details, systems requirements, and training information for CPARS is available at <http://www.cpars.csd.disa.mil>. The CPARS User Manual, registration for On Line Training for Contractor Representatives, and a practice application maybe found at this site.

- (e) Within 60 days after the end of a performance period, the Contracting Officer will complete an interim or final past performance evaluation, and the report will be accessible at <http://www.cpars.csd.disa.mil>. Contractor Representatives may then provide comments in response to the evaluation, or return the evaluation without comment. Comments are limited to the space provided in Block 22. Your comments should focus on objective facts in the Assessing Official's narrative and should provide your reviews on the causes and ramifications of the assessed performance. In addition to the ratings and supporting narratives, blocks 1 – 17 should be reviewed for accuracy, as these include key fields that will be used by the Government to identify your firm in future source selection actions. If you elect not to provide comments, please acknowledge receipt of the evaluation by indicating "No comment" in Block 22, and the, signing and dating Block 23 of the form. Without a statement in Block 22, you will be unable to sign and submit the evaluation back to the Government. If you do not sign and submit the CPAR within 30 days, it will automatically be returned to the Government and will ne annotated: "The report was delivered/received by the contractor on (date). The contractor neither signed nor offered comment in response to this assessment." Your response is due within 30 calendar days after receipt of the CPAR.
- (f) The following guidelines apply concerning your use of the past performance evaluation:
 - (1) Protect the evaluation as "source selection information." After review, transmit the evaluation by completing and submitting the form through CPARS. If for some reason you are unable to view and/or submit the form through CPARS, contact the Contracting Officer for instructions.
 - (2) Strictly control access to the evaluation within your organization. Ensure the evaluation is never released to persons or entities outside of your control.
 - (3) Prohibit the use of or reference to evaluation data for advertising, promotional material, preaward surveys, responsibility determinations, production readiness reviews, or other similar purposes.
- (g) If you wish to discuss a past performance evaluation, you should request a meeting in writing to the Contracting Officer no later than seven days following your receipt of the evaluation. The meeting will be held in person or via telephone or means during your 30-day review period.
- (h) A copy of the completed past performance evaluation will be available in CPARS for your viewing and for Government use supporting source selection actions after it has been finalized.

(End of notice)

Part I – Section H

Special Contract Requirements

LSM 1452.237-80 Safety, Regulations, Laws to be Observed

SAFETY, REGULATIONS, LAWS TO BE OBSERVED (NOV 2007)

(a) The Contractor, its employees, and its subcontractors and employees shall abide by all safety rules applicable at the site of the work and shall comply with all applicable laws, ordinances, orders, codes, rules, regulations, etc. The Contractor shall furnish employees, including those of subcontractors, with recognized approved safety equipment, devices, and sanitary facilities and enforce compliance in their use consistent with accepted practices and applicable rules. The Contractor shall provide barricades, signs, and other safety equipment as required by Federal, State, or local codes.

(b) The Contractor shall comply with all regulations of the Occupational Safety and Health Act (OSHA) of 1970. The Government shall not be liable for any citations received by the Contractor as a result of failure to comply with applicable OSHA standards.

(c) All appropriate Township, County, State, and Federal Regulations, codes, and ordinances shall apply to this Contract. It shall be the Contractor's sole responsibility to be aware of these regulations and to comply with them. The Government shall not be liable for any citations received by the Contractor.

(d) The Contractor, at all times, shall observe, comply with, and post as required all Federal, State and local laws, ordinances, and regulations in any manner affecting the conduct of the work applying to employees on the project, as well as all orders or decrees which have been or may be promulgated or enacted by any legal bodies or tribunals having authority or jurisdiction over the work, materials, employees, or contract.

(e) The Contractor shall be aware that the Government may request periodic inspections of the Contractor's operations, facilities and equipment, by any applicable governing regulatory agency.

(f) If the Contractor fails or refuses to promptly comply with any of the requirements of this special provision, the Contracting Officer, or his authorized representative, shall notify the Contractor of the noncompliance and indicate to the Contractor the corrective action to be taken. The Contractor shall, after receipt of such notice, immediately correct the conditions to which attention has been directed. Such notice, either oral or written, when served on the Contractor or his authorized representative(s) at the site of the work, shall be deemed sufficient notice of noncompliance and of the need for corrective action.

(g) In the event the Contractor fails or refuses to promptly take corrective action, the Contracting Officer or his authorized representative may issue an order to suspend all or any part of the work. When satisfactory corrective action is taken, an order to resume work will be issued. The Contractor shall not be entitled to any extension of time, nor to any claim for damages or to excess costs by reason of either the directive or the suspension order. Failure of the Contracting Officer or his authorized representative to order discontinuance of any or all of the Contractor's operations shall not relieve the Contractor of his responsibility for the safety of personnel and property.

(h) Compensation for compliance with any of the above items is to be included in the various items of the Contract for the expense involved.

(End of clause)

LSM 14- KEY PERSONNEL – All contractors to submit this data under Phase I as part of required information under evaluation factor 2.

The following personnel are considered essential to the work being performed hereunder:

Prior to diverting the above personnel to other programs, the contractor shall notify the Contracting Officer reasonably in advance and shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact to the project.

LSM 16 AE Travel and Per Diem Costs

Costs incurred by contractor personnel for travel, including costs of lodging, other subsistence, and incidental expenses, shall be considered to be reasonable and allowable only to the extent that they do not exceed the rates and amounts set forth by FAR 31.205-46.

Part II – Section I

Contract Clauses

52.202-1 Definitions. (JAN 2012)

52.203-3 Gratuities. (APR 1984)

52.203-5 Covenant Against Contingent Fees. (APR 1984)

52.203-6 Restrictions on Subcontractor Sales to the Government. (SEP 2006)

52.203-7 Anti-Kickback Procedures. (OCT 2010)

52.203-8 Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity. (JAN 1997)

52.203-10 Price or Fee Adjustment for Illegal or Improper Activity. (JAN 1997)

52.203-12 Limitation on Payments to Influence Certain Federal Transactions. (OCT 2010)

52.204-4 Printed or Copied Double-Sided on Postconsumer Fiber Content Paper. (May 2011)

52.204-7 Central Contractor Registration. (AUG 2012)

52.204-10 Reporting Executive Compensation and First-Tier Subcontract Awards. (AUG 2012)

52.209-6 Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment. (DEC 2010)

52.209-9 Updates of Publicly Available Information Regarding Responsibility Matters. (FEB 2012)

52.215-2 Audit and Records - Negotiation. (OCT 2010)

52.215-8 Order of Precedence - Uniform Contract Format. (OCT 1997)

52.215-21 Requirements for Certified Cost or Pricing Data and Data Other Than Certified Cost or Pricing Data - Modifications. (OCT 2010)

52.219-8 Utilization of Small Business Concerns. (JAN 2011)

52.219-9 Small Business Subcontracting Plan. (JAN 2011) - Alternate II (OCT 2001)

52.219-28 Post-Award Small Business Program Rerepresentation. (APR 2012)

(a) *Definitions.* As used in this clause -

"Long-term contract" means a contract of more than five years in duration, including options. However, the term does not include contracts that exceed five years in duration because the period of performance has been extended for a cumulative period not to exceed six months under the clause at 52.217-8, Option to Extend Services, or other appropriate authority.

"Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size

standard in paragraph (c) of this clause. Such a concern is "not dominant in its field of operation" when it does not exercise a controlling or major influence on a national basis in a kind of business activity in which a number of business concerns are primarily engaged. In determining whether dominance exists, consideration shall be given to all appropriate factors, including volume of business, number of employees, financial resources, competitive status or position, ownership or control of materials, processes, patents, license agreements, facilities, sales territory, and nature of business activity.

(b) If the Contractor represented that it was a small business concern prior to award of this contract, the Contractor shall rerepresent its size status according to paragraph (e) of this clause or, if applicable, paragraph (g) of this clause, upon the occurrence of any of the following:

(1) Within 30 days after execution of a novation agreement or within 30 days after modification of the contract to include this clause, if the novation agreement was executed prior to inclusion of this clause in the contract.

(2) Within 30 days after a merger or acquisition that does not require a novation or within 30 days after modification of the contract to include this clause, if the merger or acquisition occurred prior to inclusion of this clause in the contract.

(3) For long-term contracts -

(i) Within 60 to 120 days prior to the end of the fifth year of the contract; and

(ii) Within 60 to 120 days prior to the date specified in the contract for exercising any option thereafter.

(c) The Contractor shall rerepresent its size status in accordance with the size standard in effect at the time of this rerepresentation that corresponds to the North American Industry Classification System (NAICS) code assigned to this contract. The small business size standard corresponding to this NAICS code can be found at <http://www.sba.gov/content/table-small-business-size-standards>.

(d) The small business size standard for a Contractor providing a product which it does not manufacture itself, for a contract other than a construction or service contract, is 500 employees.

(e) Except as provided in paragraph (g) of this clause, the Contractor shall make the rerepresentation required by paragraph (b) of this clause by validating or updating all its representations in the Online Representations and Certifications Application and its data in the Central Contractor Registration, as necessary, to ensure that they reflect the Contractor's current status. The Contractor shall notify the contracting office in writing within the timeframes specified in paragraph (b) of this clause that the data have been validated or updated, and provide the date of the validation or update.

(f) If the Contractor represented that it was other than a small business concern prior to award of this contract, the Contractor may, but is not required to, take the actions required by paragraphs (e) or (g) of this clause.

(g) If the Contractor does not have representations and certifications in ORCA, or does not have a representation in ORCA for the NAICS code applicable to this contract, the Contractor is required to complete the following rerepresentation and submit it to the contracting office, along with the contract number and the date on which the rerepresentation was completed:

The Contractor represents that it ___ is, ___ is not a small business concern under NAICS Code [insert NAICS Code] assigned to contract number [insert contract number]. (Contractor to sign and date and insert authorized signer's name and title).

(End of clause)

52.222-3 Convict Labor. (JUN 2003)

52.222-4 Contract Work Hours and Safety Standards Act - Overtime Compensation. (JUL 2005)

52.222-20 Walsh-Healey Public Contracts Act. (OCT 2010)

52.222-21 Prohibition of Segregated Facilities. (FEB 1999)

52.222-26 Equal Opportunity. (MAR 2007)

52.222-29 Notification of Visa Denial. (JUN 2003)

52.222-35 Equal Opportunity for Veterans. (SEP 2010)

52.222-36 Affirmative Action for Workers with Disabilities (OCT 2010)

52.222-37 Employment Reports on Veterans. (SEP 2010)

52.222-50 Combating Trafficking in Persons. (FEB 2009)

52.222-53 Exemption from Application of the Service Contract Act to Contracts for Certain Services--Requirements. (FEB 2009)

52.222-54 Employment Eligibility Verification. (JUL 2012)

(a) *Definitions.* As used in this clause—

“Commercially available off-the-shelf (COTS) item”—

(1) Means any item of supply that is—

(i) A commercial item (as defined in paragraph (1) of the definition at 2.101);

(ii) Sold in substantial quantities in the commercial marketplace; and

(iii) Offered to the Government, without modification, in the same form in which it is sold in the commercial marketplace; and

(2) Does not include bulk cargo, as defined in section 3 of the Shipping Act of 1984 (46 U.S.C. App. 1702), such as agricultural products and petroleum products. Per 46 CFR 525.1 (c)(2), “bulk cargo” means cargo that is loaded and carried in bulk onboard ship without mark or count, in a loose unpackaged form, having homogenous characteristics. Bulk cargo loaded into intermodal equipment, except LASH or Seabee barges, is subject to mark and count and, therefore, ceases to be bulk cargo.

“Employee assigned to the contract” means an employee who was hired after November 6, 1986 (after November 27, 2009 in the Commonwealth of the Northern Mariana Islands), who is directly performing work, in the United States, under a contract that is required to include the clause prescribed at 22.1803. An employee is not considered to be directly performing work under a contract if the employee—

(1) Normally performs support work, such as indirect or overhead functions; and

(2) Does not perform any substantial duties applicable to the contract.

“Subcontract” means any contract, as defined in 2.101, entered into by a subcontractor to furnish supplies or services for performance of a prime contract or a subcontract. It includes but is not limited to purchase orders, and changes and modifications to purchase orders.

“Subcontractor” means any supplier, distributor, vendor, or firm that furnishes supplies or services to or for a prime Contractor or another subcontractor.

“United States”, as defined in 8 U.S.C. 1101(a)(38), means the 50 States, the District of Columbia, Puerto Rico, Guam, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands.

(b) *Enrollment and verification requirements.*

(1) If the Contractor is not enrolled as a Federal Contractor in E-Verify at time of contract award, the Contractor shall—

(i) *Enroll.* Enroll as a Federal Contractor in the E-Verify program within 30 calendar days of contract award;

(ii) *Verify all new employees.* Within 90 calendar days of enrollment in the E-Verify program, begin to use E-Verify to initiate verification of employment eligibility of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within 3 business days after the date of hire (but see paragraph (b)(3) of this section); and

(iii) *Verify employees assigned to the contract.* For each employee assigned to the contract, initiate verification within 90 calendar days after date of enrollment or within 30 calendar days of the employee’s assignment to the contract, whichever date is later (but see paragraph (b)(4) of this section).

(2) If the Contractor is enrolled as a Federal Contractor in E-Verify at time of contract award, the Contractor shall use E-Verify to initiate verification of employment eligibility of—

(i) *All new employees.*

(A) *Enrolled 90 calendar days or more.* The Contractor shall initiate verification of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within 3 business days after the date of hire (but see paragraph (b)(3) of this section); or

(B) *Enrolled less than 90 calendar days.* Within 90 calendar days after enrollment as a Federal Contractor in E-Verify, the Contractor shall initiate verification of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within 3 business days after the date of hire (but see paragraph (b)(3) of this section); or

(ii) *Employees assigned to the contract.* For each employee assigned to the contract, the Contractor shall initiate verification within 90 calendar days after date of contract award or within 30 days after assignment to the contract, whichever date is later (but see paragraph (b)(4) of this section).

(3) If the Contractor is an institution of higher education (as defined at 20 U.S.C. 1001(a)); a State or local government or the government of a Federally recognized Indian tribe; or a surety performing under a takeover agreement entered into with a Federal agency pursuant to a performance bond, the Contractor may choose to verify only employees assigned to the contract, whether existing employees or new hires. The Contractor shall follow the applicable verification requirements at (b)(1) or (b)(2) respectively, except that any requirement for verification of new employees applies only to new employees assigned to the contract.

(4) *Option to verify employment eligibility of all employees.* The Contractor may elect to verify all existing employees hired after November 6, 1986 (after November 27, 2009, in the Commonwealth of the Northern Mariana Islands), rather than just those employees assigned to the contract. The Contractor shall initiate verification for each existing employee working in the United States who was hired after November 6, 1986 (after November 27, 2009, in the Commonwealth of the Northern Mariana Islands), within 180 calendar days of—

(i) Enrollment in the E-Verify program; or

(ii) Notification to E-Verify Operations of the Contractor’s decision to exercise this option, using the contact information provided in the E-Verify program Memorandum of Understanding (MOU).

(5) The Contractor shall comply, for the period of performance of this contract, with the requirements of the E-Verify program MOU.

(i) The Department of Homeland Security (DHS) or the Social Security Administration (SSA) may terminate the Contractor’s MOU and deny access to the E-Verify system in accordance with the terms of the MOU. In such case, the Contractor will be referred to a suspension or debarment official.

(ii) During the period between termination of the MOU and a decision by the suspension or debarment official whether to suspend or debar, the Contractor is excused from its obligations under paragraph (b) of this clause. If the suspension or debarment official determines not to suspend or debar the Contractor, then the Contractor must reenroll in E-Verify.

(c) *Web site.* Information on registration for and use of the E-Verify program can be obtained via the Internet at the Department of Homeland Security Web site: <http://www.dhs.gov/E-Verify>.

(d) *Individuals previously verified.* The Contractor is not required by this clause to perform additional employment verification using E-Verify for any employee—

(1) Whose employment eligibility was previously verified by the Contractor through the E-Verify program;

(2) Who has been granted and holds an active U.S. Government security clearance for access to confidential, secret, or top secret information in accordance with the National Industrial Security Program Operating Manual; or

(3) Who has undergone a completed background investigation and been issued credentials pursuant to Homeland Security Presidential Directive (HSPD)-12, Policy for a Common Identification Standard for Federal Employees and Contractors.

(e) *Subcontracts.* The Contractor shall include the requirements of this clause, including this paragraph (e) (appropriately modified for identification of the parties), in each subcontract that—

(1) Is for—

(i) Commercial or noncommercial services (except for commercial services that are part of the purchase of a COTS item (or an item that would be a COTS item, but for minor modifications), performed by the COTS provider, and are normally provided for that COTS item); or

(ii) Construction;

(2) Has a value of more than \$3,000; and

(3) Includes work performed in the United States.

(End of clause)

52.223-2 Affirmative Procurement of Biobased Products Under Service and Construction Contracts. (JUL 2012)

52.223-5 Pollution Prevention and Right-to-Know Information. (MAY 2011)

52.223-6 Drug-Free Workplace. (MAY 2001)

52.223-9 Estimate of Percentage of Recovered Material Content for EPA-Designated Items. (MAY 2008)

52.223-12 Refrigeration Equipment and Air Conditioners. (MAY 1995)

52.223-15 Energy Efficiency in Energy-Consuming Products. (DEC 2007)

52.223-17 Affirmative Procurement of EPA-designated Items in Service and Construction Contracts. (MAY 2008)

52.223-18 Encouraging Contractor Policies to Ban Text Messaging While Driving. (AUG 2011)

52.225-13 Restrictions on Certain Foreign Purchases. (JUN 2008)

52.225-25 Prohibition on Contracting with Entities Engaging in Sanctioned Activities Relating to Iran--Representation and Certification. (NOV 2011)

52.226-6 Promoting Excess Food Donation to Nonprofit Organizations. (MAR 2009)

52.227-1 Authorization and Consent. (DEC 2007)

52.228-2 Additional Bond Security. (OCT 1997)

52.228-5 Insurance-Work on a Government Installation (JAN 1997)

52.228-11 Pledges of Assets. (JAN 2012)

52.228-16 Performance and Payment Bonds-Other Than Construction (NOV 2005)

(Applicable to successful awardee)

(a) *Definitions.* As used in this clause—

“Original contract price” means the award price of the contract or, for requirements contracts, the price payable for the estimated quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

(b) The Contractor shall furnish a performance bond (Standard Form 1418) for the protection of the Government in an amount equal to one hundred (100) percent of the original contract price and a payment bond (Standard Form 1416) in an amount equal to one hundred (100) percent of the original contract price.

(c) The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within 15 days, but in any event, before starting work.

(d) The Government may require additional performance and payment bond protection if the contract price is increased. The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bonds or to obtain additional bonds.

(e) The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the *Federal Register*, or may be obtained from the:

U.S. Department of the Treasury
Financial Management Service
Surety Bond Branch
3700 East West Highway, Room 6F01
Hyattsville, MD 20782.
Or via the internet at <http://www.fms.treas.gov/c570/>.

(End of clause)

52.229-3 Federal, State, and Local Taxes. (APR 2003)

52.230-2 Cost Accounting Standards. (MAY 2012)

52.230-3 Disclosure and Consistency of Cost Accounting Practices. (MAY 2012)

52.230-6 Administration of Cost Accounting Standards. (JUN 2010)

52.232-1 Payments. (APR 1984)

52.232-8 Discounts for Prompt Payment. (FEB 2002)

52.232-9 Limitations on Withholding of Payments (APR 1984)

52.232-11 Extras. (APR 1984)

52.232-16 Progress Payments. (APR 2012)

52.232-17 Interest. (OCT 2010)

52.232-18 Availability of Funds. (APR 1984)

52.232-23 Assignment of Claims. (JAN 1986)

52.232-25 Prompt payment. (OCT 2008)

52.232-33 Payment by Electronic Funds Transfer - Central Contractor Registration. (OCT 2003)

52.232-99 Providing Accelerated Payment to Small Business Subcontractors (DEVIATION) (AUG 2012)

This clause implements the temporary policy provided by OMB Policy Memorandum M-12-16, Providing Prompt Payment to Small Business Subcontractors, dated July 11, 2012.

- (a) Upon receipt of accelerated payments from the Government, the contractor is required to make accelerated payments to small business subcontractors to the maximum extent practicable after receipt of a proper invoice and all proper documentation from the small business subcontractor.
- (b) Include the substance of this clause, including this paragraph (b), in all subcontracts with small business concerns.
- (c) The acceleration of payments under this clause does not [provide any new rights under the Prompt Payment Act.

52.233-1 Disputes. (JUL 2002)

52.233-3 Protest after Award. (AUG 1996)

52.233-4 Applicable Law for Breach of Contract Claim. (OCT 2004)

52.236-8 Other Contracts. (APR 1984)

52.236-26 Preconstruction Conference. (FEB 1995)

52.237-2 Protection of Government Buildings, Equipment, and Vegetation (APR 1984)

52.242-13 Bankruptcy. (JUL 1995)

52.243-4 Changes. (JUN 2007)

52.243-7 Notification of Changes (APR 1984)

52.244-6 Subcontracts for Commercial Items. (DEC 2010)

52.247-63 Preference for U.S.-Flag Air Carriers. (JUN 2003)

52.247-64 Preference for Privately Owned U.S.-Flag Commercial Vessels. (FEB 2006)

52.249-3 Termination for Convenience of the Government (Dismantling, Demolition, or Removal of Improvements). (APR 2012)

52.249-8 Default (Fixed-Price Supply and Service). (APR 1984)

52.251-1 Government Supply Sources. (APR 2012)

52.252-2 Clauses Incorporated by Reference (FEB 1988)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<https://www.acquisition.gov/far/>

<http://www.doi.gov/archive/pam/aindex.html>

(End of clause)

52.252-4 Alterations in Contract (APR 1984)

Portions of this contract are altered as follows: NONE

(End of clause)

52.253-1 Computer Generated Forms. (JAN 1991)

1452.204-70 RELEASE OF CLAIMS -- DEPARTMENT OF THE INTERIOR (JUL 1996)

After completion of work and prior to final payment, the Contractor shall furnish the Contracting Officer with a release of claims against the United States relating to this contract. The Release of Claims form (DI-137) shall be used for this purpose. The form provides for exception of specified claims from operation of the release.

(End of clause)

1452.215-70 Examination of Records by the Department of the Interior (APR 1984)

For purposes of the Examination of Records by the Comptroller General clause of this contract (FAR 52.215-1), the Secretary of the Interior, the Inspector General, and their duly authorized representative(s) from the Department of the Interior shall have the same access and examination rights as the Comptroller General of the United States.

(End of clause)

1452.228-70 Liability Insurance (JUL 1996)

(a) The Contractor shall procure and maintain during the term of this contract and any extension thereof liability insurance in form satisfactory to the Contracting Officer by an insurance company which is acceptable to the Contracting Officer. The named insured parties under the policy shall be the Contractor and the United States of America. The amounts of the insurance shall be not less than as follows:

\$500,000.00 each person*

\$500,000.00 each occurrence*

\$500,000.00 property damage*

(b) Each policy shall have a certificate evidencing the insurance coverage. The insurance company shall provide an endorsement to notify the Contracting Officer 30 days prior to the effective date of cancellation or termination of the policy or certificate; or modification of the policy or certificate which may adversely affect the interest of the Government in such insurance. The certificate shall identify the contract number, the name and address of the Contracting Officer, as well as the insured, the policy number and a brief description of contract services to be performed. The contractor shall furnish the Contracting Officer with a copy of an acceptable insurance certificate prior to beginning the work.

*These amounts to be set by the Contracting Officer.

(End of clause)

Part III – Section J

List of Documents, Exhibits and Other Attachments

SOLICITATION DOCUMENTS AND ATTACHMENTS:

1. Solicitation - Standard Form 33 (3 pages)
2. Attach 1- Notice to Offerors (8 pages)
3. Attach 2-Solicitation provision and clauses (32 pages)
4. Attach 3-Section M-Award Evaluation Factors (8 pages)
5. Attach 4- Statement of Work (Section 01010, General Requirements) (22 pages)
6. Attach 5-Past Performance Questionnaire (5 pages)
7. Attach 6-Subcontracting Plan (only applicable to Large Businesses submitting a proposal under Phase II) (10 pages)
8. Attach 7 – Questionnaire of Offerors Responsibility (word document to complete and return by all contractors under Phase I) (1 page)
9. Attach 8 – Past and Current Contractor Info (word document to complete and return by all contractors under Phase I) (1 page)

Part IV – Section K

Representations, Certifications, and Other Statements of Bidders

52.204-8 Annual Representations and Certifications (MAY 2012)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 488330..

(2) The small business size standard is \$35.5 million.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b)(1) If the clause at 52.204-7, Central Contractor Registration, is included in this solicitation, paragraph (d) of this provision applies.

(2) If the clause at 52.204-7 is not included in this solicitation, and the offeror is currently registered in CCR, and has completed the ORCA electronically, the offeror may choose to use paragraph (d) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:

(i) Paragraph (d) applies.

(ii) Paragraph (d) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(c)(1) The following representations or certifications in ORCA are applicable to this solicitation as indicated:

(i) 52.203-2, Certificate of Independent Price Determination. This provision applies to solicitations when a firm-fixed-price contract or fixed-price contract with economic price adjustment is contemplated, unless—

(A) The acquisition is to be made under the simplified acquisition procedures in Part 13;

(B) The solicitation is a request for technical proposals under two-step sealed bidding procedures; or

(C) The solicitation is for utility services for which rates are set by law or regulation.

(ii) 52.203-11, Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions. This provision applies to solicitations expected to exceed \$150,000.

(iii) 52.204-3, Taxpayer Identification. This provision applies to solicitations that do not include the clause at 52.204-7, Central Contractor Registration.

(iv) 52.204-5, Women-Owned Business (Other Than Small Business). This provision applies to solicitations that—

(A) Are not set aside for small business concerns;

(B) Exceed the simplified acquisition threshold; and

(C) Are for contracts that will be performed in the United States or its outlying areas.

(v) 52.209-2, Prohibition on Contracting with Inverted Domestic Corporations—Representation. This provision applies to solicitations using funds appropriated in fiscal years 2008, 2009, 2010, or 2012.

(vi) 52.209-5, Certification Regarding Responsibility Matters. This provision applies to solicitations where the contract value is expected to exceed the simplified acquisition threshold.

(vii) 52.214-14, Place of Performance—Sealed Bidding. This provision applies to invitations for bids except those in which the place of performance is specified by the Government.

(viii) 52.215-6, Place of Performance. This provision applies to solicitations unless the place of performance is specified by the Government.

(ix) 52.219-1, Small Business Program Representations (Basic & Alternate I). This provision applies to solicitations when the contract will be performed in the United States or its outlying areas.

(A) The basic provision applies when the solicitations are issued by other than DoD, NASA, and the Coast Guard.

(B) The provision with its Alternate I applies to solicitations issued by DoD, NASA, or the Coast Guard.

(x) 52.219-2, Equal Low Bids. This provision applies to solicitations when contracting by sealed bidding and the contract will be performed in the United States or its outlying areas.

(xi) 52.222-22, Previous Contracts and Compliance Reports. This provision applies to solicitations that include the clause at 52.222-26, Equal Opportunity.

(xii) 52.222-25, Affirmative Action Compliance. This provision applies to solicitations, other than those for construction, when the solicitation includes the clause at 52.222-26, Equal Opportunity.

(xiii) 52.222-38, Compliance with Veterans' Employment Reporting Requirements. This provision applies to solicitations when it is anticipated the contract award will exceed the simplified acquisition threshold and the contract is not for acquisition of commercial items.

(xiv) 52.223-1, Biobased Product Certification. This provision applies to solicitations that require the delivery or specify the use of USDA-designated items; or include the clause at 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts.

(xv) 52.223-4, Recovered Material Certification. This provision applies to solicitations that are for, or specify the use of, EPA-designated items.

(xvi) 52.225-2, Buy American Act Certificate. This provision applies to solicitations containing the clause at 52.225-1.

(xvii) 52.225-4, Buy American Act—Free Trade Agreements—Israeli Trade Act Certificate. (Basic, Alternates I, II, and III.) This provision applies to solicitations containing the clause at 52.225-3.

(A) If the acquisition value is less than \$25,000, the basic provision applies.

(B) If the acquisition value is \$25,000 or more but is less than \$50,000, the provision with its Alternate I applies.

(C) If the acquisition value is \$50,000 or more but is less than \$77,494, the provision with its Alternate II applies.

(D) If the acquisition value is \$77,494 or more but is less than \$100,000, the provision with its Alternate III applies.

(xviii) 52.225-6, Trade Agreements Certificate. This provision applies to solicitations containing the clause at 52.225-5.

(xix) 52.225-20, Prohibition on Conducting Restricted Business Operations in Sudan—Certification. This provision applies to all solicitations.

(xx) 52.225-25, Prohibition on Contracting with Entities Engaging in Sanctioned Activities Relating to Iran—Representation and Certification. This provision applies to all solicitations.

(xxi) 52.226-2, Historically Black College or University and Minority Institution Representation. This provision applies to—

(A) Solicitations for research, studies, supplies, or services of the type normally acquired from higher educational institutions; and

(B) For DoD, NASA, and Coast Guard acquisitions, solicitations that contain the clause at 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns.

(2) The following certifications are applicable as indicated by the Contracting Officer:

[Contracting Officer check as appropriate.]

- (i) 52.219-22, Small Disadvantaged Business Status.
 - (A) Basic.
 - (B) Alternate I.
- (ii) 52.222-18, Certification Regarding Knowledge of Child Labor for Listed End Products.
- (iii) 52.222-48, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment Certification.
- (iv) 52.222-52, Exemption from Application of the Service Contract Act to Contracts for Certain Services—Certification.
- (v) 52.223-9, with its Alternate I, Estimate of Percentage of Recovered Material Content for EPA—Designated Products (Alternate I only).
- (vi) 52.227-6, Royalty Information.
 - (A) Basic.
 - (B) Alternate I.
- (vii) 52.227-15, Representation of Limited Rights Data and Restricted Computer Software.

(d) The offeror has completed the annual representations and certifications electronically via the Online Representations and Certifications Application (ORCA) website accessed through <https://www.acquisition.gov>. After reviewing the ORCA database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically that apply to this solicitation as indicated in paragraph (c) of this provision have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [offeror to insert changes, identifying change by clause number, title, date]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR CLAUSE #	TITLE	DATE	CHANGE
_____	_____	_____	_____

(If changes are noted above, provide this information with Phase I submission information)

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.

(End of provision)

Local Clause 10181.22 Questionnaire of Offerors Responsibility (FEB 2000) - All contractors to submit this data as part of required information under Phase I. Also included as attachment 7 of this solicitation as a word document to fill-in and return).

Offerors Name, Address:	Telephone #
_____	Facsimile #
_____	E-Mail Address
_____	Duns#

How long in present business? _____

Type of Organization: [] Individual [] Individual doing business as a Firm [] Partnership [] Joint Venture [] Corporation, Incorporated under the laws of the State of _____ [] Non-Profit Organization

Names of Officers, Owners, or Partners: Owners or Partners: _____
President: _____
Vice President: _____
Treasurer: _____
Secretary: _____

Individuals and their telephone numbers authorized to sign bids, offers, and contracts in your name:
1. _____
2. _____

Bonding Company: Telephone number and point of contact for Bonding company.

Financial Position: Net Worth: _____ Date: _____
Name, address, telephone number, account number, and point of contact for Financial Institutions that you do business with _____

Amount of money available and set aside purchasing supplies and paying employees until first payment is received under this contract \$ _____

WORK PERFORMANCE: Current Construction Projects:

Contact Person/Tel. #	Type of Construction	\$ Amount
1. _____		
2. _____		

Past Construction Projects completed during the past three years. (Preferably Government Type - (Federal, State, County):

Contact Person/Tel. #	Type of Construction	\$ Amount
1. _____		
2. _____		
3. _____		

(Rev 2/00)

K.3 10181.30 Past and Current Contractor Info (MAY 2001) - All contractors to submit this data as part of required information under Phase I. Also included as attachment 8 of this solicitation as a word document to fill-in and return).

OFFEROR'S NAME: _____

Customer Name: _____
Contract No.: _____
Brief Description: _____
Primary Contact Information: _____
Customer Address: _____
Contract Value: _____
Completion Date: _____
Secondary contact Information: _____
or % Complete if on-going: _____

Name: _____
Voice Mail #: _____
Fax #: _____
e-mail address: _____

Customer Name: _____
Contract No.: _____
Brief Description: _____
Primary Contact Information: _____
Customer Address: _____
Contract Value: _____
Completion Date: _____
Secondary contact Information: _____
or % Complete if on-going: _____

Name: _____
Voice Mail #: _____
Fax #: _____
e-mail address: _____

Customer Name: _____
Contract No.: _____
Brief Description: _____
Primary Contact Information: _____
Customer Address: _____
Contract Value: _____
Completion Date: _____
Secondary contact Information: _____
or % Complete if on-going: _____

Name: _____
Voice Mail #: _____
Fax #: _____
e-mail address: _____

1452.215-71 USE AND DISCLOSURE OF PROPOSAL INFORMATION -- DEPARTMENT OF THE INTERIOR (APR 1984)

(a) Definitions. For the purposes of this provision and the Freedom of Information Act (5 U.S.C. 552), the following terms shall have the meaning set forth below:

- (1) "Trade Secret" means an unpatented, secret, commercially valuable plan, appliance, formula, or process, which is used for making, preparing, compounding, treating or processing articles or materials which are trade commodities.
- (2) "Confidential commercial or financial information" means any business information (other than trade secrets) which is exempt from the mandatory disclosure requirement of the Freedom of Information Act, (5 U.S.C. 552). Exemptions from mandatory disclosure which may be applicable to business information contained in proposals include exemption (4), which covers "commercial and financial information obtained from a person and privileged or confidential," and exemption (9), which covers "geological and geophysical information, including maps, concerning wells."

(b) If the offeror, or its subcontractor(s), believes that the proposal contains trade secrets or confidential commercial or financial information exempt from disclosure under the Freedom of Information Act, (5 U.S.C. 552), the cover page of each copy of the proposal shall be marked with the following legend:

"The information specifically identified on pages _____ of this proposal constitutes trade secrets or confidential commercial and financial information which the offeror believes to be exempt from disclosure

under the Freedom of Information Act. The offeror requests that this information not be disclosed to the public, except as may be required by law. The offeror also requests that this information not be used in whole or part by the government for any purpose other than to evaluate the proposal, except that if a contract is awarded to the offeror as a result of or in connection with the submission of the proposal, the Government shall have the right to use the information to the extent provided in the contract."

(c) The offeror shall also specifically identify trade secret information and confidential commercial and financial information on the pages of the proposal on which it appears and shall mark each such page with the following legend:

"This page contains trade secrets or confidential commercial and financial information which the offeror believes to be exempt from disclosure under the Freedom of Information Act and which is subject to the legend contained on the cover page of this proposal."

(d) Information in a proposal identified by an offeror as trade secret information or confidential commercial and financial information shall be used by the Government only for the purpose of evaluating the proposal, except that (i) if a contract is awarded to the offeror as a result of or in connection with submission of the proposal, the Government shall have the right to use the information as provided in the contract, and (ii) if the same information is obtained from another source without restriction it may be used without restriction.

(e) If a request under the Freedom of Information Act seeks access to information in a proposal identified as trade secret information or confidential commercial and financial information, full consideration will be given to the offeror's view that the information constitutes trade secrets or confidential commercial or financial information. The offeror will also be promptly notified of the request and given an opportunity to provide additional evidence and argument in support of its position, unless administratively unfeasible to do so. If it is determined that information claimed by the offeror to be trade secret information or confidential commercial or financial information is not exempt from disclosure under the Freedom of Information Act, the offeror will be notified of this determination prior to disclosure of the information.

(f) The Government assumes no liability for the disclosure or use of information contained in a proposal if not marked in accordance with paragraphs (b) and (c) of this provision. If a request under the Freedom of Information Act is made for information in a proposal not marked in accordance with paragraphs (b) and (c) of this provision, the offeror concerned shall be promptly notified of the request and given an opportunity to provide its position to the Government. However, failure of an offeror to mark information contained in a proposal as trade secret information or confidential commercial or financial information will be treated by the Government as evidence that the information is not exempt from disclosure under the Freedom of Information Act, absent a showing that the failure to mark was due to unusual or extenuating circumstances, such as a showing that the offeror had intended to mark, but that markings were omitted from the offeror's proposal due to clerical error.

(End of provision)

Part IV – Section L

Instructions, Conditions, and Notices to Bidders

52.215-1 Instructions to Offerors - Competitive Acquisition. (JAN 2004)

(a) *Definitions.* As used in this provision—

“Discussions” are negotiations that occur after establishment of the competitive range that may, at the Contracting Officer’s discretion, result in the offeror being allowed to revise its proposal.

“In writing,” “writing,” or “written” means any worded or numbered expression that can be read, reproduced, and later communicated, and includes electronically transmitted and stored information.

“Proposal modification” is a change made to a proposal before the solicitation’s closing date and time, or made in response to an amendment, or made to correct a mistake at any time before award.

“Proposal revision” is a change to a proposal made after the solicitation closing date, at the request of or as allowed by a Contracting Officer as the result of negotiations.

“Time,” if stated as a number of days, is calculated using calendar days, unless otherwise specified, and will include Saturdays, Sundays, and legal holidays. However, if the last day falls on a Saturday, Sunday, or legal holiday, then the period shall include the next working day.

(b) *Amendments to solicitations.* If this solicitation is amended, all terms and conditions that are not amended remain unchanged. Offerors shall acknowledge receipt of any amendment to this solicitation by the date and time specified in the amendment(s).

(c) Submission, modification, revision, and withdrawal of proposals.

(1) Unless other methods (*e.g.*, electronic commerce or facsimile) are permitted in the solicitation, proposals and modifications to proposals shall be submitted in paper media in sealed envelopes or packages (i) addressed to the office specified in the solicitation, and (ii) showing the time and date specified for receipt, the solicitation number, and the name and address of the offeror. Offerors using commercial carriers should ensure that the proposal is marked on the outermost wrapper with the information in paragraphs (c)(1)(i) and (c)(1)(ii) of this provision.

(2) The first page of the proposal must show—

(i) The solicitation number;

(ii) The name, address, and telephone and facsimile numbers of the offeror (and electronic address if available);

(iii) A statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation and agreement to furnish any or all items upon which prices are offered at the price set opposite each item;

(iv) Names, titles, and telephone and facsimile numbers (and electronic addresses if available) of persons authorized to negotiate on the offeror’s behalf with the Government in connection with this solicitation; and

(v) Name, title, and signature of person authorized to sign the proposal. Proposals signed by an agent shall be accompanied by evidence of that agent’s authority, unless that evidence has been previously furnished to the issuing office.

(3) Submission, modification, revision, and withdrawal of proposals.

(i) Offerors are responsible for submitting proposals, and any modifications or revisions, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that proposal or revision is due.

(ii)(A) Any proposal, modification, or revision received at the Government office designated in the solicitation after the exact time specified for receipt of offers is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and—

(1) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or

(2) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or

(3) It is the only proposal received.

(B) However, a late modification of an otherwise successful proposal that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(iii) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(iv) If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the office designated for receipt of proposals by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(v) Proposals may be withdrawn by written notice received at any time before award. Oral proposals in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile proposals, proposals may be withdrawn via facsimile received at any time before award, subject to the conditions specified in the provision at 52.215-5, Facsimile Proposals. Proposals may be withdrawn in person by an offeror or an authorized representative, if the identity of the person requesting withdrawal is established and the person signs a receipt for the proposal before award.

(4) Unless otherwise specified in the solicitation, the offeror may propose to provide any item or combination of items.

(5) Offerors shall submit proposals in response to this solicitation in English, unless otherwise permitted by the solicitation, and in U.S. dollars, unless the provision at FAR 52.225-17, Evaluation of Foreign Currency Offers, is included in the solicitation.

(6) Offerors may submit modifications to their proposals at any time before the solicitation closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.

(7) Offerors may submit revised proposals only if requested or allowed by the Contracting Officer.

(8) Proposals may be withdrawn at any time before award. Withdrawals are effective upon receipt of notice by the Contracting Officer.

(d) *Offer expiration date.* Proposals in response to this solicitation will be valid for the number of days specified on the solicitation cover sheet (unless a different period is proposed by the offeror).

(e) *Restriction on disclosure and use of data.* Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall—

(1) Mark the title page with the following legend:

This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed—in whole or in part—for any purpose other than to evaluate this

proposal. If, however, a contract is awarded to this offeror as a result of—or in connection with—the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets [*insert numbers or other identification of sheets*]; and

(2) Mark each sheet of data it wishes to restrict with the following legend:

Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.

(f) Contract award.

(1) The Government intends to award a contract or contracts resulting from this solicitation to the responsible offeror(s) whose proposal(s) represents the best value after evaluation in accordance with the factors and subfactors in the solicitation.

(2) The Government may reject any or all proposals if such action is in the Government's interest.

(3) The Government may waive informalities and minor irregularities in proposals received.

(4) The Government intends to evaluate proposals and award a contract without discussions with offerors (except clarifications as described in FAR 15.306(a)). Therefore, the offeror's initial proposal should contain the offeror's best terms from a cost or price and technical standpoint. The Government reserves the right to conduct discussions if the Contracting Officer later determines them to be necessary. If the Contracting Officer determines that the number of proposals that would otherwise be in the competitive range exceeds the number at which an efficient competition can be conducted, the Contracting Officer may limit the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals.

(5) The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit cost or prices offered, unless the offeror specifies otherwise in the proposal.

(6) The Government reserves the right to make multiple awards if, after considering the additional administrative costs, it is in the Government's best interest to do so.

(7) Exchanges with offerors after receipt of a proposal do not constitute a rejection or counteroffer by the Government.

(8) The Government may determine that a proposal is unacceptable if the prices proposed are materially unbalanced between line items or subline items. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly overstated or understated as indicated by the application of cost or price analysis techniques. A proposal may be rejected if the Contracting Officer determines that the lack of balance poses an unacceptable risk to the Government.

(9) If a cost realism analysis is performed, cost realism may be considered by the source selection authority in evaluating performance or schedule risk.

(10) A written award or acceptance of proposal mailed or otherwise furnished to the successful offeror within the time specified in the proposal shall result in a binding contract without further action by either party.

(11) If a post-award debriefing is given to requesting offerors, the Government shall disclose the following information, if applicable:

(i) The agency's evaluation of the significant weak or deficient factors in the debriefed offeror's offer.

(ii) The overall evaluated cost or price and technical rating of the successful and the debriefed offeror and past performance information on the debriefed offeror.

(iii) The overall ranking of all offerors, when any ranking was developed by the agency during source selection.

(iv) A summary of the rationale for award.

(v) For acquisitions of commercial items, the make and model of the item to be delivered by the successful offeror.

(vi) Reasonable responses to relevant questions posed by the debriefed offeror as to whether source-selection procedures set forth in the solicitation, applicable regulations, and other applicable authorities were followed by the agency.

(End of provision)

52.216-1 Type of Contract (APR 1984)

The Government contemplates award of a firm fixed price contract resulting from this solicitation.

(End of provision)

52.215-16 Facilities Capital Cost of Money. (JUN 2003)

52.228-1 Bid Guarantee (SEP 1996)

(Applicable to submission of offers under Phase II)

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The bidder shall furnish a bid guarantee in the form of a firm commitment, *e.g.*, bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds—

(1) To unsuccessful bidders as soon as practicable after the opening of bids; and

(2) To the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.

(c) The amount of the bid guarantee shall be twenty (20) percent of the bid price or \$3.0 million, whichever is less.

(d) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

(End of provision)

52.232-13 Notice of Progress Payments. (APR 1984)

52.233-2 Service of Protest. (SEP 2006)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the Government Accountability Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from [*Contracting Officer designate the official or location where a protest may be served on the Contracting Officer.*]

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of provision)

1452.233-2 SERVICE OF PROTEST DEPARTMENT OF THE INTERIOR (JUL 1996) (DEVIATION)";

the following sentence is added to the end of the provision:

(c) A copy of the protest served on the Contracting Officer shall be simultaneously furnished by the protester to the Department of the Interior Assistant Solicitor for Procurement and Patents, 1849 C Street, NW, Room 6511, Washington, D.C. 20240."

52.237-1 Site Visit. (APR 1984)

52.252-01 Solicitation Provision Incorporated by Reference (FEB 1998)

52.252-03 Alterations in Solicitation (APR 1984)

52.252-5 Authorized Deviations in Provisions (APR 1984)

(a) The use in this solicitation of any Federal Acquisition Regulation (48 CFR Chapter 1) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the provision.

(b) The use in this solicitation of any Department of Interior Regulation (48 CFR Chapter 14) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation. (End of provision)

Part IV – Section M

Award Evaluation Factors

See attachment 3 titled “Section M-Award Evaluation Factors” for the complete listing of evaluation criteria..

1.0 Basis for Contract Award

1.1 The Source Selection Authority (SSA) will select the best overall offer, based on experience and past performance data, technical approach and price. A contract may be awarded to the Offeror deemed responsible in accordance with the Federal Acquisition Regulation (FAR), as supplemented, whose proposal conforms to the solicitation's requirements (including all stated terms, conditions, representations, certifications, technical requirements and other information required by Section L of the this solicitation), and which is judged, based on the evaluation factors and sub-factors, to represent the best value to the Government.

1.2 As set forth in Section L (provision 52.215-1), the Government reserves the right to award without discussions. The Government may make a final determination as to whether the Offeror's proposal is acceptable or unacceptable solely on the basis of the initial proposal as submitted. Accordingly, Offeror's are advised to submit initial proposals that are fully and clearly acceptable without additional information.

1.3 Offerors are required to meet all solicitation requirements, such as terms and conditions, representations and certifications, and technical requirements, in addition to those identified as factors, or elements, to be eligible for award.

1.4 The government intends to select one contractor for the shipwreck debris removal at Palmyra Atoll and Kingman Reef National Wildlife Refuge (NWR) acquisition. However, the government reserves the right to award no contract at all, depending on the quality of the proposal(s) submitted and the availability of funds.

2.0 Final Proposal Revision

2.1 The government reserves the right to make an award without discussion; however, discussions or negotiations may be held and result in a Final Proposal Revision. If it is determined to be in the best interest of the government to hold discussions, the government will decide which proposals are in the competitive range. Offerors with proposals in the competitive range will then be issued evaluation notices. Responses to evaluation notices, as well as the final proposal revision, will be considered in making the best value decision. Offerors should be aware that a complete understanding of the requirement, price/cost and all other terms and conditions of the proposed contract must exist between the Offeror and the government at the conclusion of discussions.

2.2 Any technical revisions or non-concurrence to contract terms and conditions submitted in the final proposal revision may not be subject to further discussion or negotiation, and may render the offer unacceptable to the government. This provision is not intended to restrict the Offeror's opportunity to revise figures (e.g., prices, discounts, percentage rates, etc.). Rather, it is intended to preclude any misunderstandings by the government, which could result if new or revised terms and conditions are submitted in the final proposal revision that have not been fully disclosed, discussed and understood during discussions or negotiations. Hence, such new or revised terms and conditions are not solicited and, if submitted in the final proposal revision, may render the offer unacceptable to the government.

3.0 Evaluation Criteria and Site Visit

There are two evaluation phases under this project. All contractors will provide a response to the Phase I evaluation criteria and up to five (5) of the top rated firms under this phase will be selected to attend the site visit and these will be the only firms eligible to submit a proposal under the Phase II evaluation factors.

PHASE I - All interested bidders will submit a response to the following evaluation factors under Phase I by no later than October 25, 2012 at 3 PM PDT. Paragraph 3.1 below provides specifics on evaluation factor. Phase I will consist of evaluation factors 1 and 2 as follows:

- 1) Evaluation Factor 1 - Submission of experience data over the last ten (10) years of up to five (5) current and completed contracts that are similar in nature to this project and conditions encountered at Palmyra Atoll and Kingman Reef NWR as addressed in the Performance Work Statement.
- 2) Evaluation Factor 2 - Submission of past performance data over the last ten (10) years of up to five (5) current and completed contracts that are similar in nature to this project and conditions encountered at Palmyra Atoll and Kingman Reef NWR as addressed in the Performance Work Statement.

Under Phase I, an initial evaluation will be conducted against responses to evaluation factors 1 and 2 based upon the Performance Work Statement and a determination will be made for up to five (5) of the top ranked firms that will be eligible to attend the site visit. These five (5) firms selected to attend the site visit will be the only firms eligible to submit a proposal on the project thereafter. No other contractors will be eligible to submit a proposal. Page limitations for proposal responses are clarified in attachment 1, Notice to Offerors of the solicitation package.

SITE VISIT – For those contractors selected under the Phase I evaluation to attend the site visit and submit a proposal under Phase II, at least one contractor representative will be able to attend the site visit and possibly up to two personnel per contractor if seating is available. Contractors selected must provide the names of a primary and secondary person planning on attending the site visit to the Contracting Officer within two days selection notification. The Contracting Officer will notify the Contractor at least fourteen days in advance as to who will be able to attend. Personnel attending the site visit will be required to have passports.

****Please note that this flight schedule is dependent upon any weather delays that may occur. Contractors will be responsible for covering the cost of flying to Honolulu and any overnight accommodations. Contractors will also be responsible for overnight accommodations and food on Palmyra.**

PHASE II – Those contractors selected to attend the site visit will be only contractors eligible to submit a proposal under Phase II. Paragraph 3.1 below provides specifics on evaluation factors.

Phase I Evaluation Factors

3.1 Specific Evaluation Criteria for Phase I (Evaluation Factors 1 and 2 below)as follows:

- (1) Experience; and
- (2) Past Performance

Experience and past performance are of equal value.

3.2 Experience

The offeror’s technical capability of the item offered to meet the Government’s requirement/experience related to similar projects of size and complexity for shipwreck debris removal. The proposal shall be assigned a color rating (Blue-Exceptional, Green-Acceptable, Yellow-Marginal, and Red-Unacceptable) as defined in the following table

TABLE 1 – EXPERIENCE		
Color	Rating	Description
Blue	Exceptional	Exceeds specified minimum experience requirements in a way beneficial to the government; offeror must have one or more strengths and no deficiencies to receive a blue.
Green	Acceptable	Meets specified minimum experience requirements delineated below; Proposal rated green must have no deficiencies but may have one or more strengths.
Yellow	Marginal	Does not clearly meet some basic experience requirements delineated below, but any such uncertainty is correctable.
Red	Unacceptable	Fails to meet specified minimum experience requirements; Proposals with an unacceptable rating are not awardable.

EVALUTAION FACTOR 1: EXPERIENCE –The Government will evaluate the offeror’s proposed approach and technical responsiveness for meeting or exceeding the requirements stated below. Any features or technical offerings that exceed the minimum acceptable requirements and that are determined to provide added value to the Government will be considered under a best value determination. The CO will ultimately determine in accordance with the evaluation factors whether or not exceeding the stated requirements provides the best overall affordable benefit to the Government. Offerors are advised that any features or technical offerings exceeding the minimums that are accepted by the Government may be incorporated into the resultant contract as the minimum standards. The Government’s evaluation will focus on the offeror’s ability to meet or exceed the experience requirements listed below:

1. *Experience with similar work on past projects over the last ten (10) years as described in the Government requirement under this Statement of Work.*

To be rated acceptable (Green) in this factor, an offeror must demonstrate the ability to meet the following:

Experience with salvage operations. The person or firm responsible for the salvage operations shall have had at least 2 projects within the past 10 years that were similar in scope and complexity.

Experience with remote locations. The person or firm responsible for the salvage operations shall have had at least 1 project within the past 10 years that was similar in nature to the remote location of Palmyra Atoll and Kingman Reef.

Experience with projects with special site considerations. The person or firm responsible for salvage operations shall have had at least 2 projects within the past 10 years that required strict considerations of the environmental impact and schedule.

3.3 Past Performance.

Past Performance will be evaluated as a measure of the Government’s confidence in the offeror’s ability to successfully perform based on previous and current contract efforts. Past Performance is as important as experience price. The main purpose of the past performance evaluation is to appropriately consider each offeror’s demonstrated record of contract compliance in successfully completing salvage operations that meet users’ needs including cost and schedule. Current performance will have greater impact in the performance confidence assessment than less recent performance. In assessing performance risk, the Government will use relevant present and past performance data to evaluate the areas and factors listed in Factor 2 below. Offerors are advised that in conducting this assessment the Government reserves the right to use both data provided by the offeror and data obtained from other sources. Each offeror shall be assigned one of the following ratings in accordance with Table 2.

TABLE 2- PERFORMANCE CONFIDENCE ASSESSMENTS	
Rating	Description
HIGH CONFIDENCE	Based on the offeror’s performance record, the government has high confidence the offeror will successfully perform the required effort.
SIGNIFICANT CONFIDENCE	Based on the offeror’s performance record, the government has significant confidence the offeror will successfully perform the required effort.
SATISFACTORY CONFIDENCE	Based on the offeror’s performance record, the government has confidence the offeror will successfully perform the required effort. Normal contractor emphasis should preclude any problems.
UNKNOWN CONFIDENCE	No performance record is identifiable.
LITTLE CONFIDENCE	Based on the offeror’s performance record, substantial doubt exists that the offeror will successfully perform the required effort.
NO CONFIDENCE	Based on the offeror’s performance record, extreme doubt exists that the offeror will successfully perform the required effort.

EVALUATION FACTOR 2: PAST PERFORMANCE - The Government will evaluate past performance and assign a rating of: Exceptional/High Confidence, Very Good/Significant Confidence, Satisfactory/Confidence, Neutral/Unknown Confidence, Marginal/Little Confidence, or Unsatisfactory/No Confidence in accordance with Table 2 (above). Past performance will be evaluated as a measure of the Government's confidence in the offeror's ability to successfully perform based on previous and current contract efforts and the offeror's effectiveness in performing similar service contracts. For the purpose of this evaluation, the "offeror" includes the prime contractor's bidding organization as complemented by the prime's team (subcontractors and other operating units of the prime, for example). The recency and relevancy of past performance information is critical to the Government's evaluation. As such, current performance will have a greater impact in the performance confidence assessment than less recent performance. The Government reserves the right to visit/revisit any or all offerors and to contact any and all references. This assessment will be accomplished using both data provided by the Offeror and data obtained from other sources, included but not limited to information available from the Past Performance Information Retrieval System (PPIRS). Attached to this RFP is a "Past Performance Rating Questionnaire" (to be used as part of the past performance evaluation) and a cover letter signed by the Contracting Officer (CO). The top portion of the questionnaire shall be completed by the Offeror for each of the contracts identified. The Offeror shall then send the questionnaire and CO cover letter to the appropriate POC (most likely program manager). The questionnaires will be completed by the POC (**not the offeror**) and returned directly to the CO. Responses received will be used as part of the Government's evaluation of past performance. Offerors are responsible for insuring responses are received by the CO by the closing date of the solicitation. In addition, the Government may choose additional contracts and have a questionnaire filled out by the respective POC. The assessment of past performance as a specific evaluation factor is separate and distinct from the Determination of Responsibility required by FAR Part 9. The Government's evaluation of the Past Performance factor will include the following:

1. Demonstrated record of **contract compliance** in supplying similar services which meet users' needs, including cost and schedule.
2. **Quality of service/work performed**, compliance with contract requirements, accuracy of reports, technical ability, and conformance to good workmanship standards.
3. **Timeliness of performance**; responsiveness to technical direction and contract administration; and adherence to contract schedules.
4. **Business relations** to include effective management; reasonable and cooperative relationship with Government Program and Contract Management offices; flexible, reasonable, and cooperative in meeting mission changes/contract changes; and an overall concern for government's interest.
5. **Customer satisfaction** - Satisfaction of end users with the contractor's services, to include interface and responsiveness to technical direction.
6. **Subcontracting** - Successful subcontract relationships and subcontract management.
7. **Management and Key Personnel** - List and provide resumes of personnel selected to manage and perform the key aspects of the work on the contract; quality of key management personnel to be assigned to the contract, to include the past performance of the offeror as a whole and how well the offeror's employees have performed.,

IAW FAR 15.305(a)(2), firms lacking relevant past performance history will receive a neutral evaluation for past performance.

Phase II Evaluation factors

Only offerors chosen under Phase I to attend the site visit will be allowed to submit a proposal under Phase II for final selection of a contractor.

4.1 Specific Evaluation Criteria for Phase II (Evaluation Factors 3 and 4 below) as follows:

- (1) Evaluation factors cited under paragraph 1.05 (D)(3) of the Performance Work Statement (Section 01010, General Requirements) for Palmyra Atoll and Kingman Reef; and
- (2) Price or Cost

Those evaluation factors to be addressed by the Offeror under paragraph 1.05 (D)(3) of the Performance Work Statement (Section 01010) for Palmyra Atoll and Kingman Reef are considered significantly more important than cost or price.

4.2 Contractor's technical approach to complete salvage work

Technically Acceptable Proposal – A technically acceptable proposal will be based upon an acceptable work plan approach that shows an understanding of all aspects of the project and the challenges required to complete this project as addressed in the Performance Work Statement (Section 01010, General Requirements) and shall be assigned a confidence rating of: Exceptional/High Confidence, Very Good/Significant Confidence, Satisfactory/Confidence, Neutral/Unknown Confidence, Marginal/Little Confidence, or Unsatisfactory/No Confidence in accordance with Table 3 (below).

TABLE 3- TECHNICAL PROPOSAL	
Rating	Description
HIGH CONFIDENCE	Based on the offeror's performance record, the government has high confidence the offeror will successfully perform the required effort.
SIGNIFICANT CONFIDENCE	Based on the offeror's performance record, the government has significant confidence the offeror will successfully perform the required effort.
SATISFACTORY CONFIDENCE	Based on the offeror's performance record, the government has confidence the offeror will successfully perform the required effort. Normal contractor emphasis should preclude any problems.
UNKNOWN CONFIDENCE	No performance record is identifiable.
LITTLE CONFIDENCE	Based on the offeror's performance record, substantial doubt exists that the offeror will successfully perform the required effort.
NO CONFIDENCE	Based on the offeror's performance record, extreme doubt exists that the offeror will successfully perform the required effort.

EVALUATION FACTOR

3: Technical approach to complete items cited under paragraph 1.05 (D)(3) of the Performance Work Statement (Section 01010, General Requirements) for Palmyra Atoll and Kingman Reef which are listed as follows;

a. Palmyra Atoll

- 1) Information from initial assessment concerning the fuel or other potentially hazardous materials in the wreckage or surrounding debris.
- 2) Condition and stability of the wreckage. Updated conditions from most current information obtained on-site by the potential contractor in addition to information furnished by USFWS to the Contractor.
- 3) Approach to completing NEPA documents and other permits. The contractor shall act as the primary agent representing the USFWS, with the USFWS being the owner and ultimate signing authorities.
- 4) Method for mobilizing materials, equipment, and labor. Methods for storage of materials and equipment. Approach for ship-based berthing for labor. Include information on retention of sewage and greywater while in the refuge. Also, methods of transportation, estimated number of trips / crew changes and duration of shifts.
- 5) Chosen method of removal and planned equipment to be used. Choose methods that will have the least impact on the ecosystems while effectively and economically getting the job done. Include types, size, and numbers of each piece of equipment to be used. Sequence of events, number of equipment setups and breakdown. Disposition of captured wreckage during and after removal. Include need for divers, work platforms, and submersible equipment to be used. Quantify by area and show locations of debris removal and other areas that may be impacted by the removal process e.g., need to

remove dead coral heads to create a path to the shipwreck, how the coral heads would be removed, can the removed coral heads be salvaged and transplanted back to the site, and locations of possible staging areas.

- 6) Schedule/Timeline of Project using Critical Path Methodology (CPM). Included but not limited to planning, permitting process, mobilization, staging, wreckage removal implementation and its critical stages, breakdown, cleanup, demobilization, and closeout.
- 7) Environmental Protection Approach. Show how and what type of equipment is planned to be used that will protect and minimize damage and impact to the existing coral and marine ecosystem including threatened and endangered species. Methodology for containment, cleanup, and disposal of any hazardous pollutants such as fuels and other petroleum products, batteries.
- 8) Site Contingencies. Explain the contractor's approach to deal with issues such as stabilizing coral that is damaged or left unstable by the removal operations, as well as emergency provisions during inclement weather.
- 9) Work Progress Contingencies. Due to remoteness show plans for contingencies, repairs and replacements when problems arise such as equipment breakdown or failure, inclement weather, injured or sick crew, etc.
- 10) Demobilization, Clean Up, and Closeout. Include information on demobilization of equipment, materials and crews, breakdown of staging areas, disposition of hazardous waste remediated or generated during the project. Highlight any commissioning or monitoring requirements for the USFWS.

b. Kingman Reef:

- 1) Information from initial assessment concerning the fuel or other potentially hazardous materials in the wreckage or surrounding debris. Identify type of debris, quantity and extent of coverage on the fore reef, back reef, and in the lagoon.
- 2) Condition and stability of the wreckage. Updated conditions from most current information obtained by USFWS and furnished to the Contractor.
- 3) Approach to completing NEPA documents and other permits. The contractor shall act as the primary agent representing the USFWS, with the USFWS being the owner and ultimate signing authorities.
- 4) Method for mobilizing materials, equipment and labor. Methods for storage of materials and equipment. Approach for ship-based room and board for labor. Include information on retention of sewage and greywater while in the refuge. Also, methods of transportation, estimated number of trips and duration of shifts.
- 5) Chosen method of removal and planned equipment to be used. Choose methods that will have the least impact on the ecosystems while effectively and economically getting the job done. Include types, size and numbers of each piece of equipment to be used. Sequence of events, number of equipment setups and breakdown. Disposition of captured wreckage during and after removal. Include need for divers, work platforms, and submersible equipment to be used. Due to remoteness show plans for contingencies, repairs and replacements when problems arise such as equipment breakdown or failure, inclement weather, injured or sick crew, etc.
- 6) Schedule/Timeline of Project using Critical Path Methodology (CPM). Included but not limited to planning, permitting process, mobilization, staging, wreckage removal implementation and its critical stages, breakdown, cleanup, demobilization, and

closeout.

- 7) Environmental Protection Approach. Show how and what type of equipment is planned to be used that will protect and minimize damage and impact to the existing coral and marine ecosystem including threatened and endangered species. Methodology for containment, cleanup, and disposal of any hazardous pollutants such as fuels and other petroleum products, batteries.
- 8) Site Contingencies. Explain the contractor's approach to deal with issues such as stabilizing coral that is damaged or left unstable by the removal operations, as well as emergency provisions during inclement weather.
- 9) Work Progress Contingencies. Due to remoteness show plans for contingencies, repairs and replacements when problems arise such as equipment breakdown or failure, inclement weather, injured or sick crew, etc.
- 10) Demobilization, Clean Up, and Closeout. Include information on demobilization of equipment, materials and crews, breakdown of staging areas, disposition of hazardous waste remediated or generated during the project. Highlight any commissioning or monitoring requirements for the USFWS.

4.3 - Price or Cost

EVALUATION FACTOR 4: PRICE

Offeror's prices will be evaluated for reasonableness and completeness as part of the award decision.

(i) Reasonableness. The techniques and procedures described under FAR 15.404-1(b) will be the primary means of assessing proposal reasonableness. The evaluation techniques described under FAR 15.404-1(c), as determined appropriate, may also be performed in further determining the reasonableness of the proposal. The Offeror's proposal will be reviewed for compliance with the requirements specified in Section L – Notice to Offerors of the RFP. The assessment will consider the traceability of provided pricing information submitted against this project.

(ii) Completeness. The price proposal will be evaluated for completeness in relation to the Offeror's proposed technical and management approach, and to ensure it reflects a clear understanding of the requirements.

Price analysis is an assessment of affordability, and will be used to ensure a fair and reasonable price. Price analysis techniques will include, but are not limited to, a comparison of proposed prices received in response to the solicitation, comparison with prior proposed and contract prices for the same or similar services and a comparison of proposed prices with the independent Government cost estimate.

a. Unrealistically low proposed costs or prices, initially or subsequently, may be grounds for eliminating a proposal from competition either on the basis that the offeror does not understand the requirement or the offeror has made an unrealistic proposal.

b. In addition, offerors are cautioned against submitting a materially unbalanced offer. The Government shall analyze offers to determine whether they are unbalanced with respect to prices or separately priced line items. Offers that are determined to be materially unbalanced may be rejected. An offer is mathematically unbalanced if it is based on prices which are significantly less than the cost for some contract line items and significantly overstated in relation to cost for others. An offer is materially unbalanced if it is mathematically unbalanced, and if:

- i. There is a reasonable doubt that the offer would result in the lowest overall cost to the Government, even though it is the lowest evaluated offer; or
- ii. The offer is so grossly unbalanced that its acceptance would be tantamount to allowing an advance payment.

When the integrated assessment of all aspects of the evaluation is accomplished, the color/adjectival ratings for the Price/Technical Capability and Past Performance/Experience factors are all considered equally. The equality of the color/adjectival ratings and risk assessments is conceptual, not numerical, in nature. Any one of these considerations can influence the SSA's decision.

5.0 EVALUATION PROCEDURES. Initial proposals for Phase I (evaluation factors 1 and 2) to be received by October 23, 2012 by 3 PM PDT. Initial proposals submitted for Phase I will be provided to the Technical Proposal Evaluation Committee (TPEC). The TPEC will perform the initial evaluation of proposals in accordance with procedures developed by the TPEC and this document to determine up to the five top rated firms. This evaluation will be concluded as soon as practicable after receipt, but should be completed by no later than the first or second week of November 2012. At conclusion of Phase I evaluations, contractors selected will immediately be advised of their selection to attend the site visit. These will be the only contractors permitted to submit a proposal under Phase II evaluation criteria.

The date for Phase II proposal submission (evaluation factors 3 and 4) will be determined hereafter and is anticipated to occur within approximately three weeks from conclusion of the site visit date. The TPEC evaluation teams will accomplish their assigned evaluation responsibilities for all proposals and document the findings of each individual evaluator and provide summary documentation at the team level. The TPEC will prepare the TPEC Proposal Evaluation Report (PER) (preliminary and/or final) comparative analysis of the evaluation results and the TPEC chairman will brief the SSAC. The cost or price analysis will be finalized at this time and will be included in the PER. The PER will summarize and display all findings. Strengths, weaknesses, deficiencies, and clarifications will be fully described for each offeror's proposal and will be identified back to the specific minimum Government requirement. The cost or price analysis evaluation will then be appended and included with the overall TPEC PER.

The TPEC will review the CO's input together with such other data as is deemed warranted and prepare an award recommendation to the SSA. The SSAC shall finalize the comparative analysis of the evaluation results and provide it to the SSA. The SSA will then make the source selection decision thereby concluding the proposal evaluation process.

STATEMENT OF WORK
SECTION 01010
GENERAL REQUIREMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The work to be performed under this contract consists of supplying all labor, equipment, materials, and supplies necessary to plan and implement the removal of two shipwrecks. One is located at the Palmyra Atoll National Wildlife Refuge (NWR) (5°52'38"N 162°07'08"W) and the other is at Kingman Reef NWR (6°24'18"N 162°21'3"W). More specifically the contractor must have the capabilities to remove and dispose of a grounded 121 ft steel hull, longline fishing vessel and scattered debris from the western terrace reef at Palmyra Atoll NWR, and the remnants of a teak fishing vessel and scattered debris from the Kingman Reef NWR. All parts of the shipwrecks and debris are negatively impacting the marine community and need to be removed. The contractor shall furnish all labor, equipment, materials, and transportation to remove and properly dispose of the wrecks and debris, including obtaining all necessary permitting and compliance documentation. The contractor must possess industry standard qualifications to perform this type of salvage and removal operation. The successful contractor shall be selected by a two-step Best Value Analysis Process (see Section 1.05 D Pre-Award Requirements).
- B. The project is located on two refuges which are located within the Pacific Remote Islands Marine National Monument and are part of the Pacific Reefs NWR Complex. They are located approximately 1,000 miles south of Honolulu, Hawaii. They are low-lying equatorial atolls that are a collection of islets and coral reefs.
- C. All inquiries regarding the work should be directed to the Contracting Officer's Technical Representative (COTR), Mark Harris, at the Division of Engineering, U.S. Fish and Wildlife Service (USFWS), 911 N.E. 11th Avenue 2nd Floor West, Portland, Oregon 97232-4181, (503) 231-2209.

1.02 CONTRACT DOCUMENTS

- A. The Standard Government Forms, Drawings, Specifications, Solicitation Provisions and Contract Clauses, made a part of the Contract are essential parts thereof and the requirements in one are as binding as though contained in all. They are intended to be mutually supplementary to describe and provide for a complete work.

1.03 REFERENCED SPECIFICATIONS AND STANDARDS

- A. Referenced Specifications and Standards:
1. Perform any code reviews and ensure the operations comply with the USFWS manual, current edition of the federal OSHA safety requirements, and similar model codes.
 2. For products or workmanship specified by Referenced Specification or Standard, comply with requirements of the Specification or Standard, except when more rigid requirements are specified or are required by governing codes.
 3. Should Referenced Specification or Standard conflict with Contract Documents, request clarification from COTR before proceeding with the work.
 4. Contractual relationships of parties of the Contract shall not be altered from those

Attachment 4

described on the Contract Documents by mention or inference in Referenced Specification or Standards.

5. Except where a specific date is specified, the date of the Referenced Specification or Standard is that in effect as of the Bid Opening date.
6. Obtain a copy of all Referenced Specifications and Standards, and maintain at the jobsite during the specific work until completion of the project.
7. Obtain a copy of the most current USFWS AutoCAD Drafting Standards from Garry Henderson; 503-231-2095, email: garry_henderson@fws.gov.

1.04 SUBMITTALS

A. Obtain an electronic submittal transmittal sheet from the COTR. Include with each submittal a project-specific submittal transmittal sheet; electronic MS Word preferred.

B. Initial Submittals required.

1. Project Schedule: The Contractor shall furnish the COTR his proposed Work Progress Schedule within 15 days after award of the Task Order. He shall also advise the COTR of revisions of the schedule as modifications may become necessary, or as may be required after commencement of work. Such outlines and revisions shall be in sufficient detail to enable the COTR to judge as to the adequacy of the Contractor's operations and to anticipate such conditions as may tend to impair or retard the progress and completion of the work.
2. Payment Schedule: The Contractor shall furnish the COTR a detailed payment schedule within 15 days of award of the Task Order. This schedule shall be based upon the Contract Bidding Schedule but with sufficient additional detail to allow accurate calculation of the Monthly Progress Payment. Lump sum bid items shall be broken down into their component parts, e.g., mobilization, bond and insurance, excavation, metalwork, concrete work disposal, with a cost figure for each. The list of component parts would vary depending upon the type of contract and the above list shall not be construed as complete or incomplete.

C. Remaining Submittals:

1. Except as indicated below, transmit project-specific submittals electronically to the COTR and/or the USFWS designated engineering point-of-contact.
 - a. Permits as required by applicable administrative authorities.
 - b. Remaining technical submittals as required by these specifications.

1.05 SCOPE OF WORK

A. Existing Conditions:

1. Palmyra Atoll and Kingman Reef National Wildlife Refuges were established in 2001 for their outstanding natural marine wildlife resources. They were also included in the Pacific Remote Islands Marine National Monument (MNM) in 2009. Palmyra's coral reefs are also recognized as Ramsar Wetlands of International Importance by the 160 Contracting Parties to The Convention on Wetlands. The biological integrity, diversity, and environmental health of the coral reefs at Palmyra Atoll and Kingman Reef NWRs are management priorities.

They are located approximately 1,000 miles south of Honolulu, Hawaii. They are low-lying equatorial atolls that are a collection of islets, coral reefs, and waters that teem with wildlife. The heavy rainfall at Palmyra supports dense vegetation on the small islets of the atoll.

Palmyra Atoll NWR

In 1991, a longline fishing vessel, *Hui Feng No. 1*, ran aground on the west side of Palmyra Atoll; the responsible party for this vessel is unknown, according to the U.S. Coast Guard. The 37 m longline fishing vessel is in 6m of water with a small portion of the ship emerging about 0.5m out of the water at medium tide. The steel hull is at an 80° list. The ship is located approximately 800 m from the channel on the Western Terrace reef area. The hull is mostly intact but is starting to deteriorate and cave inward. It is believed that it has deteriorated to the point that it cannot be towed. More than likely the ship will need to be cut up in place and transported in pieces away from the atoll.

Surveys in 2006, indicated that the area near the shipwreck is going through a phase shift from true coral to false coral by the strong presence of corallimorph. Corallimorph, identified as *Rhodactis howseii*, was found in large numbers in close proximity to this wreck. Based on observations, it is believed that the spread of corallimorph at Palmyra and nearby atolls appeared to be associated with dissolved iron leaching from corroding metal such as chains, anchors, and shipwrecks. Subsequent surveys revealed that this organism had spread to greater than 1 million m² of benthos with a dense infestation in an area covering 150,000 m² around the ship. Evidence from previous surveys suggests this phenomenon is rapidly spreading, smothering the benthos and killing corals. Recent surveys revealed that this organism has spread as far as 100 m from the wreckage. And it has substantially grown to 2.2 km at its widest point along the longest NW-SE axis. The corallimorph is now dominating areas that were once healthy coral groves, causing a phase shift to a monotypic stand of this invasive species. There are several dead coral heads in the area between the ship and the channel that are exposed at extreme low tides.

Kingman Reef NWR

Kingman Reef is the most pristine of any reef under U.S. jurisdiction, and one of the most pristine coral reefs in the world, with a fully structured inverted food web. Kingman Reef is considered an open atoll and is in the shape of an arrow head with its tip pointing to the east and its western side open to the sea. It is located 30 miles NNW of Palmyra Atoll at 6°24'N 162°24'W (about 920 nautical miles SSW of Honolulu) with a navigable 12 fathom deep channel in the west and two, sometimes three small rubble spits or islets on the northeastern and southern portions of the reef. It is a largely submerged tropical reef, supporting diverse species of corals, fish, as well as many other unique wildlife species. As an open atoll, Kingman Reef has a fully exposed "open lagoon" (lagoon) which is defined as a somewhat sheltered area in the lee of the emergent reef that experiences high tidal flush, currents and winds, and may be exposed to strong weather. The waters of the lagoon are 100 to 200 ft deep with scattered shallow patch reefs.

In 2007, a wooden fishing vessel, possibly of Indonesian origin, ran aground in the Kingman Reef. It was badly burned, abandoned and believed to have floated several thousand miles east to Kingman. The vessel was 25.5 m long with a beam of 8 m. It ran

hard aground on the shallow perimeter reef crest with the bow pointing SSW towards the lagoon. Since the original discovery of the vessel it has broken up considerably and the debris field is scattered from the fore reef and reef crest to the lagoon and back reef. What remains of the vessel is aground on the northern rubble spit of Kingman Reef, and measures about 7 m in length. The ship and various items are strewn about in the reef including engine parts, fishing gear, coils, piping, anchors, and compressors from the refrigeration equipment. The wreckage is very unstable and has shifted its location in recent years.

The bulk of the wreckage is located on a rubble spit in approximately 1-1.5 m of water. The wooden hull remains sitting upright on the reef flat, emerging approximately 1.5-2.0 m out of the water. The debris field extends into the lagoon and out to the reef crest. The wooden hull is not intact, and has been broken apart by wave action, with only about 7m remaining on the rubble spit. Approximately 60% of the hull remains in relatively stable condition however the ship's main deck, engine room and house appear missing. It rests approximately 50 m to the northeast of the deep waters of the lagoon, with a shallow back reef and coral bench separating the lagoon and rubble spit. The coral bench is exposed at low tide extending out 30m to the shallow back reef. The back reef extends out 10 m before it drops off quickly to 30 m. The debris field extends out to the reef crest in waters 1-3 m deep. The debris in the lagoon and back reef is in water 1 to 25 m deep. Salvage and removal of debris will include diving for wooden planks, metal and fiberglass debris. Best access to the wreck would be from the lagoon.

The wreckage is causing physical damage and promoting a bloom of cyanobacteria, and filamentous green algae particularly in the tide pools in the area of the wreck. This growth has spread across approximately 1.5 hectare of once pristine coral reef, fanning out from the wreck site, covering 2 km of back reef in the lagoon. If continued unabated the cyanophyte and algal growth will continue to spread, over growing corals, giant clams and other benthic organism causing a phase shift from stable coral reef to an algal dominated system.

B. Work Site Restrictions:

1. Contractor is responsible for transporting all salvage/demolition equipment, supplies and labor needed for the contract to Palmyra and Kingman. No stores or on-island resources are available for the purchase or acquisition of any supplies including food. All anticipated supplies must be brought by the Contractor by ship. Flights into/out of Palmyra have a very limited payload. Passengers are normally limited to 50 lbs of luggage/gear.
2. Personnel need to stay shipboard (lodging, food, recreation) when not on the work site; these refuges and the wrecks are in remote areas. The ship shall be commanded by a qualified captain. The ship shall meet the requirements for sea-worthiness as required in the provisions of Maritime Law. Limited wildlife –dependent recreation (snorkeling, hiking, and wildlife observation, catch and release flats fishing) may be permitted on scheduled down days, but only with a USFWS or USFWS-approved guide. No on-shore or off-shore fishing will be permitted. No camping is allowed on the atoll islands. Palmyra has a functional crushed coral airfield on The Nature Conservancy-owned Cooper Island; and deep harbor located within the national wildlife refuge. It may be

possible to transport crew and personnel to and from Palmyra via plane, but all other operations would need to be ship based.

3. Kingman Reef NWR is 30 miles north of Palmyra. Access to Kingman Reef is by vessel only. Kingman will be flown over for a brief aerial site assessment via the G2 charter flight on the way to or from Palmyra.
4. No facilities, housing, freshwater, support services exist at Kingman Reef. All access and operations must be ship based. The ship would be allowed to moor in the lagoon.
5. Limited facilities, housing, freshwater, support services exist at Palmyra Atoll, but may not be available for the entire period of the contract. Some staging grounds may be available. Bidders should specify size of staging grounds requested at Palmyra. Due to limited facilities, access and operations during shipwreck removal will be ship based. The ship would be allowed to moor in the lagoon. The Contractor shall be self-sufficient as to communications (satellite phone) and administrative needs for themselves and their subcontractors and employees.
6. If additional flights into Palmyra are needed, they will be contracted through the USFWS. Bids should include a USFWS reservation for each flight required in your bid package at the current contract price per flight. Flights can be held over at Palmyra up to two nights at no additional cost to allow a cumulative 2 days for on-atoll work; a third night could be planned at an additional cost. The contract plane into Palmyra will carry up to 13 passengers.
7. The Contractor shall be responsible for obtaining the necessary approvals to enter the Palmyra Atoll and Kingman Reef NWRs and is required to obtain the required FWS refuge/monument Special Use Permit and abide by the condition of that permit. Coordination shall be made with the below point of contact. While within the jurisdiction of the NWRs, the Contractor shall comply with all USFWS regulations concerning site access and environmental restrictions. The USFWS prohibits the taking of invertebrates, fish, and marine animals and prohibits any discharge within the atoll waters and out to the 12 nautical mile refuge boundary. Sewage and gray water shall be discharged a minimum of 12 nautical miles outside of the atoll. Strict biosecurity measures are in place to minimize the introduction of nonnative species to the atoll. (See appendix).
8. The Contractor must meet all quarantine requirements and biosecurity protocols. Any equipment previously used elsewhere must be thoroughly cleaned and inspected.
9. The hull must be cleaned of all fouling and inspected prior to departure to the NWRs. The inspections shall be performed by a representative of the USFWS. If the ship is not located in Honolulu at the time of inspection, the contractor shall be responsible for any costs such as travel and per diem incurred by the inspector to perform the inspection.
10. Rat free inspection must be done just prior to departure. (On Oahu, Terminix is the only known vendor who does the inspection. An appointment must be made in advance. It takes 2 weeks to perform the rat inspection)
11. Shipboard berthing, food preparation, and sanitation must meet NWR requirement of no disposal, dumping, discharge, or release within the NWR boundary (12nm),
12. Transportation, appropriate berthing, and food on-site must be provided by the contractor for one USFWS representative (male or female). This is to include space and all access on the vessels and seats on the charter flights for personnel rotations.

13. To a limited extent and in consultation with USFWS and The Nature Conservancy, a few items for use during or just prior to the removal activities may be staged at Palmyra with prior approval by USFWS and The Nature Conservancy. Nothing may be staged on Kingman Reef NWR. Ships may moor in the lagoon during the salvage operation.

C. Period of Performance:

1. The project shall be completed by December 31, 2013.

D. Pre Award Requirements:

1. Based on the programmatic needs listed in this Work Statement, submit an information package that lists your experience and qualifications to performance the services requested. Information should include direct relevant experiences within the last ten years on projects of a similar scope and size as specified in Section M of the Contract Clauses. Include reference contact information for each project submitted. The USFWS will select the top five offerors to move on to the next step.
2. The remaining offerors shall attend a required on-site visit, departing from Honolulu, Hawai'i. Potential bidders will pay their costs to get to and from the charter flight in Honolulu. Potential bidders may not have more than 2 representatives for the required site visit, due to flight and space constraints onsite. This preliminary site visit will introduce potential bidders to the conditions of the shipwrecks and acquaint them with the unique conditions and requirements of Palmyra Atoll and Kingman Reef. This preliminary evaluation will include a fly-over of Kingman Reef and one-day on-site visit to the Palmyra shipwreck. These preliminary evaluations during the site visit will be the only opportunity for the prospective contractors to spend actual on the ground time researching the project before submitting their proposal packages. Based on information obtained during the on-site scoping visit and any additional information from the USFWS the contractor shall identify a feasible concept-level alternative along with an estimated cost for complete planning/design and implementation of the project that would satisfy the programmatic needs. Submit a written proposal along with maps and drawings with enough information as specified below for the USFWS to determine your approach, other contractors involved, adherence to the applicable codes and costs. The USFWS will review the alternatives for technical adequacy and acceptance along with the price, perform a best value analysis and select a contractor.
3. The Proposal package should include at a minimum but not limited to:
 - a. Palmyra Atoll
 - 1) Information from initial assessment concerning the fuel or other potentially hazardous materials in the wreckage or surrounding debris.
 - 2) Condition and stability of the wreckage. Updated conditions from most current information obtained on-site by the potential contractor in addition to information furnished by USFWS to the Contractor.
 - 3) Approach to completing NEPA documents and other permits. The contractor shall act as the primary agent representing the USFWS, with the USFWS being the owner and ultimate signing authorities.
 - 4) Method for mobilizing materials, equipment, and labor. Methods for storage of materials and equipment. Approach for ship-based berthing for labor. Include information on retention of sewage and greywater

while in the refuge. Also, methods of transportation, estimated number of trips / crew changes and duration of shifts.

- 5) Chosen method of removal and planned equipment to be used. Choose methods that will have the least impact on the ecosystems while effectively and economically getting the job done. Include types, size, and numbers of each piece of equipment to be used. Sequence of events, number of equipment setups and breakdown. Disposition of captured wreckage during and after removal. Include need for divers, work platforms, and submersible equipment to be used. Quantify by area and show locations of debris removal and other areas that may be impacted by the removal process e.g., need to remove dead coral heads to create a path to the shipwreck, how the coral heads would be removed, can the removed coral heads be salvaged and transplanted back to the site, and locations of possible staging areas.
- 6) Schedule/Timeline of Project using Critical Path Methodology (CPM). Included but not limited to planning, permitting process, mobilization, staging, wreckage removal implementation and its critical stages, breakdown, cleanup, demobilization, and closeout.
- 7) Environmental Protection Approach. Show how and what type of equipment is planned to be used that will protect and minimize damage and impact to the existing coral and marine ecosystem including threatened and endangered species. Methodology for containment, cleanup, and disposal of any hazardous pollutants such as fuels and other petroleum products, batteries.
- 8) Site Contingencies. Explain the contractor's approach to deal with issues such as stabilizing coral that is damaged or left unstable by the removal operations, as well as emergency provisions during inclement weather.
- 9) Work Progress Contingencies. Due to remoteness show plans for contingencies, repairs and replacements when problems arise such as equipment breakdown or failure, inclement weather, injured or sick crew, etc.
- 10) Demobilization, Clean Up, and Closeout. Include information on demobilization of equipment, materials and crews, breakdown of staging areas, disposition of hazardous waste remediated or generated during the project. Highlight any commissioning or monitoring requirements for the USFWS.

b. Kingman Reef:

- 1) Information from initial assessment concerning the fuel or other potentially hazardous materials in the wreckage or surrounding debris. Identify type of debris, quantity and extent of coverage on the fore reef, back reef, and in the lagoon.
- 2) Condition and stability of the wreckage. Updated conditions from most current information obtained by USFWS and furnished to the Contractor.

- 3) Approach to completing NEPA documents and other permits. The contractor shall act as the primary agent representing the USFWS, with the USFWS being the owner and ultimate signing authorities.
- 4) Method for mobilizing materials, equipment and labor. Methods for storage of materials and equipment. Approach for ship-based room and board for labor. Include information on retention of sewage and greywater while in the refuge. Also, methods of transportation, estimated number of trips and duration of shifts.
- 5) Chosen method of removal and planned equipment to be used. Choose methods that will have the least impact on the ecosystems while effectively and economically getting the job done. Include types, size and numbers of each piece of equipment to be used. Sequence of events, number of equipment setups and breakdown. Disposition of captured wreckage during and after removal. Include need for divers, work platforms, and submersible equipment to be used. Due to remoteness show plans for contingencies, repairs and replacements when problems arise such as equipment breakdown or failure, inclement weather, injured or sick crew, etc.
- 6) Schedule/Timeline of Project using Critical Path Methodology (CPM). Included but not limited to planning, permitting process, mobilization, staging, wreckage removal implementation and its critical stages, breakdown, cleanup, demobilization, and closeout.
- 7) Environmental Protection Approach. Show how and what type of equipment is planned to be used that will protect and minimize damage and impact to the existing coral and marine ecosystem including threatened and endangered species. Methodology for containment, cleanup, and disposal of any hazardous pollutants such as fuels and other petroleum products, batteries.
- 8) Site Contingencies. Explain the contractor's approach to deal with issues such as stabilizing coral that is damaged or left unstable by the removal operations, as well as emergency provisions during inclement weather.
- 9) Work Progress Contingencies. Due to remoteness show plans for contingencies, repairs and replacements when problems arise such as equipment breakdown or failure, inclement weather, injured or sick crew, etc.
- 10) Demobilization, Clean Up, and Closeout. Include information on demobilization of equipment, materials and crews, breakdown of staging areas, disposition of hazardous waste remediated or generated during the project. Highlight any commissioning or monitoring requirements for the USFWS.

4. Contract shall be awarded by a best value analysis process.

E. Post Award Requirements

1. Planning and Permitting Services:

- a. **Single Point-of-Contact:** Designate in writing, the Contractor's single point-of-contact for the project, typically the Project Manager who will see the project through from design to end of construction. Submit the contact name, email, mailing, address and telephone number(s) to the COTR and/or USFWS Engineering contact person.
- b. If it has not already been decided, determine who will be the point of contact(s) for the USFWS to help the contractor prepare environmental and other permit applications and supporting documents. At a minimum the following permits shall be looked into to determine if application submittals are required.
 - 1) NEPA and other permitting process including but not limited to:
 - 2) Endangered Species Act Section 7 consultations.
 - 3) US Army Corps of Engineers Section 10.
 - 4) US Environmental Protection Agency (EPA) ocean dumping permit for disposal of wreckage at sea, as necessary, or plans and compliance for other disposal alternatives.
- c. **Project Schedule.** List the principal project tasks in rough chronological order and show the duration (number of days) anticipated and start & end time dates for each task.
 - 1) Update the schedule to indicate planned verses actual accomplishments as the project progresses.
- d. **List of Key Project Personnel**
 - 1) All work shall be performed by persons who are well qualified by education, experience, and/or training in the project work, and that are competent in their respective discipline or trade.
 - 2) Submit an organization chart listing the proposed key personnel of the Contractor team.
 - 3) The business entities and key personnel for these services should be entities and individuals who can be committed for the duration of the project.
 - 4) USFWS reserves the right request and/or direct changes in personnel.
- e. **Construction Approach/Work Plan**
 - 1) Submit a more detailed narrative than submitted during the bidding process describing the key elements of the work plan listed below. Where practical scaled maps and drawings shall be used to provide further clarification of the construction approach:
 - a) **Quality Assurance/Quality Control (QA/QC) Plan**
 - i. Include the anticipated construction safety approach and any key safety personnel.
 - ii. Include the anticipated quality control approach and any key quality control personnel.
 - iii. Environmental monitoring plan for issues such as sedimentation monitoring, water quality monitoring, green

turtle avoidance, etc.

- b) Anticipated work to be self-performed and work that would be anticipated to be performed by specialty contractors.
 - c) Method for mobilizing materials, equipment, and labor.
 - d) Chosen method and procedures for removal, disposal and planned equipment to be used. Final disposition of wreckage and debris.
 - e) Schedule/Timeline of Project using CPM methodology.
 - f) Plan for contingencies.
 - g) Demobilization, Clean up, and Close out Documents.
- 2) As the planning progresses, refine the Construction Approach document to include the name(s) of any new contractor(s) and principal sub-contractor(s) not mentioned previously; and submit a brief narrative detailing recent similar projects experience.
- f. USFWS Review of Documents- Submit 3 hard copies and a PDF electronic copy of the Construction Approach/Work Plan to the COTR for FWS review at the 35% stage development and again at the 95% stage development. Submit any Autocadd drawings in (3) 11"x17" hard copy drawing sets and a dwg file electronic copy. Allow for a 2 week review period at each stage.
- g. 100% Work Plan Documents
- 1) Submit the final distribution of the drawings & Work Plan; one full-size set of drawings on Vellum; three half-size set of drawings and electronic AutoCAD.dwg set of drawings with CTB plot file. And 3 copies of the Work Plan on paper and in Adobe Acrobat pdf electronic format.
 - 2) The drawing cover sheet shall bear the stamp(s) when applicable and signature of the designer(s) registered in one of the 50 United States or from a similar board of registration of an internationally recognized government if applicable. The drawing and specification cover sheet submitted to the USFWS may contain a scanned icon of the stamp & signature.
 - 3) Submit the current project schedule and Construction Quality Control Plan.
 - 4) USFWS will circulate the drawings for USFWS signatures.
 - 5) Upon written approval from the CO, the Contractor may proceed with Implementation of the project. Continue on with on-going permitting processes if necessary.
2. Construction/Implementation Services:
- d. General Construction Requirements
- 1) Contractor shall provide supervision, labor, materials, equipment, tools, construction equipment and machinery, inspection, testing, start-up, water, electricity, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether

temporary or permanent and whether or not incorporated or to be incorporated in the Work.

- 2) Security: Effectively secure the work site, staging areas, and materials storage areas.
- 3) Diligence: Perform all construction activities efficiently and with the requisite expertise, skill, and competence to satisfy the requirements of the Contract Documents. Contractor shall at all times exercise complete and exclusive control over the means, methods, sequences, and techniques of construction.
- 4) Supervision: Any time onsite work is underway, provide an onsite Project Manager or Project Superintendent who has a good working knowledge of the project work. Non-work hours activities while in the Monument shall also be under the supervision of the contractor.
- 5) Subcontractors: Utilize general contractors and specialty subcontractors who are duly licensed and well qualified to perform the Work consistent with the Contract Documents; Government may reasonably object to Contractor's proposed selection of workers and business entities.
- 6) Other Contractors: Coordinate and cooperate with any other contractors working at the project site.
- 7) USFWS Operations: Schedule and coordinate construction activities so as not to unduly impact ongoing refuge operations; USFWS operations have precedence over the construction activities.
- 8) Limitations: Work, off hours activities, and recreation must be conducted in a way that limits disturbance and maintains protection to sensitive wildlife and wildlife habitats on and around the island. Some heavy equipment will be restricted to certain parts of the island/atoll because of the sensitivity of the habitat. Equipment such as pumps and/or storage tanks that have a large footprint must be used only in areas approved by the COTR. All Equipment must meet quarantine (biosecurity) criteria.
- 9) Each employee (Contractor or subcontractor) must be instructed in the rules of the refuges including allowed and prohibited recreation and behavior. Breaking of refuge rules will be grounds for removal of an employee, at the Contractor's expense, from the refuges. Ignorance of rules will not excuse misbehavior.

3. Construction Safety

- a. The Contractor shall have the ultimate responsibility for health and safety and behavior on the project site at all times, from issuance of the Notice to Proceed until final completion and acceptance of the project by the Contracting Officer.
- b. The Contractor is responsible for ensuring that all onsite activities, equipment, and facilities constructed by the Contractor, subcontractor, or supplier conform fully to the standards of the Department of Labor, Occupational Safety and Health Administration (OSHA) 29 CFR 1926 and 1910; and DOI and USFWS policies.

- c. Comply with all applicable Federal, State, Maritime and local safety requirements. In the event where any safety standard referenced herein conflicts with another, the more stringent shall govern.
- d. Initiate and maintain, throughout the performance of this contract, an effective health and safety program that provides adequate policies, procedures, and practices to protect workers from (and allow them to recognize) job-related health and safety hazards.
 - 1) The program shall include provisions for the identification, evaluation, prevention and control of general work site hazards, specific job hazards, and potential hazards that may arise from foreseeable construction methods and conditions, as well as providing a competent person to conduct frequent and regular inspections.
 - 2) Each employee (Contractor or subcontractor) must be instructed in the recognition and avoidance of unsafe conditions and the regulations applicable to the work environment.
- e. Provide barricades and warning devices as necessary to safeguard the public, workers, and government personnel. Rollover Protection and Seat Belts: In addition to the Safety and Health requirements of clause Federal Acquisition Regulation (FAR) 52.236-13 of Part 2, Section I of this Contract, rollover protection and seat belts required by 29CFR 1926 (OSHA) shall be extended to include equipment regardless of the year of manufacturer.

4. Compliance Documentation

- a. The Contractor shall (during normal working hours throughout the duration of the contract) promptly furnish information, and provide reasonable facilities & access for obtaining information respecting: the character of the materials, condition of the work-in-progress, number of workers employed, their pay rate, time worked, inspection reports and test results from sampling and testing laboratories, and similar information.

5. Construction Quality Control (CQC)

- a. Designate in writing a single person competent to oversee and manage on-site quality control activities.
- b. The Contractor is responsible for quality control of all project work including any sub-contracted work, and to submit thorough documentation that work fully complies with the construction documents and project permits.
- c. Quality control processes include but are not limited to proactively:
 - i. Executing the project Construction Quality Control Plan.
 - ii. Ensuring compliance with the construction documents and project permits.
 - iii. Managing specialty subcontractors
 - iv. Reviewing shop drawings, and other construction submittals.
 - v. Ensuring that the workers have the appropriate expertise and proper equipment to perform the work.

- vi. Effectively utilizing third-party sampling & testing services (typically for earthwork gradation, compaction, concrete & asphalt testing, welding, pile driving, and other specialty inspections).
 - vii. Timely involvement of industry specialists such as manufacturer representatives.
 - viii. Providing timely Quality Control documentation.
 - ix. Timely involvement of local authorities having jurisdiction.
- d. Third-Party Sampling & Testing: On projects that entail third-party sampling and testing, the Contractor shall provide and pay for the services of an independent construction materials testing laboratory accredited by an acceptable laboratory accreditation authority; or similar approved construction inspection specialty consultants.
 - e. Field-verify all dimensions and conditions prior to performing the work. Notify the COTR of any conflicts.
4. Invasive Species/Pathogen Control
- a. Follow any other decontamination/ quarantine procedures required by Refuge Staff or as spelled out in the Statement of Work.
5. Environmental Protection
- a. General: Comply with all applicable federal, state, Maritime and local environmental laws, permits, and regulations. This condition applies to, but is not limited to, laws, permits, and regulations governing noise levels, air and water quality standards, erosion control, surface runoff, cultural resources and wildlife such as green turtles.
 - b. Hazardous Materials: Perform any hazardous materials work in strict accordance with governing hazardous materials regulations. Immediately stop work if any unidentified hazardous materials are encountered and immediately notify the Inspector, COTR or Contracting Officer. Restrict access to the area in question. Limit or prevent the release of any hazardous materials into refuge waters.
 - c. Cultural Resources: Immediately stop work if paleontological, archaeological or historical remains (including burials or skeletal material) are encountered, immediately stop the work and notify the Inspector, COTR, or Contracting Officer. The Contracting Officer will notify the Regional Archaeologist so the provisions of 36 CFR 800.7 (Resourced Discovered During Construction) and other relevant laws are followed. Work will cease in the immediate vicinity until permitted to resume by written order from the Contracting Officer. Work in other areas may proceed as approved by the Contracting Officer.
 - d. Threatened or Endangered Species: Requirements on handling issues associated with threatened and endangered species shall be determined during the Section 7y permitting process. The contractor shall abide by those requirements once established.
 - e. Erosion & Spills: Provide effective erosion control and spill containment measures at the earliest feasible stage of construction, and regularly inspect and

maintain them in effective working order. Promptly stop work in area(s) of any ineffective erosion control / spill containment measures.

- f. Spill Kit: Have suitable spill containment kits, including booms, readily available to the work site and ensure that the workers are proficient in using the kits in a timely manner.
- g. Unsuitable Equipment: Promptly remove from service any equipment that is not in sound mechanical condition, or that is leaking fluid beyond what can be effectively managed with absorbent mats. No leakage shall be allowed into the water.
- h. Vegetable-Based Hydraulics: Unless explicitly approved otherwise, dedicated onsite equipment operating near or over water bodies (or sensitive habitat) shall be equipped with vegetable-base hydraulic fluids. Consider alternates such as propane, electric, or air pneumatics.
- i. Transient Equipment: Unless indicated otherwise, transient equipment (that is free of noticeable leaks) may utilize conventional hydraulic fluids; typical for trucks importing or exporting materials and equipment to/from off-site sources.
- j. Fueling & Maintenance: Fuel and maintain equipment well away from sensitive habitat.
- k. Pumps & Generators: Where feasible, pumps and generators operating over (or in close proximity to) water bodies or sensitive habitat shall be propane-electric.
- l. Dust: Utilize effective means to minimize the dispersal of wind borne generated by construction activities from leaving the work site and/or entering water bodies.
- m. Damage: Protect adjacent vegetation, reef, property, structures, and improvements from damage.
- n. Work Limits: Coordinate with the local USFWS staff to select a construction staging area(s), if feasible. Construction equipment and operations shall be contained on-board the Contractor's vessels or within the work limits and staging areas.

6. Clean Up

- a. Keep the work vessels, work site, and staging areas reasonably free from trash and construction waste/debris. Prevent discharges into refuge waters.
- b. Upon Substantial Completion of the Work, promptly remove any debris, materials, equipment, and tools, temporary facilities; and restore any areas disturbed by the Work to their preconstruction condition.

7. Construction Waste

- a. Minimize creation of construction, deconstruction, and demolition waste.
- b. Ensure any existing or new materials/equipment/substances are properly characterized, reused, salvaged, recycled, and/or disposed of.
 - i. Any regulated quantities of hazardous materials shall be disposed of at disposal facilities specifically licensed to accept hazardous waste.

- ii. Dispose of any materials (that is not salvaged, reused, or recycled) in a legal manner off-site, in licensed disposal facilities.

8. Material & Equipment Transportation, Handling & Storage

- a. Access to the island is either by plane or boat.
- b. Contractor shall have a representative on site to receive material deliveries, and the contractor shall remain responsible for all material deliveries whether or not their representative is on site at the time of delivery or not.
- c. Government owned equipment is not available for Contractor's use to accomplish any Work unless previously approved with the COTR.
- d. Transport, handle, and store materials and equipment in accordance with the manufacturer's written instructions, and in a secure manner.
- e. Promptly remove from the project site any materials or equipment that are damaged or are otherwise unsuitable. Properly store the damaged materials or equipment in a designated area until it can be removed from the island.
- f. Depending on quantity and type of materials, equipment and tools, government buildings and other facilities may be available for storage of Contractor's materials, equipment, and tools on a limited basis, pending previous approval by the COTR.
- g. No stores or on-island resources are available for the purchase or acquisition of any supplies including food and water.

9. Temporary Facilities

- a. The Contractor shall furnish all temporary facilities and utilities needed including heat, light, power, water, satellite telephone, radios, sanitary facilities (including retention of all greywater and sewage), job offices, material handling equipment, temporary construction aids, berthing, food, food storage and preparation facilities, and storage enclosures.
- b. No large temporary storage facilities shall be constructed on island.
- c. The Contractor is responsible for all temporary connections and disconnections.

10. Work Hours & Progress Schedule

- a. Due to the remote nature of the project and the desire to remove the within the anticipated timeframe work hours can be flexible keeping in mind worker safety and impacts to normal Refuge operations.
- b. Provide a well-annotated Project Schedule in electronic Adobe.pdf format (or other approved format). Every two weeks, submit a revised schedule if actual work progress differs from the schedule.

11. Final Walkthrough

- a. Submit a preliminary list of unfinished work and notify the COTR at least ten calendar days prior to the anticipated date of completion of all work.
- b. The COTR will perform final walk through as promptly as practicable.

- c. The time required for such walk through and for making any corrections as a result thereof shall be included in the contract performance time.
- d. The Contractor representative responsible for the work shall be present at the final walk through and shall submit a preliminary list of unfinished work.

12. Closeout Documents

- a. Submit any requested regulatory-agency clearance documents indicating the work complies with their requirements such as finalized inspections.
- b. After completion of the work and prior to final payment, submit a Release of Claims (Form DI-137 provided by the Contracting Officer), properly executed by the Contractor, releasing claims against the United States arising out of this contract, other than claims specifically excepted from the operation of the release.

END OF SECTION

APPENDIX

SUPPLEMENTAL SPECIAL CONDITIONS

3.1 Wildlife Disturbance

3.1.1 Sea Turtles

Disturbance to sea turtles must be avoided. Sea turtle restrictions: Minimum distances of 50 yards from all sea turtles. No harassment of any kind is allowed.

3.1.2 Human Hazards to Seabirds

Seabird colonies will be avoided to the extent practicable. Areas indicated as particularly sensitive by the Manager must be avoided. When allowed, travel through or work in the interior portions of islands must be coordinated with Refuge Staff at Palmyra. Any entry into seabird colonies or the interior portions of islands must be conducted in a manner that minimizes disturbance to nesting birds and their habitat.

3.4 Alien Species Prevention

One of the gravest threats to Palmyra is the introduction of alien plant and animal species. The introductions of rats (*Rattus rattus*), and most recently the scale insect (*Pulvinaria urbicola*), have caused severe damage to the native communities of Palmyra. In only several years, the scale insect has destroyed approximately 70% of the indigenous *Pisonia* forest (*Pisonia grandis*) found on Palmyra. Introductions of other organisms over the years have caused significant damage to the native terrestrial plant and animal communities, and likely the marine community as well. The Service is responsible for the management and protection of Palmyra. The policies and practices outlined below are complex, but the Service has found them to be effective at greatly reducing additional introductions of invasive species on National Wildlife Refuges throughout the tropical Pacific. Please do your part to protect Palmyra from alien plant and animal species by following the precautions outlined below.

3.4.1. Definitions

3.4.1.1. Clothing: All apparel, including shoes, socks, over and under garments.

3.4.1.2. Soft gear: All gear such as books, office supplies, daypacks, fanny packs, packing foam or similar material, camera bags, camera/binocular straps, microphone covers, nets, holding or weighing bags, bedding, tents, luggage, or any fabric or material capable of harboring seeds or insects.

3.4.1.3. New Clothing/Soft Gear: New retail items, recently purchased and never used.

3.4.1.4. Palmyra Dedicated Clothing/Soft Gear: Items that were originally purchased as new and have ONLY been used at Palmyra, and which have been stored in a quarantined environment between trips to Palmyra.

3.4.1.5. Sensitive Gear: Computers, Optical Equipment, and other Sensitive Equipment

3.4.1.6. Non-Sensitive Equipment and Construction Materials: Building materials, power and hand tools, generators, misc. machinery etc.

3.4.1.7. Suitable Plastic Packing Container: Packing containers must be constructed of smooth, durable plastic which can be easily cleaned and will not harbor seeds or insects. Packing containers may be re-used for multiple trips to Palmyra, but must be thoroughly cleaned before each trip and strictly dedicated to Palmyra related projects.

*Examples of APPROPRIATE plastic packing containers are 5 gallon plastic buckets and plastic totes constructed with a single layer and having a smooth surface. All appropriate packing containers must have tight fitting plastic lids.

*An example of an INAPPROPRIATE plastic packing container is a U.S. Mail tote. Mail totes are typically constructed of cardboard-like plastic that provides a porous multi-layered surface, allowing seeds and insects to easily hitch-hike.

3.4.2. Quarantine Inspections

3.4.2.1. Honolulu to Palmyra: All personal gear, supplies, equipment, machinery, and vessels (planes, boats, ships and barges) will be inspected for quarantine compliance by Service staff in Honolulu prior to departure for Palmyra.

3.4.2.2. Palmyra to Honolulu: To help protect the State of Hawaii from potential alien species introductions from Palmyra, all personal gear, supplies, equipment, machinery, and vessels must be cleaned and inspected for quarantine compliance by Service and/or TNC staff on Palmyra prior to departure for Honolulu. Steam cleaning, pressure washing, and fumigation are not required for Honolulu bound cargo, but a concerted effort will be made to ensure that alien pests are not transported.

3.4.3. Prohibited Items (Transport of the following items are strictly prohibited)

3.4.3.1. Rooted Plants, Cuttings, Flowers and Seeds (raw or propagative)

3.4.3.2. Soil, Sand, Gravel, or any other material that may harbor unwanted plant and animal species

3.4.3.3. Animals (no exceptions)

3.4.3.4. Cardboard (paper and plastic cardboard harbors seeds and insects)

3.4.4. Regulated Items (Transport of the following items are strictly regulated)

3.4.4.1. Food items have the potential to carry alien pests and are therefore selected, packed and shipped with great care for consumption on Palmyra. Most fresh foods are not transported to Palmyra, but are grown either hydroponically or in an earth garden on site. Do not bring your own foods without authorization.

3.4.4.2. Wood products often harbor seeds and insects. Therefore, only treated wood that has been painted or varnished may be transported. Approved wood products must also be frozen for 48 hours or fumigated as described in section 3.4.9 below.

3.4.5. Packing Procedures

3.4.5.1. Ensure that the environment selected for packing has been well cleaned and free of seeds and insects. Keep packing containers closed as much as possible throughout the packing process so insects cannot crawl in before the containers have been securely closed. Quarantine procedures should be performed as close to the transportation date as possible to ensure that pests do not return as hitch-hikers on the packing containers.

3.4.6. Packing Containers

3.4.6.1. All supplies and gear must be packed and shipped in SUITABLE PLASTIC PACKING CONTAINERS (see section A above for definitions of packing containers). Packing containers must be constructed of smooth, durable plastic and have been thoroughly cleaned prior to use.

3.4.6.2. Packing containers may be re-used for multiple trips to Palmyra, but must be thoroughly cleaned before each trip and strictly dedicated to Palmyra related projects. Cardboard containers are strictly prohibited due to their tendency to harbor seeds and insects.

3.4.7. Clothing and Soft Gear

3.4.7.1. All persons walking on the terrestrial part of the Refuge [islands other than Cooper Island] must have NEW or PALMYRA DEDICATED clothing and soft gear (including all footwear). This rule applies whenever you plan to step on to dry land past the intertidal zone.

3.4.7.2. Freeze all clothing and soft gear for 48 hours (including both new and Palmyra dedicated).

3.4.7.3. All aquatic gear such as nets and traps should be Palmyra – dedicated and not have been used at other research sites.

3.4.8. Sensitive Equipment

3.4.8.1. All Sensitive Gear (optical equipment, computers, satellite phones and other electronic equipment) need not be frozen or fumigated, but must be thoroughly inspected and cleaned.

3.4.9. Non-Sensitive Equipment and Construction Materials

3.4.9.1. All Non-Sensitive Equipment, Machinery, and Construction Materials that are water resistant must be steam cleaned or pressure washed to ensure the removal of all dirt, insects, and seeds from external surfaces.

3.4.9.2. All non-water resistant items must be tented and fumigated to kill unwanted pests, or frozen for 48 hours.

3.4.9.3. Quarantine procedures should be performed as close to the transportation date as possible to ensure that pests do not return to the equipment or packing containers.

3.4.9.4. All small boats should be thoroughly washed down, fumigated, and hulls carefully cleaned before transport to Palmyra NWR. Additionally, small boats must be washed at the end of each day to reduce the risk of spreading alien species between islands within the Refuge.

3.4.10 Commercial Ships and Barges, and Private Sailing and Motor Vessel Quarantine

3.4.10.1. Ship owners or Captains will ensure that ships and barges are free of rats, insects, seeds, and all other alien species prior to departing for Palmyra. They will ensure that rodent bait stations containing rodenticide and traps have been placed on the ship and barge decks and holds throughout their voyage to Palmyra as well as throughout the duration of the stay within the Refuge.

3.4.10.2. Ship owners or Captains will notify the Service at least 10 full working days prior to all vessels departing for Palmyra in order to arrange a quarantine inspection of all vessels and cargo bound for Palmyra. The inspection will be scheduled as close to the departure date as possible.

3.4.10.3. Ship owners or Captains will ensure that all ships and barges entering Palmyra have had their hulls cleaned of fouling marine organisms. The ships and barges must depart for Palmyra within 14 days of having had the hulls cleaned. All ship and barge hulls must be re-cleaned should the vessel return to a port for greater than 14 days before returning to Palmyra. Results of all hull cleanings must be submitted to the Service 2 full working days prior to the vessel departure from Honolulu. Contact the Refuge office for additional details.

3.4.10.4. No discharge of ballast water, grey water, sewage, or waste of any kind will be allowed by any vessel within the Refuge boundary (12 mile territorial sea).

3.5 HazMat & Chemicals

3.5.1 All chemicals and hazardous materials must be pre-approved by the Refuge Manager for SUP approval.

3.5.2 All chemicals and hazardous materials must be stored, used, and disposed of according to applicable laws and Refuge-approved protocols.

3.5.3 Permittee and their Personnel must be properly trained in use of all chemicals and hazardous materials used. Proof of appropriate training may be required by the Refuge Manager.

3.5.4 No chemicals or hazardous material may be left on the Refuge after the departure of the Permittee unless it has been previously arranged with the Refuge Manager for USFWS staff to continue the Permittee's project and those materials are necessary. All requests for

USFWS staff to continue a Permittee's project after the Permittee's departure must be made in writing to the Refuge Manager, and such a request must include all details of chemicals and hazardous materials use and storage on the Refuge.

- 3.5.5 Immediately after the project is complete the Permittee must make arrangements to remove all chemicals and hazardous materials from the Refuge. Any costs associated with use, storage, transport, training, disposal, or HazMat response for these materials will be the sole responsibility of the Permittee.

Appendix M
Past Performance Rating Questionnaire

Solicitation No. F12PS01171

Palmyra Atoll and Kingman Reef National Wildlife Refuge (NWR)
Shipwreck Debris Removal

Solicitation No. F12PS00171

**Palmyra Atoll and Kingman Reef National Wildlife Refuge (NWR)
Shipwreck Debris Removal**

**PAST PERFORMANCE QUESTIONNAIRE
SOURCE SELECTION SENSITIVE INFORMATION**

Name of Offeror: _____

Client/Contract Information (Supplied by offeror)

Name of Client: _____ Contract Number: _____

Contract Title: _____

Contract Value: _____

Type of Contract: _____ Period of Performance: _____

The ratings below are supplied by the contractor identified above, NOT the offeror.

Performance Elements	Unsatisfactory 0	Poor 1	Fair 2	Good 3	Excellent 4	Outstanding 5
1. Quality of Product or Service						
2. Cost Control						
3. Timeliness of Performance						
4. Business Relations						

5. Remarks on outstanding performance:

Provide data supporting this observation; you may continue on a separate sheet if needed.

6. Remarks on unsatisfactory performance:

Provide data supporting this observation; you may continue on a separate sheet if needed.

7. Please identify any corporate affiliations with the offeror.

8. Other comments that you wish to make:

9. Would you do business with _____ again?
(insert offeror's name)

10. Questionnaire completed by:

Name:

Title:

Mailing Address (Street and P.O. Box):

City, State and Zip Code:

Telephone Number:

Fax Number:

Date Information provided:

PAST PERFORMANCE QUESTIONNAIRE Ratings and Performance Categories

The offeror shall be evaluated based on the following ratings and performance categories:

Ratings:

- 0 = unsatisfactory
- 1 = poor
- 2 = fair
- 3 = good
- 4 = excellent
- 5 = outstanding

Quality of Product or Service

Unsatisfactory: Non-conformances are jeopardizing the achievement of contract requirements, despite use of client resources. Recovery is not likely. If performance cannot be substantially corrected, it constitutes a significant impediment in consideration for future awards containing similar requirements.

Poor: Overall compliance requires significant client resources to ensure achievement of contract requirements.

Good: There are no, or very minimal, quality problems, and the offeror has met the contract requirements.

Excellent: There are no quality issues, and the offeror has substantially exceeded the contract performance requirements without commensurate additional costs to the client.

Outstanding: The offeror has demonstrated an outstanding performance level that was significantly in excess of anticipated achievements and is commendable as an example for others, so that it justifies adding a point to the score. It is expected that this rating will be used in those rare circumstances where offeror performance clearly exceeds the performance levels described as "Excellent".

Cost Control

Unsatisfactory: Ability to manage cost issues is jeopardizing performance of contract requirements, despite use of client resources. Recovery is not likely. If performance cannot be substantially corrected, this level of ability to manage cost issues constitutes a significant impediment in consideration for future awards.

Poor: Ability to manage cost issues requires significant client resources to ensure achievement of contract requirements.

Fair: Ability to control cost issues requires minor client resources to ensure achievement of contract requirements.

Good: There are no, or very minimal, cost management issues and the offeror has met the contract requirements.

Excellent: There are no cost management issues and the offeror has exceeded the contract requirements, achieving cost savings to the client.

Outstanding: The offeror has demonstrated an outstanding performance level that justifies adding a point to the score. It is expected that this rating will be used in those rare circumstances where the offeror achieved cost savings and performance clearly exceeds the performance levels described as "Excellent".

Timeliness of Performance

Unsatisfactory: Delays are jeopardizing the achievement of contract requirements, despite use of client resources. Recovery is not likely. If performance cannot be substantially corrected, it constitutes a significant impediment in consideration for future awards.

Poor: Delays require significant client resources to ensure achievement of contract requirements.

Fair: Delays require minor client resources to ensure achievement of contract requirements.

Good: There are no, or minimal, delays that impact achievement of contract requirements.

Excellent: There are no delays and the offeror has exceeded the agreed upon time schedule.

Outstanding: the offeror has demonstrated an outstanding performance level that justifies adding a point to the score. It is expected that the rating will be used in those rare circumstances where offeror performance clearly exceeds the performance levels described as "Excellent".

Business Relations

Unsatisfactory: Response to inquires and/or technical, service, administrative issues are not effective. If not substantially mitigated or corrected it should constitute a significant impediment in considerations for future awards.

Poor: Response to inquires and/or technical, service, administrative issues are marginally effective.

Fair: Response to inquiries and/or technical, service, administrative issues are somewhat effective.

Good: Response to inquiries and/or technical, service, administrative issues are somewhat effective.

Excellent: Response to inquiries and/or technical, services administrative issues exceeds client expectation.

Outstanding: The offeror has demonstrated an outstanding performance level that justifies adding a point to the score. It is expected that this rating will be used in those rare circumstances where offeror performance clearly exceeds the performance levels described as "Excellent".

Subcontracting Plan

Palmyra Atoll and Kingman Reef National Wildlife Refuges

**SMALL BUSINESS, SMALL DISADVANTAGED BUSINESS, SMALL WOMEN-OWNED BUSINESS,
HUBZONE SMALL BUSINESS, SMALL SERVICE-DISABLED VETERAN-OWNED BUSINESS, SMALL
VETERAN-OWNED BUSINESS SUBCONTRACTING PLAN**

DATE: _____

CONTRACTOR: _____

ADDRESS: _____

SOLICITATION or CONTRACT NUMBER: _____

ITEMS/SERVICE: _____

The following, together with any attachments, is hereby submitted as a Subcontracting Plan to satisfy the applicable requirements of Public Law 95-507, Section 211 and FAR 19.7.

1. (a) The total estimated dollar value of all planned subcontracting (to all types of business concerns) under this (select only one of the three):

(i) Individual Plan (This Contract Only) is \$ _____

(ii) Division-wide Plan \$ _____
(Represents _____% of Total Annual Sales)

(iii) Company-wide Plan \$ _____
(Represents _____% of Total Annual Sales)

(b) The following percentage goals (expressed in terms of a percentage of total planned subcontracting dollars) are applicable to the plan cited above or to the contract awarded under the solicitation cited.

(i) Small business concerns: _____% of total planned subcontracting dollars under this contract will go to subcontractors who are small business concerns.

(aa) Small Disadvantaged business (SDB) concerns: _____% of total planned subcontracting dollars under this contract will go to subcontractors who are small business concerns owned and controlled by socially and economically disadvantaged individuals.

(After July 1, 1999 all SDBs must be certified by the Small Business Administration. A large business may find the listing of certified SDBs on SBA's homepage at www.sba.gov.)

(bb) Small Women-Owned concerns: _____% of total planned subcontracting dollars under this contract will go to subcontractors who are small business concerns owned and controlled by a woman or women who are U.S. citizens and who also control and operate the business.

(cc) HUBZone Small Business concerns: _____% of total planned subcontracting dollars under this contract will go to subcontractors who are small business concerns located on the List of Qualified HUBZone Small Business Concerns maintained and published on SBA's homepage www.sba.gov. HUBZone mean a historically under utilized business zone, which is an area located within one or more qualified census tracts, qualified nonmetropolitan counties, of lands within external boundaries of an Indian reservation.

Subcontracting Plan

Palmyra Atoll and Kingman Reef National Wildlife Refuges

(dd) Service-Disabled Veteran-Owned Small Business: _____% of total planned subcontracting dollars will go to subcontractors who are small business concerns owned and controlled by a service-disabled veteran(s). (Reference SBA's homepage at www.sba.gov to find a listing of Service-Disabled Veteran-Owned Small Businesses).

(ee) Veteran-Owned Small Business: _____% of total planned subcontracting dollars will go to subcontractors who are small business concerns owned and controlled by a veteran(s). (Reference SBA's homepage to find a listing of Veteran-Owned Small Businesses).

(c) The following dollar values correspond to the percentage goals shown in (1) above.

(aa) Total dollars planned to be subcontracted to Small business concerns:
\$ _____

(bb) Total dollars planned to be subcontracted to Small Disadvantaged Business concerns:
\$ _____

(cc) Total dollars planned to be subcontracted to Small Women-Owned Business concerns:
\$ _____

(dd) Total dollars planned to be subcontracted to Qualified HUBZone Small Business concerns:
\$ _____

(ee) Total dollars planned to be subcontracted to Service-Disabled Veteran-Owned Small Business concerns:
\$ _____

(ff) Total dollars planned to be subcontracted to Veteran-Owned Small Business concerns:
\$ _____

(d) The following principal products and/or services will be subcontracted under this contract, and the distribution among small (SB), small disadvantaged (SDB), small women-owned (WOB), HUBZone (HUB), service-disabled veteran-owned (SDVO), veteran-owned (VO) and large business (LB) concerns is as follows:

SB	SDB	WOB	HUB	SDVO	VO	LB

Subcontracting Plan

(e) The following method was used in developing subcontracting goals (i.e., Statements explaining how the product and service areas to be subcontracted were established, how the areas to be subcontracted to small, small disadvantaged, women-owned small business, HUBZone small business, service-disabled veteran-owned small business and veteran-owned small business concerns were determined and how their capabilities were determined):

(f) The following method was used to identify potential sources for solicitation purposes:

- (i) Existing company source lists.
- (ii) PRONET on SBA's WebPages
- (iii) The National Minority Purchasing Council Vendor Information Services.
- (iv) The Research and Information Division of the Minority Business Development Agency in the Department of Commerce.
- (v) Small, small disadvantaged, small women-owned, HUBZone small business trade associations and the disabled American veterans.
- (vi) Additions to (or deletions from) the service specified above are as follows:

(g) Indirect and overhead costs (check one below):

_____ have been _____ have not been _____ included in development of the goals

(h) If "have been" is checked, explain the method used in determining the proportionate share of indirect costs to be incurred with small, small disadvantaged, women-owned, HUBZone, service-disabled veteran-owned and veteran-owned small business concerns:

Subcontracting Plan

2. The following individual will administer the subcontracting program:

NAME: _____

TITLE: _____

ADDRESS AND TELEPHONE: _____

This individual's specific duties, as they relate to the firm's subcontracting program, are as follows:

General overall responsibility for this company's small business program, the development, preparation, and execution of individual subcontracting plans and for monitoring performance relative to contractual subcontracting requirements contained in this plan, including, but not limited to:

- (a) Developing and maintaining bidder's lists of small, small disadvantaged, small women-owned, HUBZone, service disabled veteran-owned and veteran-owned small business concerns from all possible sources.
- (b) Ensuring that procurement packages are structured to permit small, small disadvantaged, small women-owned business, HUBZone small business owned, service-disabled veteran-owned small business and veteran-owned small business concerns to participate to the maximum extent possible.
- (c) Assuring inclusion of small, small disadvantaged, small women-owned, HUBZone small business, service disabled veteran owned small business and veteran-owned small business concerns in all solicitations for products or services, which they are capable of providing.
- (d) Reviewing solicitations to remove statements, clauses, etc. which may tend to restrict or prohibit small, small disadvantaged, small women-owned, HUBZone small business, service-disabled veteran-owned small business and veteran-owned small business concerns participation.
- (e) Ensuring periodic rotation of potential subcontractors by bidders lists.
- (f) Ensuring that the bid proposal review board documents its reasons for not selecting low bids submitted by small, small disadvantaged, small women-owned business, HUBZone small business, service-disabled veteran-owned small business and veteran-owned small business concerns.
- (g) Ensuring the establishment and maintenance of records of solicitations and subcontract award activity.
- (h) Attending or arranging for attendance of company counselors at Business Opportunity Workshops, Minority Business Enterprise Seminars, Trade Fairs, etc.
- (i) Conducting or arranging for conduct of motivational training for purchasing personnel pursuant to the intent of Public Law 95-507.
- (j) Monitoring attainment of proposed goals.
- (k) Preparing and submitting periodic subcontracting reports required.
- (l) Coordinating contractor's activities during the conduct of compliance reviews by Federal agencies.

Subcontracting Plan

(m) Coordinating the conduct of contractor's activities involving it's small, small disadvantaged, small women-owned, HUBZone small business, service-disabled veteran-owned small business and veteran-owned small business subcontracting program.

(n) Additions to (or deletions from) the duties specified above are as follows:

3. The following efforts will be taken to assure that small, small disadvantaged, small women-owned, HUBZone small business, service-disabled veteran-owned small business and veteran-owned small business concerns will have an equitable opportunity to compete for subcontracts:

(a) Outreach efforts will be made as follows:

- (i) Contracts with minority and small business trade associations
- (ii) Contacts with business development and disabled American veteran organizations
- (iii) Attendance at small and minority business procurement conferences and trade fairs.

(b) The following internal efforts will be made to guide and encourage buyers:

- (i) Workshops, seminars, and training programs will be conducted.
- (ii) Activities will be monitored to evaluate compliance with this subcontracting plan.

(c) Small, small disadvantaged, women-owned small business, HUBZone small business, service-disabled veteran-owned small business and veteran-owned small business concern source lists, guides, and other data identifying small and small disadvantaged business concerns will be maintained and utilized by buyers in soliciting subcontracts.

(d) Additions to (or deletions from) the above listed efforts are as follows:

Subcontracting Plan

4. The offeror (contractor) agrees that the clause entitled "Utilization of Small, Small Disadvantaged, Small Women-Owned, HUBZone Small Business, Service-Disabled Veteran-Owned Small Business and Veteran-Owned Small Business Concerns" will be included in all subcontracts which offer further subcontracting opportunities, and all subcontractors (except small business concerns) who receive subcontracts in excess of \$1,000,000 for construction of any public facility, to adopt and comply with a subcontracting plan similar to this one. Such plans will be reviewed by comparing them with the provisions of Public Law 95-507 and assuring that all minimum requirements of an acceptable subcontracting plan have been satisfied. The acceptability of percentage goals shall be determined on a case-by-case basis depending on the supplies/services involved, the availability of potential small, small disadvantaged, small women-owned, HUBZone small business, service-disabled veteran-owned small business and veteran-owned small business subcontractors, and prior experience. Once approved and implemented, plans will be monitored through the submission of periodic reports, and/or, as time and availability of funds permit, periodic visits to subcontractor's facilities to review applicable records and subcontracting program progress.

5. The offeror (contractor) agrees to (i) cooperate in any studies or surveys as may be required, (ii) submit periodic reports in order to allow the Government to determine the extent of compliance by the offeror with the subcontracting plan, (iii) submit Standard Form (SF) 294, Subcontracting Report for Individual Contracts, and/or SF 295, Summary Subcontract Report, in accordance with the instructions on the forms, and (iv) ensure that its subcontractors agree to submit SFs 294 and 295.

6. The offeror (contractor) agrees that he will maintain at least the following types of records to document compliance with this subcontracting plan (these records may be maintained on a plant-wide or company-wide basis unless otherwise indicated):

- (i) Source lists, guides, and other data that identify Small, Small Disadvantaged, Small Women-Owned, HUBZone Small Business, Service-Disabled Veteran-Owned Small Business and Veteran-Owned Small Business concerns.
- (ii) Organizations contacted in an attempt to locate sources that are Small, Small Disadvantaged, Small Women-Owned, HUBZone, Service-Disabled Veteran-Owned Small Business and Veteran-Owned Small Business concerns.
- (iii) Records on each subcontract solicitation resulting in an award of more than \$100,000, indicating (a) whether small business concerns were solicited and if not, why not, (b) whether small disadvantaged business concerns were solicited and if not, why not, (c) whether small women-owned business concerns were solicited and if not, why not, (d) whether HUBZone small business concerns were solicited and if not, why not, (e) whether service-disabled veteran-owned small business concerns were solicited and if not, why not, (f) whether veteran-owned small business concerns were solicited and if not, why not.
- (iv) Records of any outreach efforts to contact (a) trade associations, (b) business development organizations, and, (c) conferences and trade fairs to locate small, small disadvantaged, small women-owned, HUBZone small business, service-disabled veteran-owned small business and veteran-owned small business concerns.
- (v) Records of internal guidance and encouragement provided to buyers through (a) workshops, seminars, training, etc., and (b) monitoring performance to evaluate compliance with the program's requirements.
- (vi) On a contract-by-contract basis, records to support award data submitted by the offeror to the Government, including the name, address, and business size of each subcontractor. (Not applicable to company or division-wide annual plans).

Subcontracting Plan

Palmyra Atoll and Kingman Reef National Wildlife Refuges

(vii) Records to be maintained in addition to the above are as follows:

Effective period of this subcontracting plan is: (Individual plans should cover the entire period of performance).

____ TO _____
Month Day Year Month Day Year

Signed: _____
Typed Name: _____
Title: _____
Date: _____

Plan Approved By: _____
Contracting Officer

Date Approved: _____

Subcontracting Plan

Palmyra Atoll and Kingman Reef National Wildlife Refuges

(ATTACHMENTS MAY BE USED IF ADDITIONAL SPACE IS REQUIRED)

	PRIOR YEAR/ CONTRACT GOALS	*PRIOR YEAR/ CONTRACT ACHIEVEMENTS
Total Subcontracting dollars	_____	_____
Small Business dollars	_____	_____
Small Business percent	_____	_____
Small Disadvantaged dollars	_____	_____
Small Disadvantaged percent	_____	_____
Small Women-owned dollars	_____	_____
Small Women-owned percent	_____	_____
HUBZone Small Business dollars	_____	_____
HUBZone Small Business percent	_____	_____
Service-Disabled Veteran-Owned dollars	_____	_____
Service-Disabled Veteran-Owned percent	_____	_____
Veteran-Owned dollars	_____	_____
Veteran-Owned percent	_____	_____

If total prior year contract achievements are not available, use actual figures and estimate balance.

Subcontracting Plan

GOALS PROJECTED FOR CURRENT YEAR/CONTRACT

Total Subcontracting dollars	_____
Small Business dollars	_____
Small Business percent	_____
Small Disadvantaged dollars	_____
Small Disadvantaged percent	_____
Small Women-owned dollars	_____
Small Women-owned percent	_____
HUBZone Small Business dollars	_____
HUBZone Small Business percent	_____
Service-Disabled Veteran-Owned dollars	_____
Service-Disabled Veteran-Owned percent	_____
Veteran-Owned dollars	_____
Veteran-Owned percent	_____

*If total prior year contract achievements are not available, use actual figures and estimate balance.

Subcontracting Plan

INDIVIDUAL CONTRACT PLAN

Pursuant to the provisions of this contract, your firm is required (if applicable) to submit Subcontracting Report for Individual Contracts (Standard Form 294). Reports shall be submitted semiannually and at contract completion. The report covers subcontract award data related to this contract. This report is not required for commercial plans.

The report is to be submitted to the Director, Office of Small and Small Disadvantaged Business Utilization, Department of Interior, 1849 C Street, NW, MS 2252-MTB, Washington, DC 20240, Phone (202)208-3493, with an 'information copy' to the Contracting Officer indicated herein.

The failure of the Contractor or subcontractor to comply in good faith with the clause entitled "Utilization of Small Business Concerns," or an approved plan required by this clause, shall be a material breach of the contract.

**COMMERCIAL PRODUCT PLAN
(Corporate, Company or Subdivision)**

Small Business Act of 1958, as amended by Public Law 95-507

Pursuant to the provisions of this contract, your firm is required (if applicable) to submit a Summary Subcontract Report (Standard Form 295). Reports shall be submitted annually for contracts with civilian (federal government) agencies.

The report is to be submitted to the Director, Office of Small and Small Disadvantaged Business Utilization, Department of Interior, 1849 C Street, NW, MS 2252-MTB, Washington, DC 20240, Phone (202)208-3493, with an 'information copy' to the Contracting Officer indicated herein.

The failure of the Contractor or subcontractor to comply in good faith with the clause entitled "Utilization of Small Business Concerns," or an approved plan required by this clause, shall be a material breach of the contract.

Local Clause 10181.22 Questionnaire of Offerors Responsibility (FEB 2000) - All contractors to submit this data as part of required information under Phase I. Also included as attachment 7 of this solicitation as a word document to fill-in and return).

Offerors Name, Address: _____ Telephone # _____
_____ Facsimile # _____
_____ E-Mail Address _____
_____ Duns# _____

How long in present business? _____
Type of Organization: [] Individual [] Individual doing business as a Firm [] Partnership []
Joint Venture [] Corporation, Incorporated under the laws of the State of _____ [] Non-Profit
Organization

Names of Officers, Owners, or Partners: Owners or Partners: _____
President: _____
Vice President: _____
Treasurer: _____
Secretary: _____

Individuals and their telephone numbers authorized to sign bids, offers, and contracts in your name:
1. _____
2. _____

Bonding Company: Telephone number and point of contact for Bonding company.

Financial Position: Net Worth: _____ Date: _____
Name, address, telephone number, account number, and point of contact for Financial Institutions that you do
business with _____

Amount of money available and set aside purchasing supplies and paying employees until first payment is received
under this contract \$ _____

WORK PERFORMANCE: Current Construction Projects:

Contact Person/Tel. #	Type of Construction	\$ Amount
1. _____		
2. _____		

Past Construction Projects completed during the past three years. (Preferably Government Type - (Federal, State, County):

Contact Person/Tel. #	Type of Construction	\$ Amount
1. _____		
2. _____		
3. _____		

(Rev 2/00)

K.3 10181.30 Past and Current Contractor Info (MAY 2001) - All contractors to submit this data as part of required information under Phase I. Also included as attachment 8 of this solicitation as a word document to fill-in and return).

OFFEROR'S NAME: _____

Customer Name: _____

Contract No.: _____

Brief Description: _____

Primary Contact Information: _____

Customer Address: _____

Contract Value: _____

Completion Date: _____

Secondary contact Information: _____

or % Complete if on-going: _____

Name: _____

Voice Mail #: _____

Fax #: _____

e-mail address: _____

Customer Name: _____

Contract No.: _____

Brief Description: _____

Primary Contact Information: _____

Customer Address: _____

Contract Value: _____

Completion Date: _____

Secondary contact Information: _____

or % Complete if on-going: _____

Name: _____

Voice Mail #: _____

Fax #: _____

e-mail address: _____

Customer Name: _____

Contract No.: _____

Brief Description: _____

Primary Contact Information: _____

Customer Address: _____

Contract Value: _____

Completion Date: _____

Secondary contact Information: _____

or % Complete if on-going: _____

Name: _____

Voice Mail #: _____

Fax #: _____

e-mail address: _____

APPENDIX C. FINAL TECHNICAL APPROACH
SUBMITTED TO USFWS



GLOBAL

Diving & Salvage, Inc.

3840 W Marginal Way SW

Seattle, WA 98106

24hr Line: 1.206.623.0621

Fax: 1.206.932.9036

www.gdiving.com

VOLUME TWO

TECHNICAL APPROACH – Evaluation Factor 3

SHIPWRECKS REMOVAL AT PALMYRA ATOLL AND KINGMAN REEF

Solicitation #: F12PS01171

Persons authorized to negotiate on behalf of Global Diving and Salvage, Inc.:

Devon Grennan – President

Ph: 206-623-0621 Email: dgrennan@gdiving.com

David DeVilbiss – VP of Marine Casualty & Emergency Response

Ph: 206-623-0621 Email: ddevilbiss@gdiving.com

Authorized Signer:

_____ **Date:** _____
David DeVilbiss – VP of Marine Casualty & Emergency Response

With this submission Global Diving and Salvage, Inc. agrees with the terms, conditions and provisions included in this solicitation and agrees to furnish any or all items upon which prices are offered, at the price established opposite each item.



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1 Introduction

1.1 Foreword

The remote locations and the extreme sensitivity of the marine and upland environments at Palmyra Atoll and Kingman Reef pose significant challenges to any contractor. As will be evidenced in this document, Global Diving and Salvage is exceptionally suited to perform this scope of work. There are many reasons for making this claim which include:

- Global’s history in successfully performing similar operations for the US Coast Guard, other agencies and owners brings to bear a level of expertise unparalleled in the commercial salvage industry.
- Global’s long experience in providing quality management and qualified, knowledgeable crews experienced in approaching each and every project with sensitivity and care.
- Global dive crews routinely perform ship salvage operations. Our team is experienced in approaching underwater salvage operations with the goal to minimize environmental impacts from pollution or from debris generated during the salvage effort.

For many years Global has worked with the US Coast Guard, Environmental Protection Agency, NOAA and other regulatory agencies in the mitigation of the threat of underwater pollution through the safe and efficient recovery of derelict and wrecked vessels. Over the years we have developed strong understandings of the issues faced by the agencies and have worked closely to develop processes and procedures that work to resolve the problems they face.

To that end we are offering the Fish and Wildlife Service options that we, based on our experience and to our best ability, feel provide the tools to ensure a successful outcome. With the plans outlined in the following pages it is our goal to provide a state of the art, efficient and economically appealing means to accomplish the objectives of the Fish and Wildlife Service in safely removing the threats posed to the pristine waters of Palmyra Atoll and Kingman Reef by the deteriorating wrecks.

2 Global Diving & Salvage, Inc. – Company Profile and Policies

2.1 Company Profile

Global Diving & Salvage, Inc. (GDS) was founded in 1979 as a privately held diving, salvage, and environmental marine service provider in Seattle, WA. At the time of founding, it was envisioned that the scope of operations would extend only to ship husbandry, underwater construction, salvage, and marine oil spill cleanup. Now, three decades down the road, Global has grown from the original owner/operator company to a full service marine contractor engaging the civil engineering as well as energy markets on an international level. Global can also provide not only operational support for a myriad of projects, but project management, technical, and engineering support should those requirements be needed. GDS’s corporate office remains in Seattle, WA, but now regional offices have



been established in Alaska, California, and Texas. These offices employ up to 400 persons on a full time basis and support all operations nationally and internationally.

GDS's extensive work experience includes all forms of commercial diving, ranging from surface air to mixed gas and saturation diving operations in all types of conditions including marine casualty response, hazardous materials, potable water, high altitudes, and penetration dives.

Global's crews are experienced with salvage projects ranging from hazardous high current, zero visibility operations to open ocean recoveries. In addition to standard salvage operations, and as evidenced in our Phase 1 submittal, Global Diving has a particularly long and varied history of successfully refloating and disposing of derelict vessels. The range of experience Global brings to bear on the Palmyra Atoll and Kingman Reef projects provides the US Fish & Wildlife Service with an assurance that the work will be completed as safely, efficiently and with the sensitivity and respect that these projects demand.

2.2 Safety Policies

Global's safety approach emphasizes working collaboratively with each other and our clients to ensure the safest work environment possible. Global has developed our TEAM (Together Everyone Achieves More) program to facilitate this goal. This program encourages participation from our employees and clients to ensure safety is maintained for current projects and improved for future projects.

Our safety program is successful through company-wide employee training, ongoing participation from our employees thru observations and suggestions, job safety kickoffs, daily tailgate meetings with job hazard analysis, proactive dive safety and general safety committees, tracking and addressing trends, and frequent job safety audits.

3 Curtin Maritime Corp. – Subcontractor – Marine Resources /Cranes

Global has worked closely with Curtin Maritime in the engineering and preparation of the plans for the mobilization of the personnel and equipment necessary to complete the recovery of the wrecked vessels at Palmyra and Kingman Reef. Curtin Maritime is providing the floating marine equipment and cranes to the project.

3.1 Curtin Maritime Corp. - Company Profile

Curtin Maritime is a tugboat & barge operator based in Long Beach, California. Founded in 1997 by Captain Martin Curtin, the motto of Curtin Maritime is "Do More with Less." Efficiency, integrity, and innovation are the foundation upon which Curtin Maritime is built and the core of how their business is run. They pride themselves on operating at the highest level of each of these terms: efficiency, integrity, and innovation.

3.2 Curtin Maritime - Health and Safety Policy Statement

Curtin Maritime, Corp. is committed to promoting a culture of safety within our company and providing safe working conditions to both our customers and employees. The safety of all persons, no matter who



they are, is a top priority of the Company, and we are deeply invested in protecting the people and equipment we work with.

We believe that all accidents are preventable; by establishing rules and safe working procedures, exercising good judgment, and using common sense. All Curtin Maritime employees have the opportunity and responsibility to protect themselves and contribute to the protection of their fellow crewmembers, environment, and equipment for which they are responsible.

In fifteen years of business, not one Curtin Maritime employee has been involved in an accident. This perfect safety record is something we pride ourselves on and strive to maintain.

The principles of Curtin Maritime’s safety program are based on our membership in The American Waterways Operators Responsible Carrier Program. This program is designed as a framework for continuously improving the industry’s safety performance, and as a company, Curtin Maritime is one hundred percent committed to supporting this goal and contributing to it as best we can.

In addition to our own safety programs, we aim to comply with those of our customers. For example, Curtin Maritime has maintained an “A” rating in Chevron’s CHESM —Contractor Health and Safety Management process. The CHESM process establishes clear accountabilities, ensures active engagement of contractors and provides a consistent program to eliminate health, environment, and safety (HES) incidents and injuries among contractors. As a contractor for Chevron, we value our excellent rating in the CHESM program, and work diligently to keep that status, year after year.

4 Subcontractor – Windward Environmental LLC – NEPA / Environmental

Windward Environmental LLC (Windward) is a Seattle-based firm that specializes in environmental and engineering consulting services for clients in the regulated community. With a strong foundation in scientific and engineering principles, we use an interdisciplinary approach to meet our clients’ needs and provide strategic insight.

Windward’s staff of 40 professionals includes senior personnel who are highly respected in their fields, both regionally and nationally. Windward’s five partners each have an average of 22 years of experience.

Founded in 2000, Windward has a history of fostering positive working relationships with local, state, and federal regulators and has extensive experience in the interpretation and application of environmental regulations. We strive to develop the most cost-effective approach for each site, incorporating proven tools and innovative methodologies in investigation planning, field program design, and remediation services. Our goal is to ensure that the data collected are defensible and support ongoing decision-making and program strategy. As a consequence, our work is given serious consideration by all involved parties – even in the most contested situations.



5 Subcontractor – Windward Environmental LLC – Reef Specialist

Global Diving & Salvage has selected Ms. Kathleen Hurley, a marine biologist and scientist with extensive coral and reef experience as the reef specialist for the work at Palmyra Atoll and Kingman Reef. Ms. Hurley will be on location throughout the project and will assist Global in developing the protocols that will be in place during the operation, and will develop and direct the coral remediation and restoration processes should they become necessary. A brief synopsis of Ms. Hurley’s background follows.

Kathleen Hurley , MS, MA, is an experienced environmental management professional with extensive experience assessing impacts to coral reef ecosystems and NEPA documentation. She holds graduate degrees in marine science and environmental policy. Her experience includes design and implementation of the first national coral reef survey in the Dominican Republic, assessment of coral diversity and richness in the Turks and Caicos Islands, and surveys of reefs in the Cabo Blanco Absolute Reserve (Costa Rica). She developed and implemented reef surveys in the Commonwealth of Dominica and evaluated the population dynamics of *Diadema antillarum* in this ecosystem. Additionally, she has participated in reef protection efforts including buoy installation and tour guide education in the Caribbean. In her graduate work at Western Washington University, she utilized satellite imagery to assess habitat change over time in seagrass beds and coral reefs of the Middle Florida Keys.

Her environmental policy work includes advisory services to the Government of Colombia on environmental impact assessment procedures and preparation of NEPA documentation for a variety of projects throughout the United States. In 2009, she collaborated with Global Diving and Salvage, Inc. on the environmental impact assessment of shipwreck in Mexican territorial waters, providing technical support on assessment of marine habitats surrounding the vessel. She has also teamed with Global Diving and Salvage, Inc. on environmental assessment for scuttling vessels off the Washington State coast. She is well-versed in best management practices, project management and is known for her collaborative approach to environmental management issues.



Section 2: Kingman Reef – Wreck Removal and Debris Recovery

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1 Kingman Reef – Operations Overview

The wreck at Kingman Reef was not able to be surveyed in person on the ground during the site visit. The US F&WS has provided enough information that Global Diving and Salvage feels confident that the developed plan is capable of adjusting to variables on scene to be able to accomplish the Scope of Work. Our method incorporates a Tug and Barge that have personnel accommodations (bunk room, galley, etc.) that are capable of supporting the project without the need for ancillary berthing vessels. The Tier III EPA air quality standards with no discharge from the vessels will have a minimum impact on the environment at Kingman Reef. Water makers and other built in equipment will provide sustainability to the effort without the need for replenishment. The Master of the tug and barge was able to participate in the site visit, which has given him the ability to plan vessel operations based on real life ascertained data.

We have incorporated into our plan the design and build of a special LGPLV (Low Ground Pressure Lifting Vehicle) that also floats. It will enable the crews to remove heavier pieces of the wreck from shallow water areas with minimal impact to the coral, without any need to drag material on the sea floor.

We have also planned on the incorporation of special built SDTVs (Shallow Draft Transport Vessel) to facilitate access to the dry part of the reef from the larger floating assets.

All recyclable debris recovered will be recycled rather than disposed of at sea. Any non-recyclable material will be disposed of properly through Waste Management.

We feel we have put together a plan that best protects the Kingman Reef area, leaving no lasting remnants of the removal operation in this pristine and unique environment.

2 Scope of Work

Provide all labor, equipment, materials and supplies necessary to plan and implement the removal and disposal of the hull and debris associated with the wreck of an unnamed fishing vessel located at the Kingman Reef National Wildlife Refuge

3 Findings from Initial Assessment

The wreck at Kingman Reef was not able to be surveyed up close during the job site visit. Two overflights were made with the jet from an approximate altitude of 500 feet. The passes allowed us the opportunity to observe the overall area of the reef and some of the wreck pieces. We know from the information provided that the vessel is a wooden hulled vessel that had experienced fire damage. Figure 1 is a picture of the wreck shortly after it appeared on Kingman Reef.



Figure 1: Severely damaged unnamed wreck lies ashore on Kingman Reef

As indicated in Figure 2, photos obtained over time show the wreck deteriorating with the damage moving down, indicating wave forces at work.



Figure 2: Wave action and time are severely degrading the vessels condition as evidenced in this undated photo

At the time of the Phase 1 site visit it is suspected that only the machinery, the running gear of the vessel and heavier components of the refrigeration system are in the area of the original grounding. Lighter components such as insulation, wood, and the fish hold have been strewn along the reef. Some of this debris is visible from the air, and some has been reported in the waters on the lagoon side of the reef as shown in Figure 3.

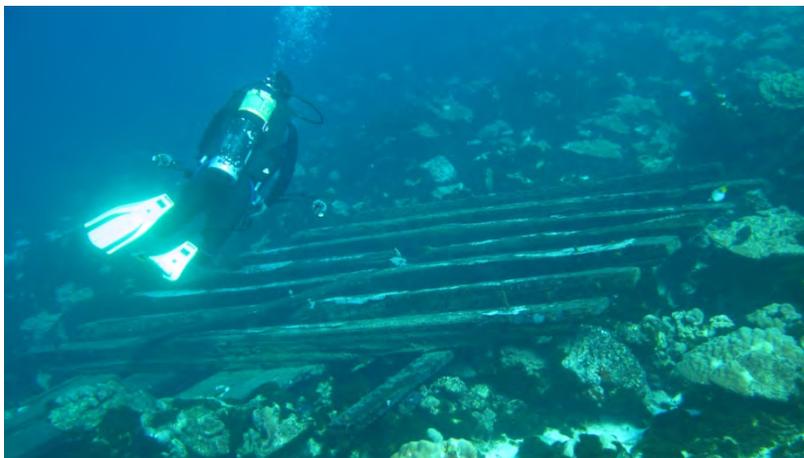


Figure 3: Wood debris in the Kingman Reef lagoon being inspected by unknown diver

The site of the original grounding is shallow and in a high energy area subject to ocean swells. Heavy swells can render that portion of the reef inaccessible for people without adequate protections and training. The sea floor in that area seems to be a mixture of sand and coral and is mostly less than 6 FSW in depth.

The exposed portion of the reef is made up of dead coral and migratory sand with no vegetation. It shifts and changes with severe weather events. The portions of the wreck that exist on this sand appear to move along the reef over time.



**Figure 4: Exposed sand and coral shifts with weather and current.
Wreck debris moves with the shifting sands.**

The submerged portion of the lagoon side of the reef has a bench that extends into the lagoon from the exposed sand for approximately 150 feet. The water depth then drops quickly into very deep water nearly 200 FSW in depth. The seafloor in the area of the lagoon appears to be a mixture of sand, volcanic rock, and coral. This variation in depth can be seen in Figure 5 below.



Figure 5: Water depth in the Kingman Reef lagoon increases rapidly.

The lagoon itself is quite deep and is fairly protected from the North, South, and West. There is a channel on the South side allowing access to the lagoon from outside the reef. This channel and the West end provide access to vessels inside the lagoon.

4 Environmental Compliance Support (ESA and NEPA)

The activities outlined in the solicitation *Shipwrecks Removal at Palmyra Atoll and Kingman Reef National Wildlife Refuge* constitute a federal action by the US Fish and Wildlife Service (USFWS) and trigger alternatives analysis and public participation requirements as defined by the National Environmental Policy Act (NEPA). The solicitation tasks the contractor with developing compliance documents for NEPA and the Endangered Species Act (ESA) of 1973. Windward will conduct analyses and prepare documents to meet the requirements of these authorities.

4.1 National Environmental Policy Act

Although Windward will investigate the availability of a Categorical Exclusion (CE) for these actions, it is likely that an Environmental Assessment (EA) will be required due to the nature of the project. Approximately six weeks will be necessary to develop an EA, and the US Department of the Interior (DOI) review/approval period will be at least three months. The EA will assess all potential effects of multiple alternative remediation options on the environment at Palmyra Atoll and Kingman Reef, including leaving the wrecks “as is” (i.e., no action).

If it is determined in the EA that the preferred remediation alternative is a “major federal action significantly affecting the quality of the human environment,” an Environmental Impact Statement (EIS) will be required. However, an EIS is not expected to be necessary, based on previously documented shipwreck removal actions by the US Coast Guard (USCG) in similar habitats (Government of American Samoa et al. 1999).

4.2 Environmental Assessment

The EA will follow the general format of the Government of American Samoa’s *Emergency Restoration Plan and Environmental Assessment*, hereafter referred to as the Pago Pago EA (Government of American Samoa et al. 1999), and will incorporate location-specific information on the legal framework of the shipwreck’s removal; the designated purpose for the proposed removal; input from all concerned agencies and parties consulted; and an in-depth assessment of the physical, biological, and chemical issues relevant to biota at Palmyra Atoll and Kingman Reef. Within that established context, alternatives will be outlined and assessed for possible adverse effects on biota, predicted ecological benefits relative to a no-action scenario, and predicted project costs. The EA may also employ ecosystem services accounting in order to semi-quantitatively compare environmental impacts, as was done in the Pago Pago EA.

Specific issues to be addressed as part of the EA’s description of baseline conditions (i.e., conditions associated with a no-action alternative to removal) will include the effects of iron supplementation on

iron-limited marine systems; the development of “black reefs,” as Kingman Reef is described by Kelly et al. (2012); and effects commonly correlated with shipwrecks, such as phase shifts and corallimorph proliferation in coral communities (Kelly et al. 2012; Norström et al. 2009; Work et al. 2008; Schroeder et al. 2008; Government of American Samoa et al. 1999). Potential effects on biota to be discussed in the EA in connection with the removal action will include physical damages caused by removal (i.e., crushing of corals), short-term degradation of water quality (i.e., increased turbidity during work and removal), disturbance of sensitive wildlife, and possible releases of ship-borne chemicals (e.g., petroleum products).

In addition to textual discussion, figures (e.g., maps) and tables will be included to the extent practical to summarize information, and to provide visual representations of the site, habitat, and descriptions of the removal options.

4.3 Environmental Impact Statement

In the event than an EIS must be conducted, the process of evaluating the impacts of the removal action will be repeated in a more detailed manner, allowing for public input as to what valued resources should be assessed. The structure of the EIS will be similar to that of the EA, but the content will focus on public concerns (in addition to agency concerns) and quantified effects. Preparation time could likely increase exponentially, especially if a great deal of coordination with other agencies or non-governmental organizations (NGOs) is required to complete the process. Preparation costs would also increase accordingly.

4.4 Section 7 Approach

Pursuant to Section 7 of the ESA (16 USC 1531 et seq.), a Section 7 consultation must be conducted to determine what effect, if any, the shipwreck removal action will have on ESA-protected species. Such species at the sites currently include Hawaiian monk seal, green turtle, and hawksbill sea turtle; none of these species have critical habitat within either action area. The Palmyra Atoll stock of false killer whale has been determined to be genetically distinct from the Hawaiian Islands stocks, and as a result may require special focus. Initially, an informal consultation with USFWS will be attempted in order to show that the shipwreck removal action will not have a significant adverse effect on the above-listed species. Based on the infrequent use of Palmyra Atoll and Kingman Reef by protected species and the lack of any critical habitat that could be affected by the removal action, it is not expected that a formal Biological Assessment (BA) or Biological Opinion (BO) will be required by USFWS.

If, during the informal consultation with USFWS, it is determined that protected species may be impacted by the removal action, a formal BA will be prepared to assess all possible impacts, at the individual level, on endangered and threatened species at Palmyra Atoll and Kingman Reef. The BA will result in a Determination of Effect for each protected species: either likely to adversely affect (LAA) or not likely to adversely affect (NLAA). If it is determined that even a single individual within the protected populations may be subject to incidental take, then an LAA determination will be warranted. At that

point, a BO will need to be prepared by USFWS to assess the impact of the removal action on the entire protected population.

The BA, if deemed necessary, will have a structure similar to that of the EA (see above), although it will exclude any discussion of the costs and benefits of shipwreck removal options and alternatives. The document will contain a discussion of the legal context and potential effects of all removal action options and alternatives for protected species only, including a discussion of the ecological baseline and the imminent need for the removal action.

4.5 References

BA – Biological Assessment

EA – Environmental Assessment

EIS – Environmental Impact Statement

ESA – Endangered Species Act

NEPA – National Environmental Policy Act

NWR – National Wildlife Refuge

Government of American Samoa, DOI, NOAA. 1999. Emergency restoration plan and environmental assessment. Pago Pago Harbor, American Samoa. The Government of American Samoa, The US Department of the Interior, and The National Oceanic and Atmospheric Administration.

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Work TM, Aeby GS, Maragos JE. 2008. Phase shift from a coral to a corallimorph-dominated reef associated with a shipwreck on Palmyra Atoll. *Plos ONE* 3(8):e2989.

5 Mobilization

5.1 Equipment

Detailed planning will commence soon after Notice to Proceed is given. The NEPA permit process will begin. Final engineering, build, and testing of specialized equipment will begin.

Mobilization of the equipment required for the project will consist of deployment of diving and salvage equipment from Global Diving & Salvage warehouses in Seattle, WA to the Curtin Maritime Marine terminal in Long Beach, CA. There, the gear will be loaded and stowed onboard the barges. As the gear is loaded, it will be steam cleaned and sealed in plastic where possible.

The primary marine equipment comprising the flotilla consists of:

T/V SARAH C: EPA Tier III environmentally compliant - 65' x 24' x 11' 1400 HP ocean combi tug with redundant propulsion. See Figure 6.

Barge 185-3: EPA Tier III environmentally compliant - 185' x 50' x 12'. The barge has ABS load line and draws 1.5' a light draft and 9.5' when at the load line. The barge is fitted with a Manitowoc 4000 III Vicon 170 ton crane rigged with 140' boom. The barge is ABS Certified to accommodate 10 crew. The barge is outfitted with a full galley and comfortable accommodations. See Figure 7.

Barge 185-1: 185' x 50' x 12' flat deck barge. The barge has ABS load line and draws 1.5' a light draft and 9.5' when at the load line.

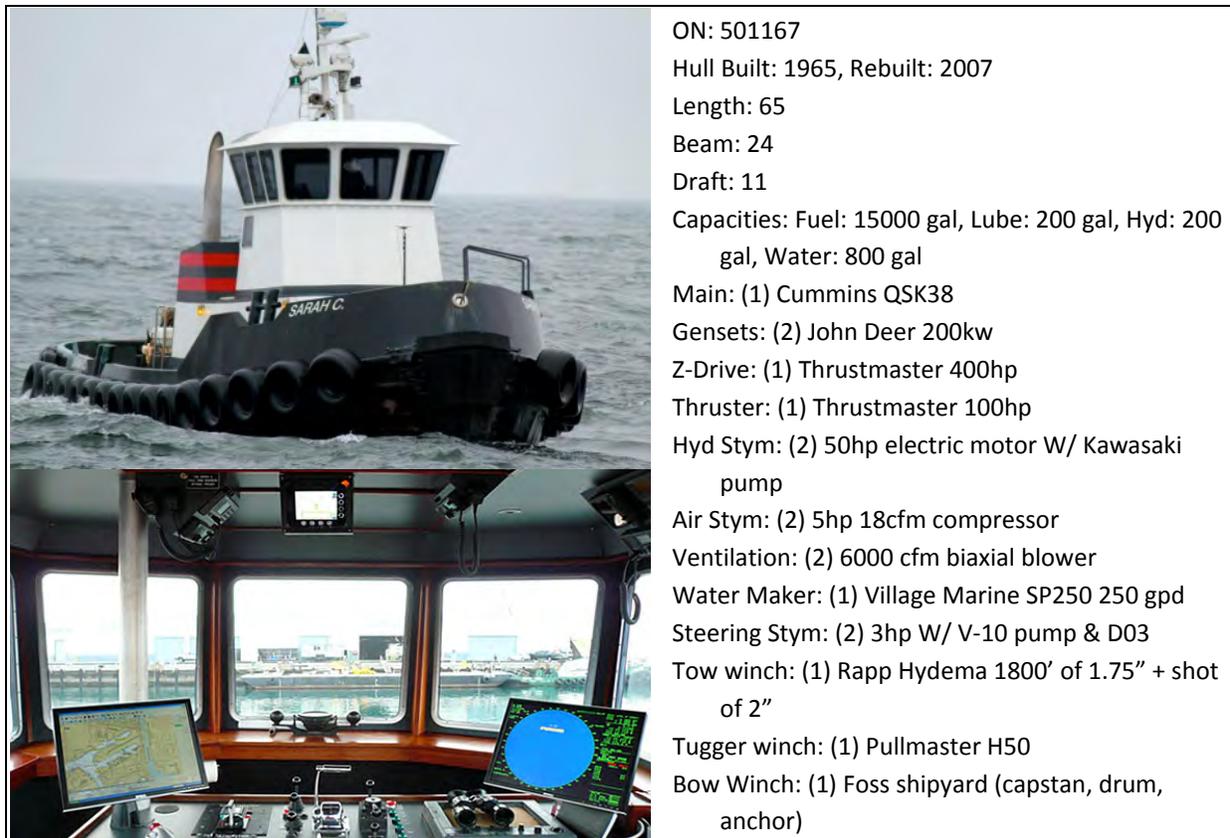
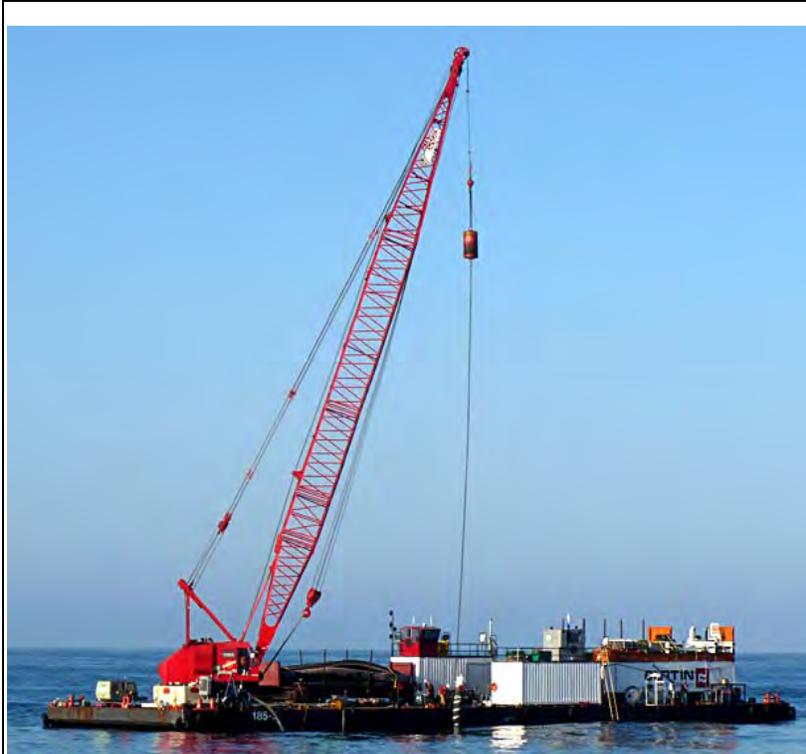


Figure 6: Towing Vessel SARAH C



Official Number: 622241
 Hull Built: 1980, Kaiser Steel
 Rebuilt: 2008, CMC
 Length: 185'
 Beam: 50'
 Depth: 12'
 Draft: 9.5 ft to load line
 Draft: 1.5 ft light
 GRT: 987
 NRT: 987
 Crane: Manitowoc 4000 III Vicon 170 ton, 140' boom length
 Winch: Clyde Frame 7 Five Drum
 Winch engine: John Deere 6068 Tier III
 Torque Converter: Twin Disk 10,000 series, hydraulic
 Anchors: (4) 4500 lbs HHP Flipper Delta
 Control House: Pilot Hose, Wabco single lever air control
 Electroics: (2) VHF, 5 camera video, nobeltec positioning
 Galley/Diner: For 12 Personnel
 Head / Showers: (2) heads, showers, and sinks
 Welder: Miller XMT 350
 Burning Rig: (2) Victor journeymen
 Deck shop and storage: 25 x 10 with roll up doors with full tools
 Mooring gear: hose lock, chain lock, buoy roller, and fire monitor
 Fuel tank and transfer: 1000 gall with 35 gpm pump with meter
 Hyd Pac: 35 GPM 2500 PSID Tier III
 Genset: 100 KVA Tier III

Figure 7: Derrick Barge 185-3

Prior to departure from Long Beach, the hulls of all floating resources will be thoroughly cleaned by a ships husbandry company to ensure the hulls are free of marine growth. The flotilla will be transported from California to Honolulu, HI where the project personnel will join and all will undergo the requisite rat free inspection required prior to departing for Palmyra Atoll. If deemed necessary an underwater inspection of the hulls can be made in Honolulu to ensure the cleanliness of the vessels prior to departing.

10 days prior to the anticipated Palmyra departure date Global will contact the US F&W representative in Honolulu to schedule and complete the required inspection and quarantine prior to departing for Palmyra Atoll.

The flotilla will sail from Honolulu directly to Palmyra Atoll to pick up the dive and salvage crewmen who will arrive by charter aircraft. The crew will deploy three temporary mooring in the Palmyra lagoon for the 185-1 Materials Barge and for the other vessels in the event heavy weather is forecast. The SARAH C and 185-3 Crane Barge will then depart Palmyra for Kingman Reef and recovery operations will ensue.

Estimated time: Honolulu to Palmyra Atoll: 9 days

5.2 Personnel

Five (5) crewmen will depart Long Beach, CA with the ocean tow of the barges to Honolulu, HI. These crew will remain with the tug and barges through the voyage.

An additional seven (7) man team consisting of the riggers, divers, and the Reef Specialist will mobilize from Seattle to Honolulu. There they will undergo the requisite inspections and be transported to Palmyra via the pre-approved charter aircraft company. The charter will be coordinated with the arrival of the SARAH C and barges into Palmyra.

Estimated time: 2 days

6 Removal operations

6.1 Overview

The location and condition of the debris on Kingman Reef poses significant challenges to removal operations; the seaward side of the rubble spit is exposed to the sea and heavy surf. Deterioration of the wooden wreck has left debris spread over a large area, both inside and outside the lagoon. Debris on the lagoon side of the reef will be removed by divers who will rig it for lifting using the crane onboard the 185-3 Crane Barge. The Crane Barge will move location as necessary to retrieve the debris.

Removal of debris on the seaward side of the spit will utilize our purpose built Low Ground Pressure Lifting Vehicle. This vehicle will have large tires with diameters of 3.5 feet and widths of 4.3 feet. The vehicle is designed to carry a heavy load from the surf zone while only applying 2 pounds per square inch of ground pressure. In water depths over 26 inches, this ground pressure is actually eliminated as the fully loaded Low Ground Pressure Lifting Vehicle floats free. When debris is recovered on the seaward side of the rubble spit, it will be loaded onto the Low Ground Pressure Lifting Vehicle by divers and the entire vehicle will be recovered using a winch onboard the 185-3 Crane Barge.

6.2 Assumptions

Little information exists regarding the vessel's current condition. Major sections of debris are assumed to be as follows:

- Wooden remains of the approximately 84 feet x 26 feet hull
- The remains of a refrigeration system
- The fish hold
- Ground tackle (anchors)
- Main and auxiliary engines and related machinery

It is assumed that the heaviest single piece of debris will be the main engine of the wreck and that it will weigh approximately 2 short tons.

6.3 Specific Equipment to be Used

Equipment Type (Size)	Quantity	Description/Purpose
Shallow Draft Transport Vessel (SDTV) (24' L x 10' W x 3' D)	2	Shallow Draft Transport Vessels are lightweight aluminum with a flat deck, wide body, and two long-tail surface motors. The deck of the Shallow Draft Transport Vessel (SDTV) contains a raised edge coaming around the perimeter that provides 300 gallons of containment volume in case of any residual within the transported material. The SDTV is designed to be highly maneuverable while carrying 10 short tons of material and drafting only 2 feet of sea water. One of these vessels will be used as a dive platform and will have a portable hydraulic crane onboard. The second SDTV will be used to transport debris to the 185-3 Crane Barge for offloading. See Drawing No. PA-02.
Low Ground Pressure Lifting Vehicle (LGPLV)	1	The Low Ground Pressure Lifting Vehicle (LGPLV) consists of an A-frame structure that holds two large low ground pressure tires. This structure is designed to float with a draft of 2 feet while holding a load of 3000 lbs. The Low Ground Pressure Lifting Vehicle will be used to recover large debris from the exposed surf zone on the ocean side Kingman Reef. See Drawing No. PA-03.
Barge 185-1 (185' x 50' x 12')	1	Flat deck barge. To be used to store and transport recovered debris until final disposal.
Barge 185-3 (185' x 50' x 12')	1	EPA Tier III environmentally compliant Crane Barge. To be used to unload Scows. Environmental and Pollution Response equipment, including a dedicated pollution response skiff, will be staged on the Crane Barge. A full galley and comfortable accommodations are built onto the barge. The barge is equipped with water makers and has no discharge equipment built in. On-site personnel will live aboard the Crane Barge when not working.
SARAH C	1	EPA Tier III environmentally compliant Oceangoing tugboat used to maneuver and anchor 185-1 and 185-3 Barges.

Table 1: Equipment to be utilized for the Kingman Reef recovery

6.4 Sequence of Events

1. Upon arrival at the site, the SARAH C will anchor the 185-3 barge in the lagoon, within the search area.
2. The 185-3 Barge will launch the two Shallow Draft Transport Vessels with divers onboard. SCUBA Divers based on these two vessels will conduct a survey of the search area. When debris is found, it will be marked by GPS location and a buoy.
3. After the survey, the SARAH C and 185-3 Crane Barge may shift position for recovering debris. The crane barge can moor within 200 feet of the dry rubble spit if necessary. This will be accomplished by first deploying a stern anchor and then moving the vessels close to the rubble spit. As the 185-3 barge moves into water of approximately 20 ft deep, the crane will deploy a second anchor as close as possible to the rubble spit. If necessary, a land anchor will be established on the spit to provide the sea ward side anchor.
4. Working from the 185-3 Crane Barge, divers will rig debris for lifting using the onboard crane. Cutting of the debris is not anticipated because the 185-3 Crane lifting capacity exceeds the maximum weight of any of the debris.
5. When the majority of the debris has been recovered from the search area, the Low Ground Pressure Lifting Vehicle will be launched from the 185-3 Crane Barge and escorted to the rubble spit by the two Shallow Draft Transport Vessels. A floating polypropylene line will be attached to both the Low Ground Pressure Lifting Vessel and the 185-3 Crane Barge.
6. Divers will conduct a survey of the shallow seaward search area by foot and will be properly equipped to transit in surf and coral.
7. Debris in the seaward part of the search area is expected to consist of mainly heavy parts of the wreck such as machinery. This heavy debris will be lifted using the Low Ground Pressure Lifting Vehicle. A winch will pull the loaded Low Ground Pressure Lifting Vehicle toward the 185-3 Crane Barge so that the onboard crane can unload it.
8. When the wreck is completely removed, divers will conduct a digitally recorded final search of the area ensuring 100% removal of all debris.
9. The 185-3 Crane Barge will reload both Shallow Draft Transport Vessels and the Low Ground Pressure Lifting Vessel and all vessels will transit to Palmyra Atoll.

7 Disposition of Recovered Materials

All metal scrap will be deck loaded onto the ABS barge 185-1 at Palmyra Atoll. All non-metallic material will be loaded into 40 cubic yard dumpsters with liquid containment liners. These dumpsters will be staged on the forward portion of the deck of the 185-1 barge.

Upon completion of the recovery operation the metal scrap will be discharged in Long Beach, California to SA Recycling located at 482 Pier T Avenue # 118, Long Beach, CA. Non-metallic waste will be disposed of by Waste Management who will take delivery of the 40 cubic yard dumpsters at the Curtin Maritime dock in Long Beach, CA. Any recyclable wood pieces will be provided to a wood recycling center.

8 Schedule

Please see the attached GANTT Chart for the projected schedule.

9 Environmental Protection

This plan serves to identify general guidance procedures to be followed by the crew involved in the USFWS Pacific Reef MNM Shipwrecks Removal. This plan will be used for in the event of an oil spill response event during deconstruction operations. While spills are never anticipated or desirable the ability to respond and control them is paramount to successful operations. Global will comply with all applicable federal, state, Maritime and local environmental laws on board the vessels and at the work site through trained personnel and dedicated response equipment.

It is important to note that Global's primary efforts will be in the prevention of any sort of release of HAZMAT or contamination into the Palmyra or Kingman environment. This will be accomplished through the containment of liquid and solid contaminants before the vessels are removed, and through strict controls throughout the operation. The procedures below will be in place in the unlikely event that the preventative measures are overcome.

9.1 Concept Overview

Projects involving the removal of wrecked hulls potentially containing petroleum always have the potential of affecting the greater marine environment. Operational planning and our experience with previous projects with similar scopes of work have refined our approach and expertise in the prevention of spills and what resources are required to mitigate, control, and effectively recover product during a spill. Personnel will conduct training drills through specific scenarios and everyone's role in the event of a spill at the commencement of the project.

Global will have spill response equipment on board the vessel to meet the required standards during all deconstruction operations. All Global personnel on board are 40 hour HAZWOPER trained, including annual refreshers, and prepared to assist the environmental response in the case of an incident.

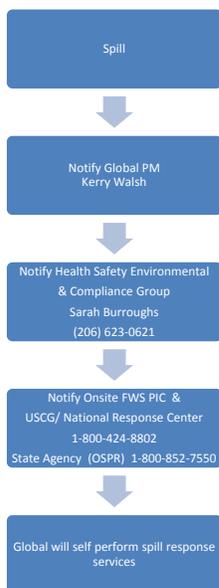
While each of the three wreck recoveries pose significantly different risks there is a common thread throughout the project that is comprised of the project vessels themselves, the diesel fueled equipment and the personnel involved in the operations. The plans laid out in the following sections address the areas Global addresses in all of our operations.

9.1.1 Spill Response Procedures

The overall procedural approach is to make the appropriate notifications and then control, contain, and recover the spilled material with safety of personnel being the primary consideration as the event moves forward.

9.1.2 Spill Response Notification Procedures

The following notifications are made for both regulatory compliance and to provide additional logistical and resource assistance from within our organization to the personnel and managers onsite during a spill event:



9.1.3 On Water Cleanup Operations

While notifications are made the crew will immediately launch the response boat to deploy boom and create a collection point or corral the oil inside the boom. The weir type skimmer will be lowered into the collection area for recovery of oil through on-water skimming while absorbents will be used to capture ancillary amounts of product. Constant monitoring will minimize any additional water recovery resulting in maximum product recovery. The recovered petroleum product would be pumped into temporary 250 gallon tote tanks on deck and then transferred into one of the barge holding tanks. Although the chances of requiring it are nil, the barge has storage capacity for recovery of as much as 1200 barrels of petroleum and contaminated water.

Containment boom will be used to divert or capture petroleum products before making landfall. Product reaching the shoreline will be removed manually with the smallest impact possible. Recovered product and solids will be taken offsite and properly disposed of as petroleum contaminated soils.

9.1.4 Spill Response Equipment On Board Vessel

The pollution response equipment that will be mobilized on board the barge 185-3 for spill response efforts are:

- 1000' of 20" containment boom
- 14' deployable fast response craft

- Skim Pak Weir Skimmer
- 10(ea) bales 5” absorbent boom
- 20(ea) bales of sorbent pads
- 20(ea) bales of sweep
- 4 (ea) case of spill bags
- 2 (ea) 250 gallon poly tote tanks
- 3 (ea) poly overpacks for potentially hazardous materials/ debris
- Peristaltic transfer pump
- Modified Level D PPE for spill response efforts
- Recovered product storage will be achieved using the barge internal tanks

9.1.5 Containment Booming

Containment will be available throughout the salvage process with an environmental crew onsite with absorbent materials to recover any petroleum product or debris that are dislodged during salvage operations. We do not anticipate the release of any recoverable oil products directly due to our operations, however we will be ready in case such a release occurs.

9.1.6 Silt Removal

Some silting is to be expected within and on the hull due to the many hull ruptures and placement in the reef zone. Non-contaminated silt that is to be removed from work areas by non-hydraulic, physical means will be accomplished where they will not cause turbidity within the nearby waters. Any silt mixed with the machinery space bilge wastes or any petroleum product will be directed into the petroleum sludge handling waste stream.

9.1.7 Sludge removal

Solid materials such as saturated absorbents will be removed and secured for proper disposal through the solid waste stream as necessary. All liquid remains will be pumped out to the liquid waste stream to be disposed of properly. Final disposition receipts will be provided following all operations.

9.1.8 Asbestos

Past experience dealing with vessels of this age and type has shown that asbestos abatement can be required as a part of the salvage or cleaning operations for crew health and safety, specifically around exhaust flanges and exhaust lagging. Global crew leads have asbestos awareness training and will ensure cleaning crews do not disturb any possible asbestos containing materials before it is encapsulated.

9.1.9 Hazardous Waste, Batteries, and Pressure Cylinders

There is a possibility that these materials and containers will be found as the hulls are deconstructed, they will be properly categorized, secured onboard the barge and sent for disposal.

9.1.10 Safety

All Global employees are Hazwoper trained and will follow safe working practices with proper PPE. Safety meetings and JSA’s will be completed each day for each task and will follow USCG and USFWS

protocol as directed. Decontamination stations will be set up for crews exiting both the hull in the reef zone and the waste handling barges as needed.

Global Diving and our partners feel our environmental approach is complete and comprehensive. We have been discussing the process with our local partners and the agencies involved. Global is bringing in the proper equipment and crew to handle the amount of contaminated materials possibly contained in the vessels' hulls.

9.2 Decontamination Plan

This plan serves to identify general guidance procedures to be followed by the crew involved in the USFWS Pacific Reef MNM Shipwreck removals. Because these operations may involve contact with fuel and lubrication oil we may assume that decks, equipment, tanks, and other areas may possibly be impacted with oil. This plan will be used for all vessels and support equipment, either contaminated or suspected of being contaminated with oil, to return to a non-oiled state.

9.2.1 Concept Overview

In view of the equipment inventory involved in this assessment, Global Diving & Salvage, Inc. will oversee decontamination of Dive equipment, personnel, and any additional equipment as needed. The primary focus of this decontamination operation will be to decontaminate dive equipment, rigging, personnel, and response equipment in a safe, organized and efficient manner while minimizing damage to the environment and waste generation.

Equipment decontamination is planned to occur in multiple phases roughly in this order:

1. Personnel as they come on/off shift if a release occurred.
2. Dive equipment and rigging upon leaving the water line and being placed on deck if contact with HAZMAT occurred.
3. Decks on barges and towing vessel as necessary and at the end of each day
4. Clean-up of containment boom and equipment within a bermed decon area if needed

9.2.2 Certification of Decontamination

For this project, the equipment owner's representative will certify that equipment has been decontaminated.

9.2.3 Decontamination Procedures

Decontamination is accomplished by ensuring that the contaminated materials that personnel and equipment came in contact with during a shift are dealt with before they can contaminate other areas.

Decontamination stations will be located at chosen locations in case they are needed.

9.2.4 Personnel Decontamination Procedures – Modified Level “D”

Decontamination stations will contain Level D PPE. Modified level D PPE includes the following: rain gear or Tyvek coveralls, steel toed boots with rubber overboots, chemical protective gloves, hearing protection, hard hat, safety glasses, and a life vest if on a vessel, dock or within 10 ft of water.

1. Deposit any equipment used on site in a segregated area in the decontamination station. This segregation reduces the possibility of cross contamination.
2. Place the removed raingear in a spill bag for disposal.
3. Rubber overshoes will be disposed of similarly.
4. Hard hats should be removed and cleaned/wiped off and hung up to dry.
5. Rubber gloves should be cleaned and removed and disposed of.
6. Tyvek should be removed and disposed of.
7. Each person should wash his/her face, hands, arms, and neck before departing the decontamination station.

9.2.5 Suspected Contamination

Any employee suspected of experiencing skin contact with contaminated materials is to remove all clothing, shower, and don clean clothes. Following this, he/she must report to the site supervisor.

9.2.6 Equipment Decontamination

Any equipment or tools that have been contaminated must be cleaned prior to stowage or reuse. Some equipment decontamination may require pressurized water or steam cleaning. All water and material must be collected and placed in the designated waste disposal area. The site supervisor, or his designee should inspect all equipment prior to its reuse.

9.2.7 Vessel Decks

To prevent the deck area from being contaminated while decontamination is taking place, the decontamination station will be lined with visqueen and sorbent materials. Once decontamination is complete the visqueen and sorbent materials may be bagged and disposed of as part of the solid waste stream.

In the event of deck contamination the use of manual wiping with controlled solvent spray will be utilized for the removal of attached oil.

9.2.8 Decontamination Wastes Handling Procedures

All liquid wastes generated during decontamination procedures (i.e. solvent rinses and contaminated soapy water) must be collected and containerized. Personnel must recognize the need for generation of these waste streams be kept to a minimum throughout the project. Solid wastes will be drummed or incorporated into other solid waste streams for proper disposal.

All solid wastes generated from decontamination (i.e. disposable raingear, gloves, etc.) must be placed in spill bags for transfer to the solid waste stream. All liquid wastes must be contained and transferred to storage for transfer to the liquid waste stream.

10 Work and Site Contingencies

10.1 Crew Orientation

Upon award Global Diving will solicit The Nature Conservancy (TNC) and FWS to plan an orientation class for all crew members assigned to the project. This orientation will be designed to make all crew members aware of the history, rules and protocols specific to Palmyra Atoll and Kingman Reef, thereby ensuring the crew is fully aware of the sensitivities and the importance of preserving the environment within the refuge.

10.2 Invasive Species

Hull Cleaning - Prior to departing Long Beach, CA the hulls of the tug and barges will be thoroughly cleaned of marine growth. The hulls will be inspected by divers in Honolulu and cleaned again if necessary to meet the inspection/quarantine parameters in the bid documents.

Rats – A rat free certification through the approved certifying company will be obtained in Honolulu prior to departing for Palmyra Atoll.

Quarantine – Global will comply with the 10 day notification and will schedule and complete the required inspections prior to departing for Palmyra Atoll.

Corallimorph – Global’s work plan calls for the wreck at Kingman Reef being removed prior to the work at Palmyra which eliminates the concern about transfer of Corallimorph to Kingman Reef via rigging, dive equipment, etc. However, if conditions (i.e. inclement weather at Kingman) dictate a change in plan and the initial operations shift to Palmyra then the rigging and gear will be cleaned with a high pressure power wash prior to departure for Kingman Reef.

10.3 Coral Preservation / Restoration

Work Plan - Global has made every effort to develop a comprehensive work plan that eliminates the need to relocate or impact the existing living coral structures.

During the Phase 1 site visit, Global Diving and Curtin Maritime personnel attending the site visit conducted extensive dive surveys of the reef between the channel, the Hui Feng #1 and Rust Island. Based on their findings Global has developed the Shallow Draft Transport Vessel (SDTV) which will allow transport of the recovered debris across the reef without the need to relocate coral heads and, due to the shallow draft and suitable size, with sufficient vertical clearance to eliminate contacting corals during the transit.

For the work on Kingman Reef we have incorporated into our plan the design and build of a special Low Ground Pressure Lifting Vehicle (LGPLV) that also floats. It will enable the crews to remove heavier pieces of the wreck from shallow water areas with minimal impact to the coral, without any need to drag material on the sea floor.

Pre Operation Survey – In order to document the condition of the surrounding reef structure Global will conduct an underwater video survey of the area prior to and after completion of the recovery operation at each location.

Reef Specialist - Global has engaged Windward Environmental LLC to provide a scientist with extensive experience in coral reef preservation and restoration. The scientist selected is Ms. Kathleen Hurley who will serve as a member of our crew on location. Ms. Hurley will monitor the ongoing work and will coordinate any required remediation or stabilization efforts with US Fish & Wildlife and The Nature Conservancy scientists on location.

Coral Restoration – If damage does occur to coral during the operation the situation will be addressed immediately and appropriately. The exact approach to the restoration will depend upon the nature of the damage. Global will be prepared with several cases of Z Spar A-788 2 part epoxy and other tools and restoration components.

10.4 Oil and Hazmat Pollution

In accordance with our operational plan Global Diving will mobilize a comprehensive array of oil spill prevention and response equipment to the project. Portable equipment (dive compressors) on the decks will be placed in secondary containment to prevent any incidental runoff and to provide protection during refueling. As it is being removed, all debris that is not clean metal will be placed in 40' drop boxes with covers to keep water from entering the boxes. All clean metal will be placed within a filter berm to keep sediments and small organisms from being washed overboard. All personnel working with material will have 40 hr certification in HAZMAT.

10.5 Gray and Black Water

The tug and accommodation barge are completely self contained and store all gray and black water in internal tanks. A portable tank will be placed on board the tug. When necessary, the storage tank on the accommodation barge will be pumped into the portable tank. If storage capacity is reached then the tug will transit to a point beyond the 12 mile refuge boundary where the tank will be discharged into the sea in accordance with the requirements of the International Convention for the Prevention of Pollution from Ships (MARPOL).

10.6 Air Pollution

The engines and generators in use on the tug and barges that are dedicated to this operation are EPA Tier 3 compliant and meet the stringent air quality standards of the state of California. This standard of air quality is a capability we believe to not be achievable by most marine operators.

10.7 Weather

Moorage - The work plan provides for the tug and barge flotilla to transit from Honolulu directly to Palmyra where the crew will establish a temporary mooring system in the lagoon prior to departing for

Kingman Reef. This temporary moorage will be of sufficient size to hold all the floating assets during any conceivable weather conditions that may impact the lagoon. In the event heavy weather is forecast, and operations are suspended, then the tug and barges will transit to the lagoon and the mooring will be utilized to secure the tug and barges.

Work Platform - The work platform that will be installed to remove the HUI FENG #1 is a jack up platform that can be raised to a height approximately 10 feet above the water at MHHW. Because the platform is raised clear of the water there will not be a requirement to remove the platform during a normal heavy weather condition. If a severe weather event is forecast, the jack up platform can be returned to a floating condition and stowed on the crane barge.

10.8 Dive Safety

Training – All divers engaged in this operation are highly trained, credentialed and professional commercial divers. In addition, all of the crew engaged in the operation - divers and topside personnel, are trained and current with 40 hr HAZWOPER, First Aid and CPR.

Compliance - All dive operations will be conducted in strict compliance with OSHA and USCG regulations and the guidelines established by the Association of Diving Contractors International (ADCI).

Safety – Though dive operations are not intended to require surface decompression Global will have a recompression chamber with copious breathing O2 on board the derrick barge. All dive crew members are qualified chamber operators. At least one member of the crew will be a Diver Medical Technician (DMT). This crew member will be equipped with a well-stocked DMT kit including IV medicine capabilities. Direct satellite communication can be established between the DMT and a hyperbaric physician if possible.

10.9 Portable Equipment

The equipment selected for use on the project is rugged and proven reliable through rigorous experience. Critical systems are provided with built in redundancy or the equipment is duplicated to provide backup. Spares and spare parts kits for all equipment are standard on all projects, and will be totologically represented on this project.

10.10 MEDEVAC / Resupply by Air

Global does not anticipate the need to resupply during the project. However, should a medical emergency arise requiring MEDEVAC, or a critical equipment issue develop, we will coordinate with the US F&WS contractor Bradley Aviation in Honolulu to provide air transport. Global Diving & Salvage is insured to provide medical evacuations.

10.11 Resupply / Emergency Transportation by Sea

Global does not anticipate the need to resupply during the project. However, should the need arise we have identified firms in Honolulu that can be contracted to transport equipment and/or personnel to or from the project. These firms include P&R Water Taxi LLC and Healy Tibbits.

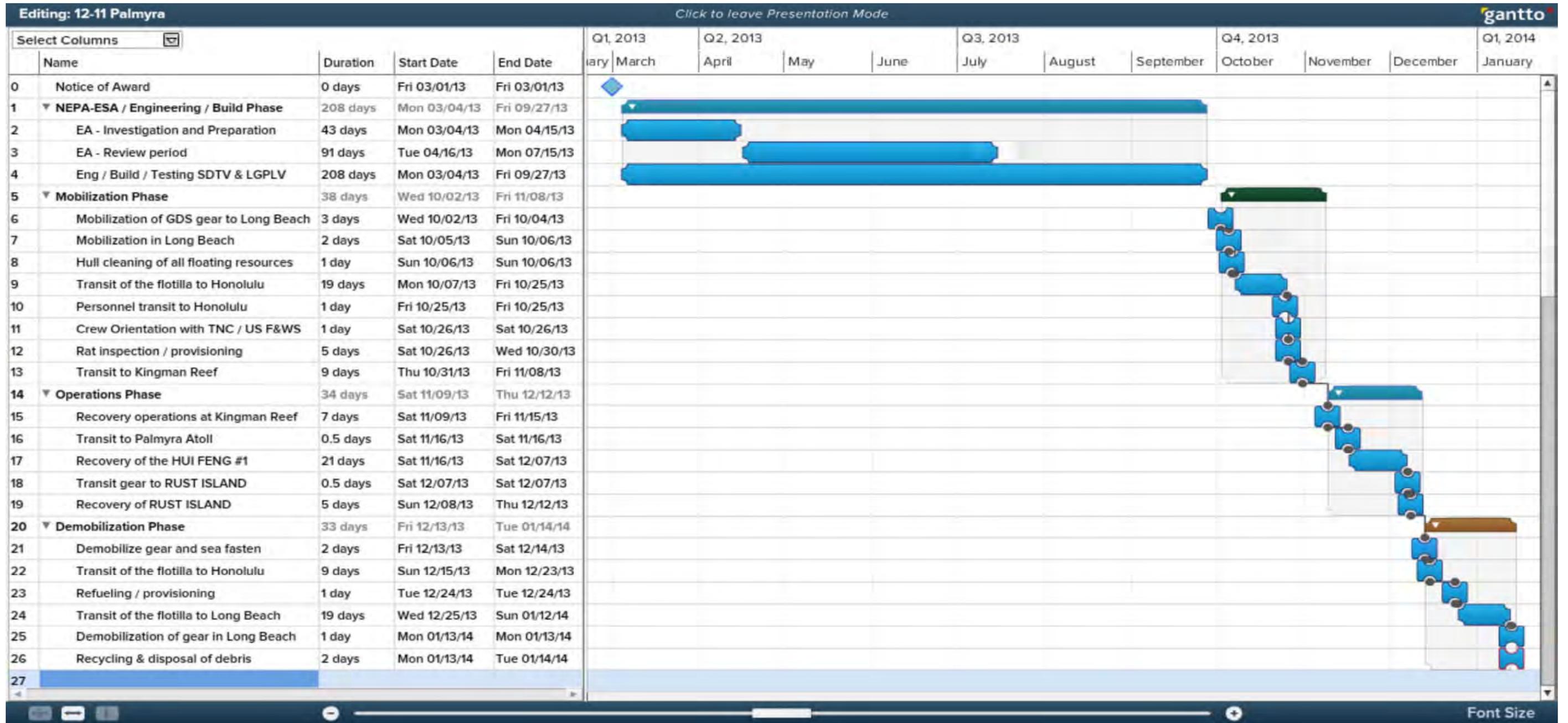
10.12 Communications

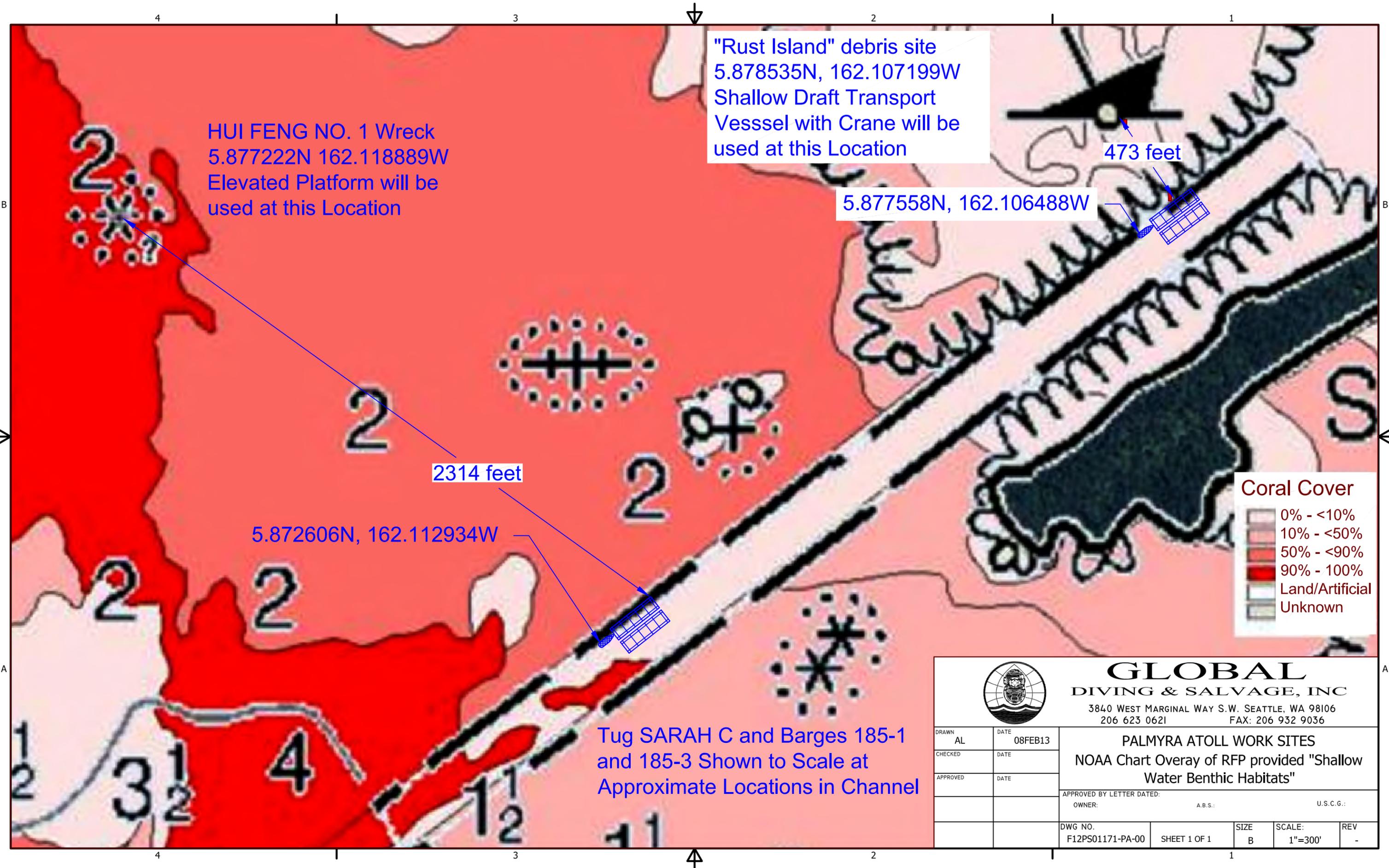
The tug and Barge will be equipped with satellite communications with data and voice capabilities.

11 Demobilization

Upon completion of the recovery operation at Kingman Reef the floating equipment will be recovered onto the barges and the barges will be secured for sea. All personnel and equipment utilized for the Kingman Reef remediation project will be demobilized from Kingman Reef and transited to Palmyra Atoll to commence recovery operations on the wreck of the HUI FENG #1.

12 Drawings





HUI FENG NO. 1 Wreck
 5.877222N 162.118889W
 Elevated Platform will be
 used at this Location

"Rust Island" debris site
 5.878535N, 162.107199W
 Shallow Draft Transport
 Vessel with Crane will be
 used at this Location

5.877558N, 162.106488W

473 feet

2314 feet

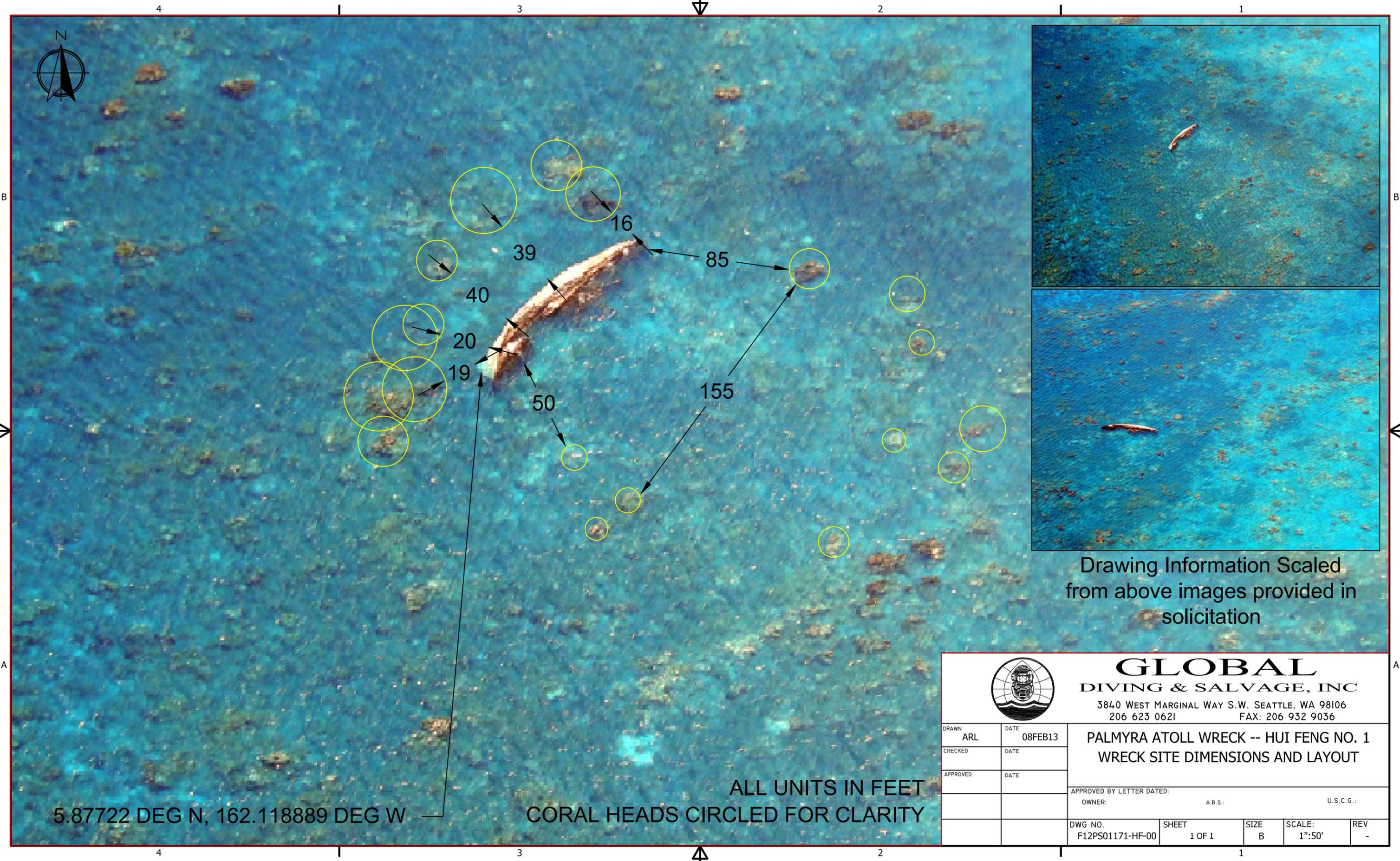
5.872606N, 162.112934W

Tug SARAH C and Barges 185-1
 and 185-3 Shown to Scale at
 Approximate Locations in Channel

Coral Cover

- 0% - <10%
- 10% - <50%
- 50% - <90%
- 90% - 100%
- Land/Artificial
- Unknown

		GLOBAL DIVING & SALVAGE, INC. 3840 WEST MARGINAL WAY S.W. SEATTLE, WA 98106 206 623 0621 FAX: 206 932 9036		
		PALMYRA ATOLL WORK SITES NOAA Chart Overlay of RFP provided "Shallow Water Benthic Habitats"		
DRAWN AL	DATE 08FEB13	APPROVED BY LETTER DATED:		
CHECKED	DATE	OWNER:	A.B.S.:	U.S.C.G.:
APPROVED	DATE	DWG NO. F12PS01171-PA-00	SHEET 1 OF 1	SIZE B
		SCALE: 1"=300'	REV -	



Drawing Information Scaled from above images provided in solicitation

5.87722 DEG N, 162.118889 DEG W

ALL UNITS IN FEET
CORAL HEADS CIRCLED FOR CLARITY



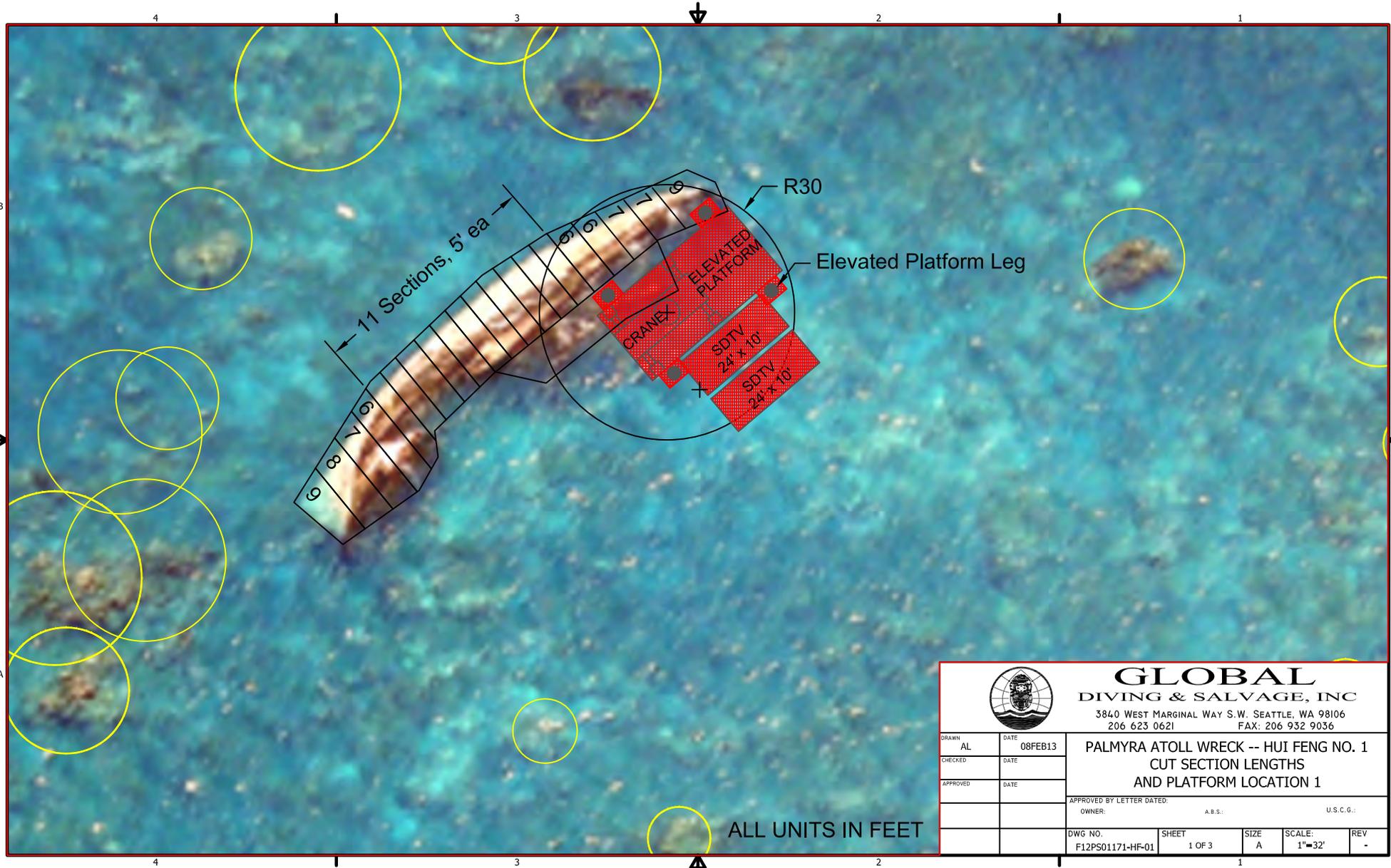
GLOBAL
DIVING & SALVAGE, INC
3840 WEST MARGINAL WAY S.W. SEATTLE, WA 98106
206 623 0621 FAX: 206 932 9036

DRAWN	DATE
ARL	08FEB13
CHECKED	DATE
APPROVED	DATE

**PALMYRA ATOLL WRECK -- HUI FENG NO. 1
WRECK SITE DIMENSIONS AND LAYOUT**

APPROVED BY LETTER DATED:
OWNER: A.B.S.: U.S.C.G.:

DWG NO.	SHEET	SIZE	SCALE:	REV
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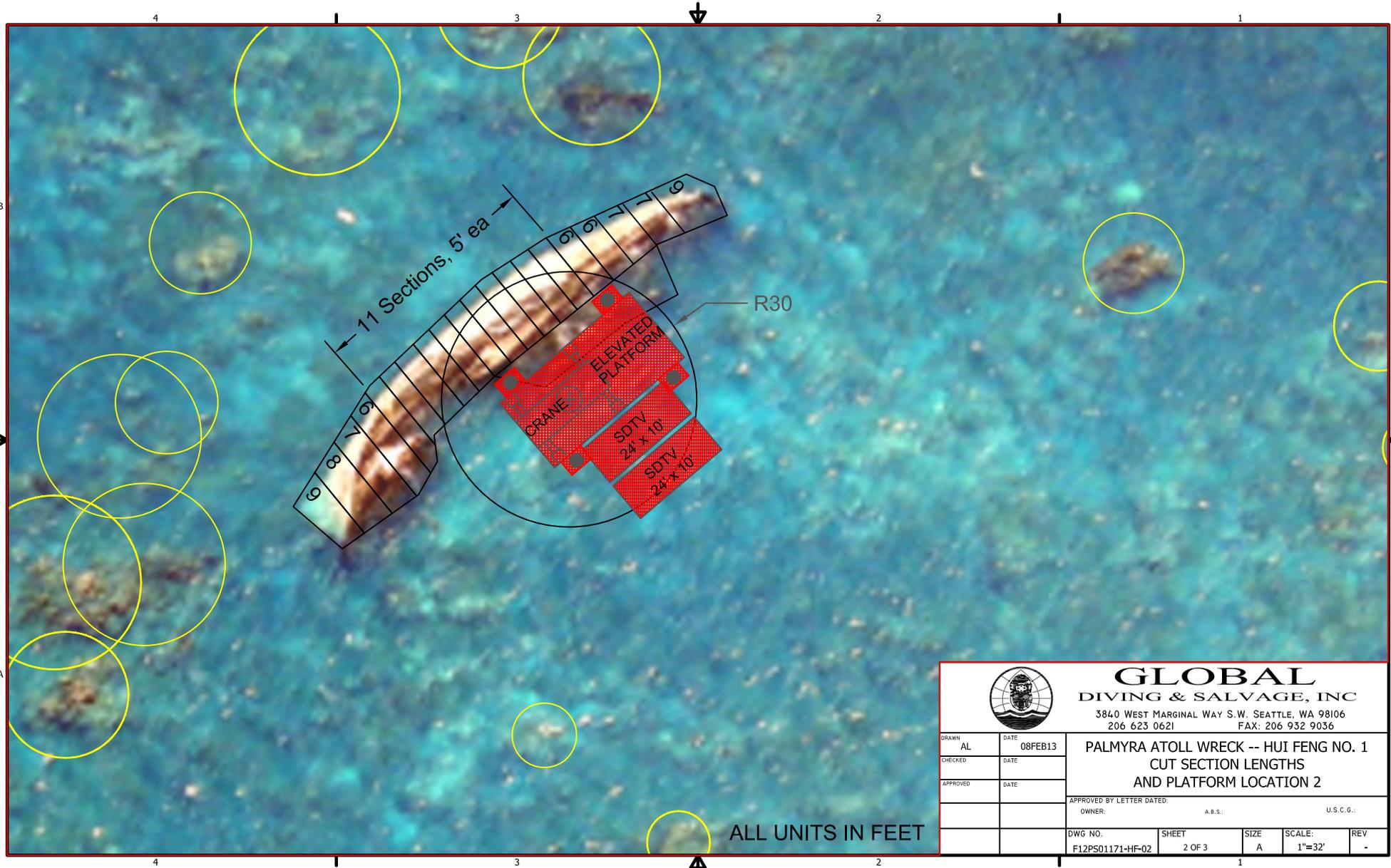


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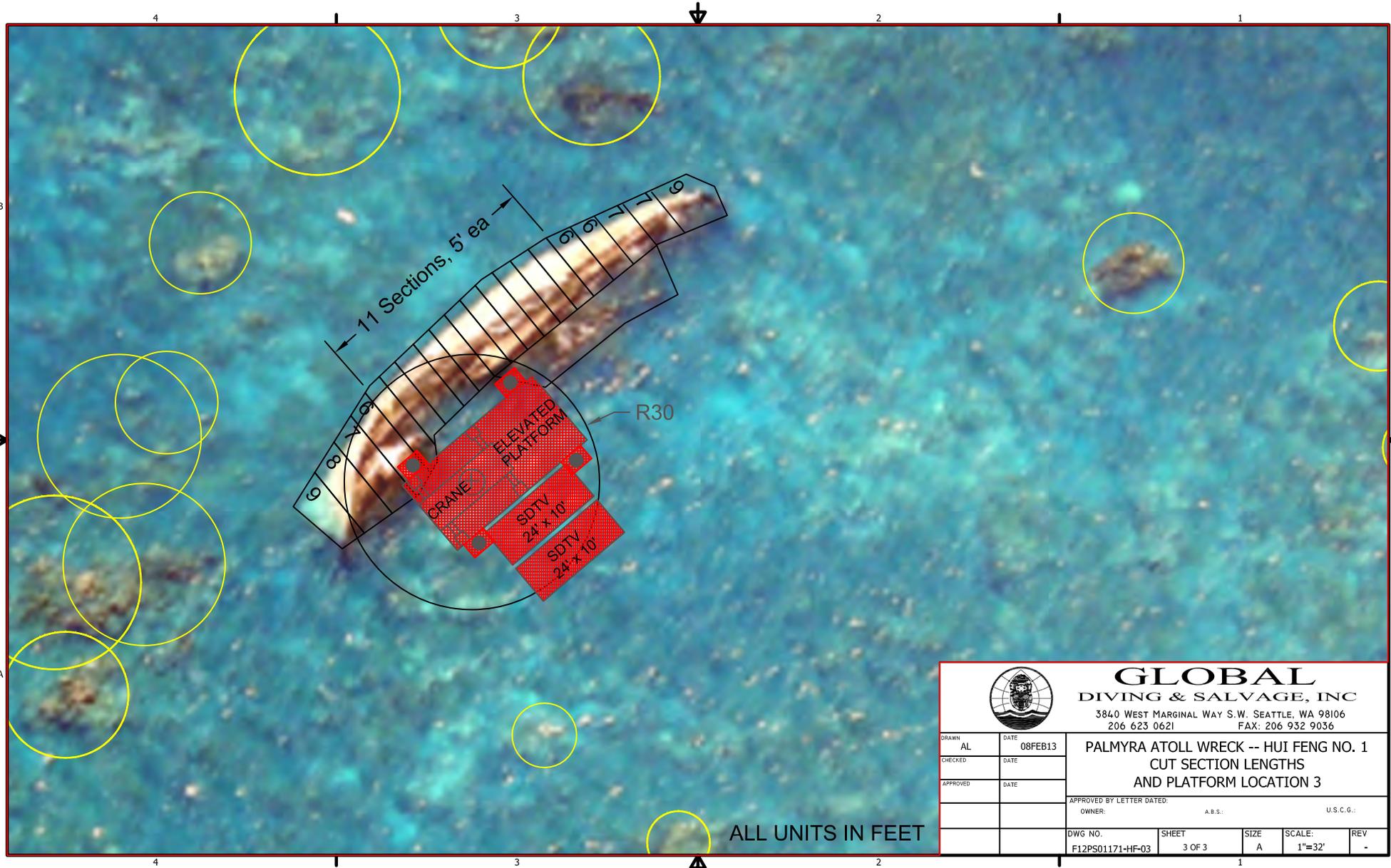
GLOBAL
 DIVING & SALVAGE, INC
 3840 WEST MARGINAL WAY S.W. SEATTLE, WA 98106
 206 623 0621 FAX: 206 932 9036

DRAWN	AL	DATE	08FEB13	PALMYRA ATOLL WRECK -- HUI FENG NO. 1 CUT SECTION LENGTHS AND PLATFORM LOCATION 1					
CHECKED		DATE							
APPROVED		DATE							
APPROVED BY LETTER DATED:				OWNER:	A.B.S.:	U.S.C.G.:			
DWG NO.	F12PS01171-HF-01	SHEET	1 OF 3	SIZE	A	SCALE:	1"=32'	REV	-



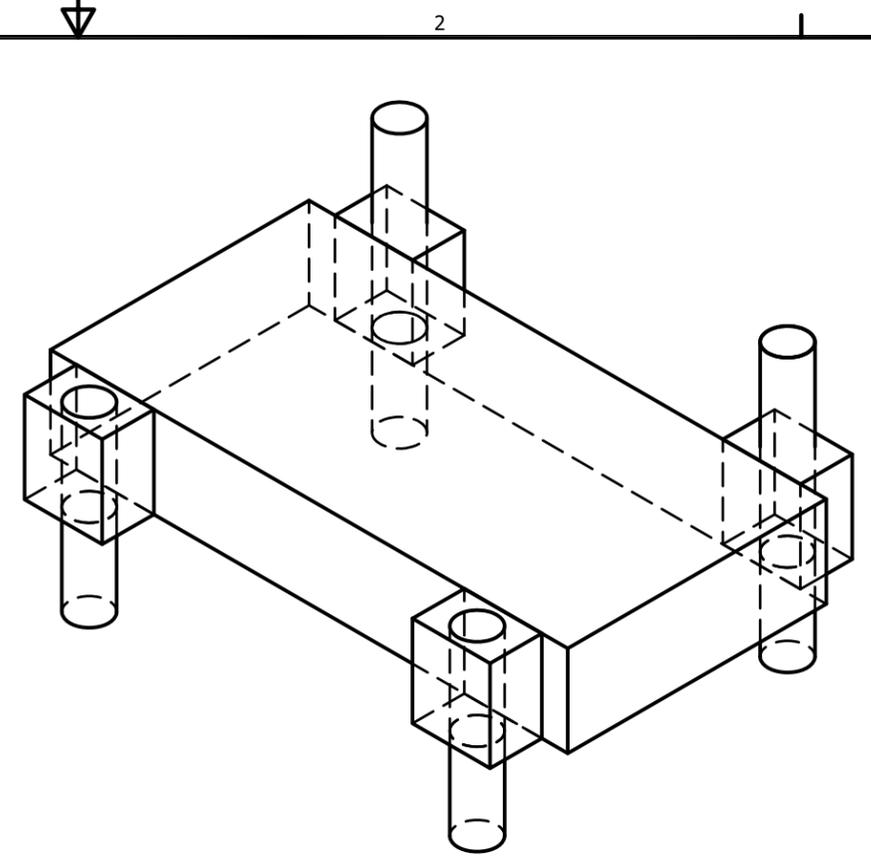
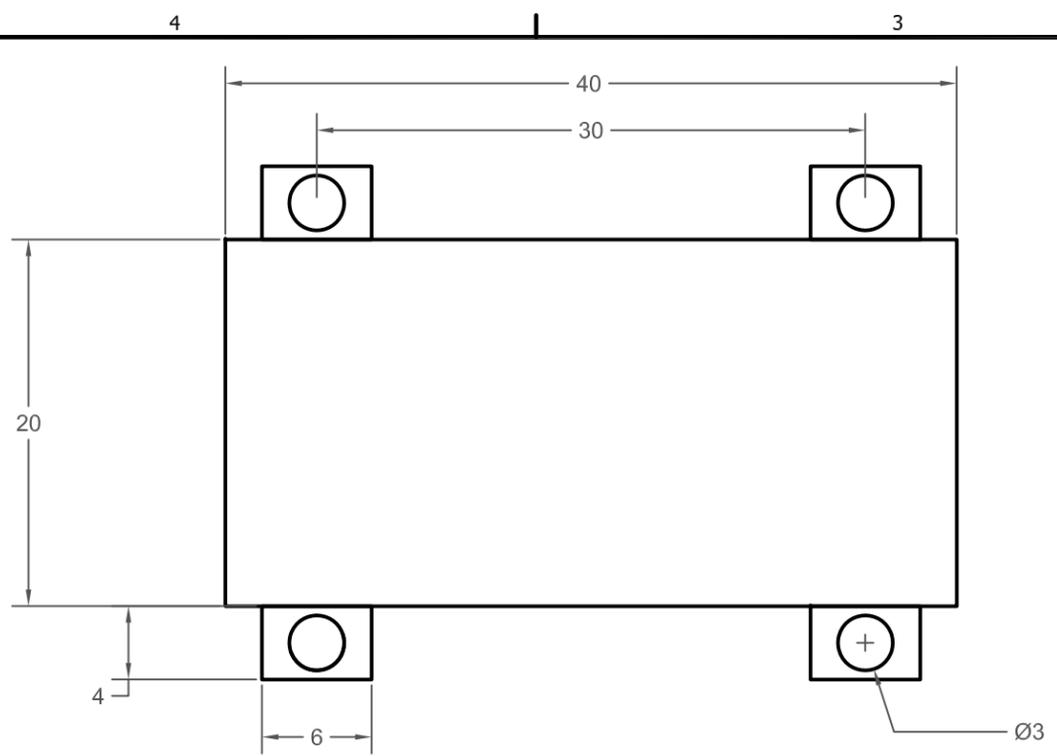
ALL UNITS IN FEET

		GLOBAL DIVING & SALVAGE, INC 3840 WEST MARGINAL WAY S.W. SEATTLE, WA 98106 206 623 0621 FAX: 206 932 9036		
		PALMYRA ATOLL WRECK -- HUI FENG NO. 1 CUT SECTION LENGTHS AND PLATFORM LOCATION 2		
DRAWN AL	DATE 08FEB13	APPROVED BY LETTER DATED: _____ OWNER: _____ A.B.S.: _____ U.S.C.G.: _____		
CHECKED 	DATE 	DWG NO. F12PS01171-HF-02	SHEET 2 OF 3	SIZE A
APPROVED 	DATE 	SCALE: 1"=32'	REV -	

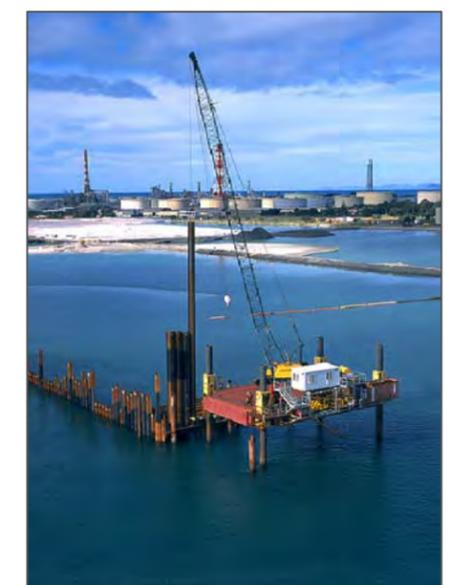


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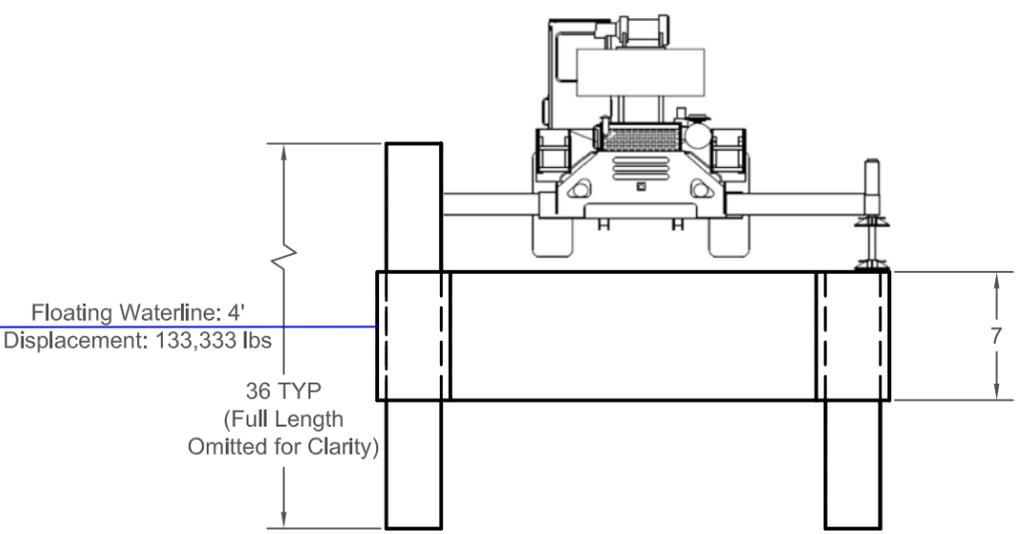
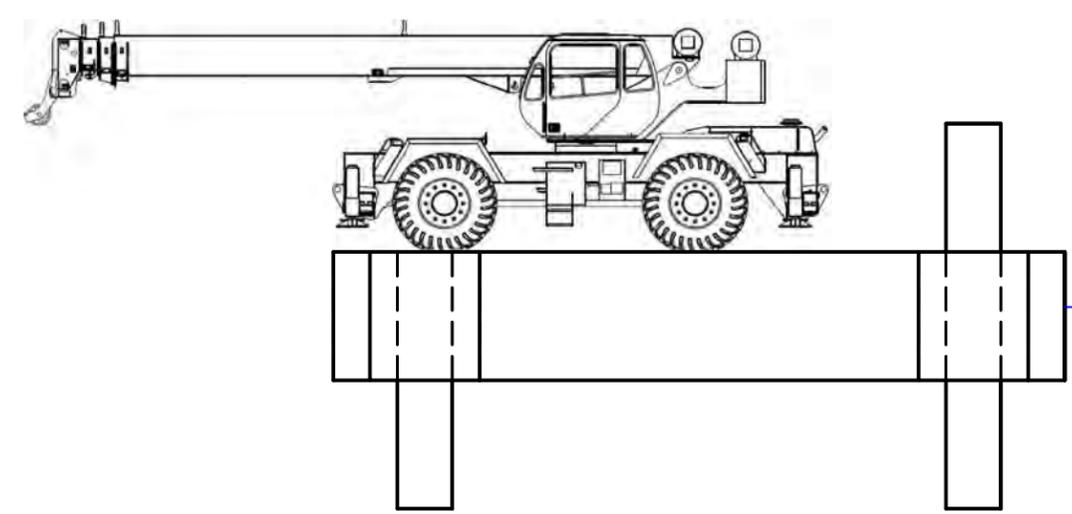
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		PALMYRA ATOLL WRECK -- HUI FENG NO. 1 CUT SECTION LENGTHS AND PLATFORM LOCATION 3			
DRAWN	AL	DATE	08FEB13	APPROVED BY LETTER DATED:	
CHECKED		DATE		OWNER:	A.B.S.:
APPROVED		DATE		U.S.C.G.:	
DWG NO.	F12PS01171-HF-03	SHEET	3 OF 3	SIZE	A
SCALE:	1"=32'	REV	-		



Platform Legs Loaded on Trailer



Working Elevated Platform Using Modular Barge Sections



30 Ton Capacity Rough Terrain Crane

Hydrostatic Properties

Draft (ft)	Displacement Weight (lbs)
1.50	5,500
1.75	18,283
2.00	31,067
2.25	43,850
2.00	82,200
2.25	94,983
3.50	107,767
3.75	120,550
4.00	133,333
4.25	146,117

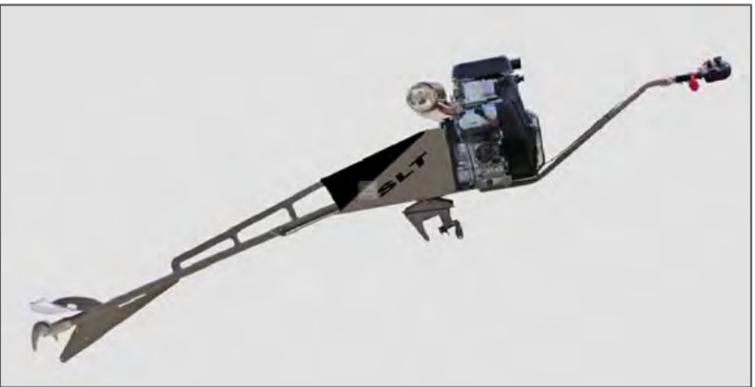
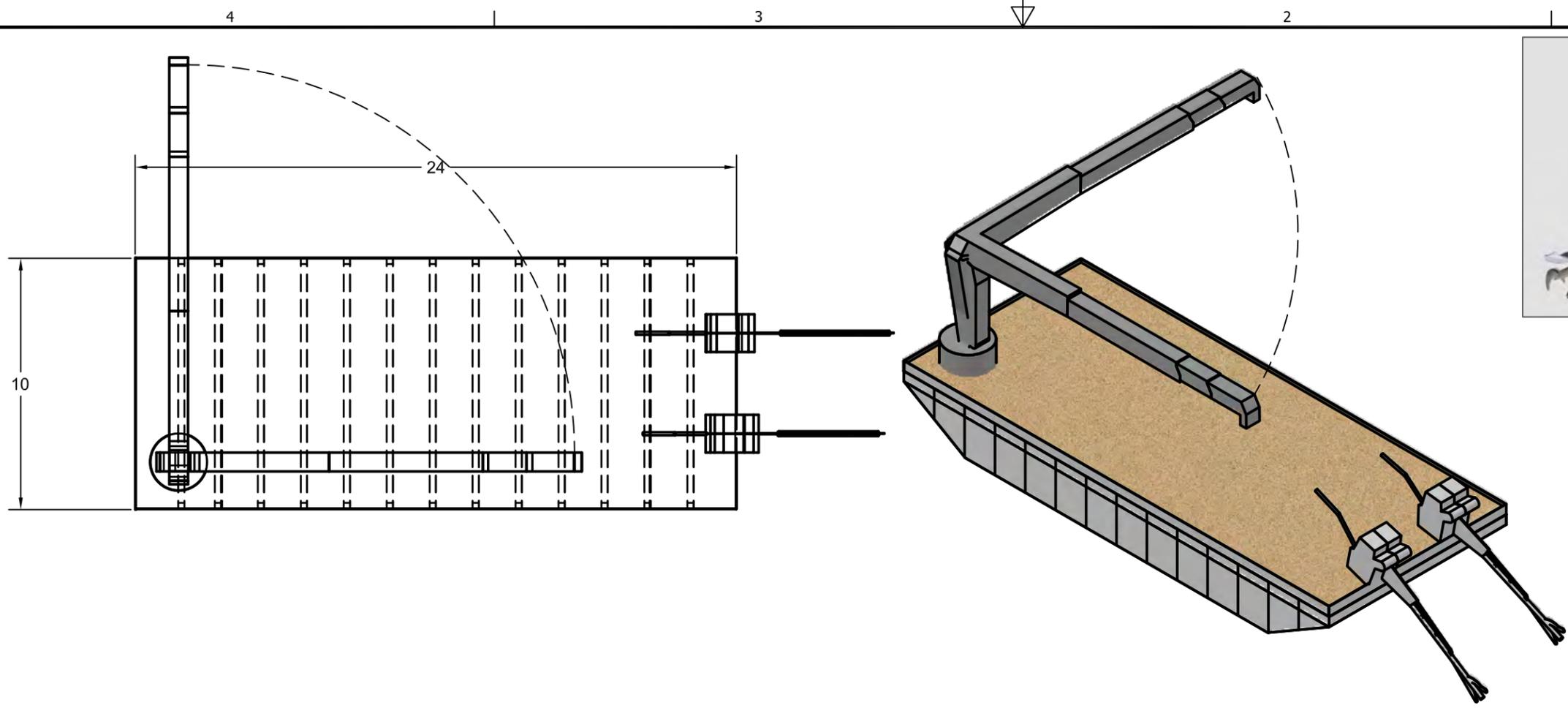
**ALL UNITS IN FEET
(UNLESS NOTED)**



GLOBAL DIVING & SALVAGE, INC
 3840 WEST MARGINAL WAY S.W. SEATTLE, WA 98106
 206 623 0621 FAX: 206 932 9036

DRAWN	DATE
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APPROVED	DATE

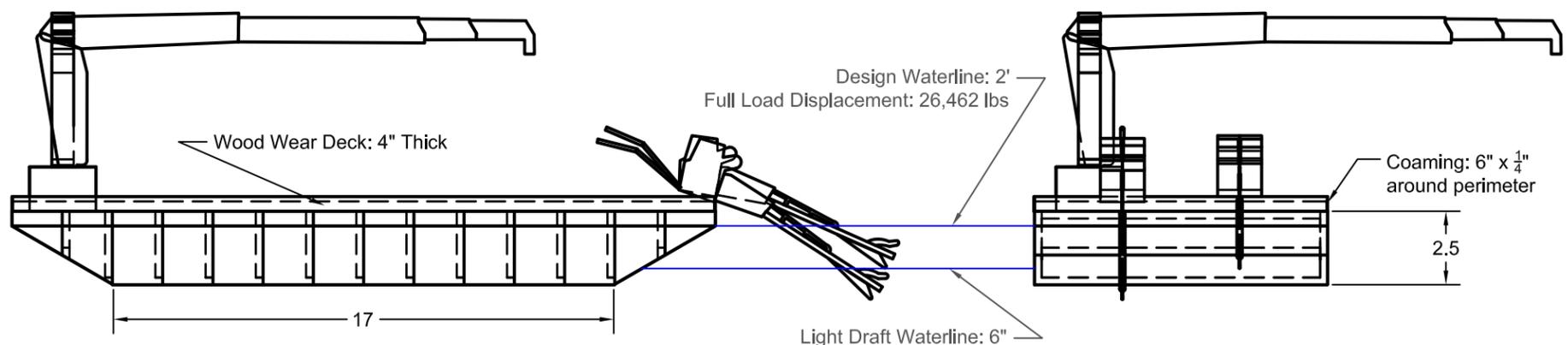
ELEVATED PLATFORM FOR REMOVAL OF HUI FENG NO. 1 WRECK AT PALMYRA ATOLL				
APPROVED BY LETTER DATED:				
OWNER:	A.B.S.:	U.S.C.G.:		
DWG NO. F12PS01171-PA-01	SHEET 1 OF 1	SIZE B	SCALE: 3/32":1'	REV -



35 HP Long Tail Motor



HIAB 045-2 Light Crane



Hydrostatic Properties

Draft (ft)	Displacement Weight (lbs)	Cargo Weight (lbs)
0.500	5,755	0
0.750	8,866	2,466
1.000	12,118	5,718
1.250	15,509	9,109
1.500	19,035	12,635
1.750	22,685	16,285
2.000	26,462	20,062

Equipment in Work Mode

Type	Weight (lbs)
HIAB 045-2 Crane	1,671
Crane HPU	1,310
Cutting Spread	4,000
Dive Spread	4,000
(2) Longtail Motors	600

**ALL UNITS IN FEET
(UNLESS NOTED)**



GLOBAL DIVING & SALVAGE, INC

3840 WEST MARGINAL WAY S.W. SEATTLE, WA 98106
206 623 0621 FAX: 206 932 9036

DRAWN	AL	DATE	08FEB13
CHECKED		DATE	
APPROVED		DATE	

SHALLOW DRAFT TRANSPORT VESSEL FOR DEBRIS REMOVAL AT PALMYRA AND KINGMAN ATOLL

APPROVED BY LETTER DATED: OWNER: A.B.S.: U.S.C.G.:

DWG NO.	F12PS01171-PA-02	SHEET	1 OF 1	SIZE	B	SCALE:	3/16":1'	REV	-
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Section 3: Palmyra Atoll – HUI FENG #1 Removal and Debris Recovery

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1 Palmyra Atoll – “F/V HUI FENG No. 1” – Operations Overview

Global Diving & Salvage, Inc. has studied the removal of the F/V HUI FENG in detail. The information we have gathered through bid documents, past experience, the site visit, and subsequent research has been used to develop our plan. We have considered multiple methods for removal, and have chosen a method that greatly reduces any impact to the reef or environment at Palmyra. Rather than plan on removing and replacing coral, we have developed a plan that will eliminate this need. We feel that one of the biggest threats to the coral is the use of anchors and anchor lines to hold work platforms in place on the reef. For this reason, we have developed a work plan that eliminates the need for anchors at all in any coral areas. Impact to the sea floor will be very limited and contained within the immediate site of the Corallimorph and the wreck. Although we intend to not damage any coral or reef structure, we will have the expertise and equipment to repair the reef on scene with us. A highly accredited specialist will participate as part of the crew, and supervise any damage assessment and repair necessary.

We have chosen to minimize the number of floating craft coming to the project. All tugs and barges to be used on the project meet Tier III EPA environmental air standards (40 CFR Part 1042) with zero discharge of any kind off the tug and barge. Floating equipment that meets these stringent standards is not common anywhere in the world, and we feel it is unlikely to be matched by other prospective bidders. The floating vessels we are utilizing are also fully certified and class approved with the proper man rated load lines to legally accommodate personnel living on board. Water makers, a full galley, and other built in capabilities on the platforms will eliminate the need to come ashore on Palmyra for any reason we can anticipate. The Captain in charge of the floating assets was on the site visit, which has allowed him to develop procedures that meet the reality of the Atoll.

Global has also incorporated into our plan and pricing the development and build of specialty work and transport platforms for this project. The size, draft, and propulsion of these platforms have all been developed specifically for the removal of the HUI FENG to not damage the reef system. The work platform at the wreck site will have greater operational weather parameters than floating platforms, minimizing weather delays.

Rather than ocean dumping the wreck after it has been removed, Global plans on recycling all recyclable materials and properly disposing of remaining waste.

In all, we feel that we have engineered a work plan that meets the intent of the stakeholders with minimal impact to Palmyra, keeping it a unique and special place.

2 Scope of Work

Provide all labor, equipment, materials and supplies necessary to plan and implement the removal and disposal of the hull and debris associated with the wreck of the F/V HUI FENG No. 1 located at the Palmyra Atoll National Wildlife Refuge.



3 Findings from Initial Assessment

The fishing vessel HUI FENG #1 was located in her reported position on the reef lying on the sea floor in roughly 20 FSW at Mean Lower Low Water (MLLW). The site is inside of the outer reef surrounding Palmyra Atoll.



Figure 1: F/V HUI FENG No. 1



Figure 2: F/V Tateyama Maru is similar in construction to the HUI FENG.

The reef keeps the deep ocean swells from affecting the site, however the site remains open to wind waves and residual ocean swell, particularly if coming from the East. The sea floor in that area is roughly 20 FSW in depth with coral heads rising from the sea floor to the water's surface in areas.

The vessel is constructed along the lines of a popular style of Japanese refrigerated fishing vessel. These vessels are numerous in nature with sister vessels accessible for familiarization and planning.

The general arrangements of the vessels place the fish holds forward with the engine and ancillary machinery aft. The general arrangements of the vessels place the fish holds forward with the engine and ancillary machinery aft. The Tateyama Maru pictured in Figure 2 is a similar vessel. The relevant specifications for the Tateyama Maru are found in Table 1.

Another vessel similar to the HUI FENG #1 is the Jyshen #26, pictured in Figure 3. The Jyshen #26 suffered a fire destroying the wheelhouse which resulted in the sinking of the vessel.

Global Diving was engaged to recover the vessel from a depth of 60 FSW. The vessel was subsequently remediated and disposed of to a scrap facility.



Length:	35.5 M	Builder:	Nippon Kai Heavy Duty Ind.
Beam:	6.9 M	Year Built:	1980
Draft:	4.2 M Aft	Hull Construction:	Steel
Displacement:	350 Ton	Deck Construction:	Steel
Superstructure:	Steel		

Table 1: Specifications of the Tateyama Maru



Figure 3: Jyshen #26 during Global Diving & Salvage recovery operation

As evidenced by our experience with the Jyshen #26, and many other similar vessels, Global is very familiar with the construction and character of this type of vessel. This experience has been incorporated into our planning and approach to the recovery of the HUI FENG #1.

Global has calculated the HUI FENG #1 to weigh 200 ST (Short Tons) light ship. The bow of the vessel is pointed to the Southwest. She is resting on the seafloor with an 85 degree list to Port, and a 5 degree trim to stern. The seafloor on the starboard side runs along the keel, and on the port side generally runs along the sheer

of the main deck. Several holes in the seafloor substrate allow visual access on the port side of the keel from the starboard side. The interior of the vessel's holds appeared to be empty of cargo. Some accumulation of sediment appeared on the port side of the holds, but appeared to be less than 3' in depth.

All machinery is suspected to be in place and somewhat intact. The refrigeration coils in the holds are all in place. The hull (lower) opening of the hawse pipes have been welded over. The vessel has rolling chocks which are visible on the starboard side. The part of the vessel that is exposed to atmosphere during low tides shows signs of metal deterioration, but the portion of the vessel hull that remains underwater appears to be within 75% of original construction thickness. No significant damage can be seen on the starboard side, though the port side is most likely breached in an area where it cannot be inspected.

The main and upper deck was originally covered with a wooden wear deck. This wood is heavily degraded and entirely missing in places. Filling pipes to most of the fuel tanks are located along the inside of the transom on the stern. The US Coast Guard Pacific Strike Team has determined that there no significant oils left on board the vessel. How they determined this condition is not known. The vessel



appears mostly devoid of fishing gear and sailing accoutrements. The masts are in place, though they are severely damaged.

The vessel has settled into the seafloor in its present location crushing the substrate beneath. The vessel has apparently shifted forward over time as the 60 feet behind the vessel shows a trench with crushed coral and rubble in it.

There are numerous coral heads in the vicinity of the HUI FENG #1. There is a clear area 25' to the starboard side and 50' of clear area on the port side of the vessel. Drawing HF-00 provides a detail of the area surrounding the vessel with measurements.

Access to the HUI FENG #1 from the channel lies across an area of coral with several coral heads rising near the surface of the water sporadically throughout the transit. This area was inspected by Global Diving divers twice during the Phase 1 site visit. Global is confident that smaller, shallow draft, craft can safely navigate between the coral heads from the channel to the casualty site with proper planning and procedures.

4 Environmental Compliance Support (ESA and NEPA)

The activities outlined in the solicitation *Shipwrecks Removal at Palmyra Atoll and Kingman Reef National Wildlife Refuge* constitute a federal action by the US Fish and Wildlife Service (USFWS) and trigger alternatives analysis and public participation requirements as defined by the National Environmental Policy Act (NEPA). The solicitation tasks the contractor with developing compliance documents for NEPA and the Endangered Species Act (ESA) of 1973. Windward will conduct analyses and prepare documents to meet the requirements of these authorities.

4.1 National Environmental Policy Act

Although Windward will investigate the availability of a Categorical Exclusion (CE) for these actions, it is likely that an Environmental Assessment (EA) will be required due to the nature of the project. Approximately six weeks will be necessary to develop an EA, and the US Department of the Interior (DOI) review/approval period will be at least three months. The EA will assess all potential effects of multiple alternative remediation options on the environment at Palmyra Atoll and Kingman Reef, including leaving the wrecks “as is” (i.e., no action).

If it is determined in the EA that the preferred remediation alternative is a “major federal action significantly affecting the quality of the human environment,” an Environmental Impact Statement (EIS) will be required. However, an EIS is not expected to be necessary, based on previously documented shipwreck removal actions by the US Coast Guard (USCG) in similar habitats (Government of American Samoa et al. 1999).



4.2 Environmental Assessment

The EA will follow the general format of the Government of American Samoa's *Emergency Restoration Plan and Environmental Assessment*, hereafter referred to as the Pago Pago EA (Government of American Samoa et al. 1999), and will incorporate location-specific information on the legal framework of the shipwreck's removal; the designated purpose for the proposed removal; input from all concerned agencies and parties consulted; and an in-depth assessment of the physical, biological, and chemical issues relevant to biota at Palmyra Atoll and Kingman Reef. Within that established context, alternatives will be outlined and assessed for possible adverse effects on biota, predicted ecological benefits relative to a no-action scenario, and predicted project costs. The EA may also employ ecosystem services accounting in order to semi-quantitatively compare environmental impacts, as was done in the Pago Pago EA.

Specific issues to be addressed as part of the EA's description of baseline conditions (i.e., conditions associated with a no-action alternative to removal) will include the effects of iron supplementation on iron-limited marine systems; the development of "black reefs," as Kingman Reef is described by Kelly et al. (2012); and effects commonly correlated with shipwrecks, such as phase shifts and corallimorph proliferation in coral communities (Kelly et al. 2012; Norström et al. 2009; Work et al. 2008; Schroeder et al. 2008; Government of American Samoa et al. 1999). Potential effects on biota to be discussed in the EA in connection with the removal action will include physical damages caused by removal (i.e., crushing of corals), short-term degradation of water quality (i.e., increased turbidity during work and removal), disturbance of sensitive wildlife, and possible releases of ship-borne chemicals (e.g., petroleum products).

In addition to textual discussion, figures (e.g., maps) and tables will be included to the extent practical to summarize information, and to provide visual representations of the site, habitat, and descriptions of the removal options.

4.3 Environmental Impact Statement

In the event that an EIS must be conducted, the process of evaluating the impacts of the removal action will be repeated in a more detailed manner, allowing for public input as to what valued resources should be assessed. The structure of the EIS will be similar to that of the EA, but the content will focus on public concerns (in addition to agency concerns) and quantified effects. Preparation time could likely increase exponentially, especially if a great deal of coordination with other agencies or non-governmental organizations (NGOs) is required to complete the process. Preparation costs would also increase accordingly.

4.4 Section 7 Approach

Pursuant to Section 7 of the ESA (16 USC 1531 et seq.), a Section 7 consultation must be conducted to determine what effect, if any, the shipwreck removal action will have on ESA-protected species. Such species at the sites currently include Hawaiian monk seal, green turtle, and hawksbill sea turtle; none of these species have critical habitat within either action area. The Palmyra Atoll stock of false killer whale



has been determined to be genetically distinct from the Hawaiian Islands stocks, and as a result may require special focus. Initially, an informal consultation with USFWS will be attempted in order to show that the shipwreck removal action will not have a significant adverse effect on the above-listed species. Based on the infrequent use of Palmyra Atoll and Kingman Reef by protected species and the lack of any critical habitat that could be affected by the removal action, it is not expected that a formal Biological Assessment (BA) or Biological Opinion (BO) will be required by USFWS.

If, during the informal consultation with USFWS, it is determined that protected species may be impacted by the removal action, a formal BA will be prepared to assess all possible impacts, at the individual level, on endangered and threatened species at Palmyra Atoll and Kingman Reef. The BA will result in a Determination of Effect for each protected species: either likely to adversely affect (LAA) or not likely to adversely affect (NLAA). If it is determined that even a single individual within the protected populations may be subject to incidental take, then an LAA determination will be warranted. At that point, a BO will need to be prepared by USFWS to assess the impact of the removal action on the entire protected population.

The BA, if deemed necessary, will have a structure similar to that of the EA (see above), although it will exclude any discussion of the costs and benefits of shipwreck removal options and alternatives. The document will contain a discussion of the legal context and potential effects of all removal action options and alternatives for protected species only, including a discussion of the ecological baseline and the imminent need for the removal action.

4.5 References

BA – Biological Assessment

EA – Environmental Assessment

EIS – Environmental Impact Statement

ESA – Endangered Species Act

NEPA – National Environmental Policy Act

NWR – National Wildlife Refuge

Government of American Samoa, DOI, NOAA. 1999. Emergency restoration plan and environmental assessment. Pago Pago Harbor, American Samoa. The Government of American Samoa, The US Department of the Interior, and The National Oceanic and Atmospheric Administration.

Kelly LW, Barott KL, Dinsdale E, Friedlander AM, Nosrat B, Obura D, Sala E, Sandin SA, Smith JE, Vermeij MJA, Williams GJ, Willner D, Rohwer F. 2012. Black reefs: iron-induced phase shifts on coral reefs. *ISME* 6:638-649.

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5 Mobilization

Please reference *Section 2: Kingman Reef – Wreck Removal and Debris Recovery*, *Section 6 – Mobilization* for details on the overall mobilization for the project.

The equipment and personnel will be mobilized to Palmyra Atoll after completion of the recovery efforts on Kingman Reef. Upon arrival in Palmyra the vessels will establish position as indicated in Drawing No. PA-00 and recovery operations will ensue.

6 HUI FENG No. 1 Removal operations

6.1 Overview

The location and condition of the wreck HUI FENG No. 1 poses significant challenges to removal operations. Refloating of the HUI FENG No. 1 was considered but was deemed unfeasible because the depth of water in the area is neither great enough for the vessel to float freely in the current damaged and deteriorated condition, nor is there enough clearance through the coral heads to permit passage of the vessel to deep water. Adding external floatation from lift bags or from barges attached to the HUI FENG No. 1 is similarly unfeasible because the external floatation would greatly increase the width of the wreck, making passage through the reef impossible without impacting or relocating coral.

To mitigate impact to the environment, the HUI FENG No. 1 will be removed in engineered sections using an elevated work platform with a crane. This will greatly reduce the footprint in the reef, equipment contact with the coral will be limited only to the 36 inch diameter legs of the elevated platform—no anchors or anchor lines will be used preventing the risk to coral from dragging anchors and anchor lines.

Diving operations will be conducted from the elevated platform. Divers will first thoroughly assess the wreck, accessing all intact tank areas by a method known as “hot tapping” which creates a watertight valved access into a tank or pipe in a controlled manner without spilling the contents of the tank or pipe. Any liquid pollutants discovered will be pumped to portable tanks on the elevated platform. Following the hull assessment and potential pollution mitigation, divers will cut the wreck into sections that can be lifted by the crane onboard the elevated platform.

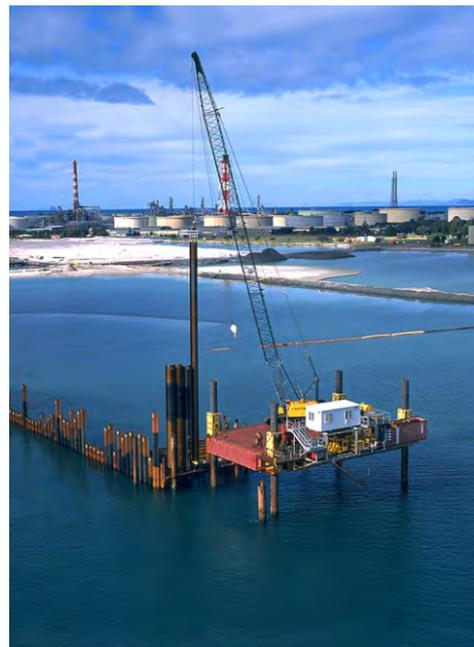


Figure 4: Elevated Modular Barge Platform



Sectioning of the wreck will be performed by exothermic cutting (commonly referred to by the proprietary name Broco) is shown in Figure 5, as well as mechanical saws and abrasive wheels. Exothermic cutting creates a fast, clean cut through marine growth, rust, and mill scale without generating slag.

Once cut, sections will be crane loaded onto purpose built vessels for the task, the Shallow Draft Transport Vessel (shown in Drawing PA-02). Shallow Draft Transport Vessels are lightweight aluminum with a flat deck, wide body, and a long-tail surface motor. The deck of the Shallow Draft Transport Vessel contains a raised edge coaming around the perimeter that provides 300 gallons of containment volume in case of any residual within the transported material. The Shallow Draft Transport Vessel is designed to be highly maneuverable while carrying 10 short tons of material and drafting only 2 feet of sea water. Two Shallow Draft Transport Vessels will transport all debris from the wreck site through the coral to the ship channel where the 185-1 and 185-3 oceangoing Crane Barges will be waiting to offload the scow.

During the pre-bid site visit, personnel performed a detailed in-water survey of the reef from the ship channel to the wreck site. The results of this survey confirms that a suitable channel exists within which our elevated platform and Shallow Draft Transport Vessels can transit (the elevated platform would transit only at high tide while assisted by both Shallow Draft Transport Vessels). Prior to actual transit through the coral reef, a thorough second survey will be performed. Divers will use buoys and GPS coordinates to mark coral heads and identify a channel for the vessels that is navigable at high and low tide. Buoys will be foam “crab floats” tied with polypropylene rope to a clump of weight bags (the scope on the rope from the weight to the buoy will be short enough to prevent the buoy from contacting the coral head). The channel will be prepared specifically for the Shallow Draft Transport Vessels which have a small waterline footprint at only 24 feet long and 10 feet wide.



Figure 7: JW Fisher PX8 Submersible Metal Detector

Once removal of the wreck is complete, divers will conduct an underwater search of the wreck site using a submersible metal detector as shown in Figure 7. This search will be digitally recorded and will be provided to stakeholders.

This methodology will have the least impact on the ecosystem; it is intended that no coral will be displaced or contacted; only the 36 inch



Figure 6: Rendering of a Diver Performing a Hot Tap



Figure 5: Diver Cutting with Exothermic (Broco) Process



diameter legs of the elevated platform will come in contact with seafloor immediately surrounding the wreck (the seafloor in this area is covered by Corallimorph).

6.2 Assumptions

Specific technical information regarding the HUI FENG No. 1 is assumed to be unavailable. The RFP lists the length of the HUI FENG No.1 at 37m (121.4 feet). The hull rests at 5 degree stern trim and an 85 degree heel angle with the starboard side 0.5m (1.6 feet) above the waterline at a “medium tide” which is reported to be 6m (19.7 feet). The breadth of the hull is therefore assumed to be 6.6m (21.7 feet). Characteristics of similarly designed long-line fishing vessels were used to estimate the lightship weight of the HUI FENG No.1; an image of one of these vessels is included as Figure 2. This vessel has displacement of 386 short tons and is 35.5m long (116.5 feet) x 6.9m wide (22.6 feet) and is shown at a draft of 4.2 m (13.7 feet). Using these vessel dimensions and other similar vessels, the hull and machinery of HUI FENG NO.1 is estimated to weigh approximately 200 short tons. It is assumed that any cargo or consumables have degraded and are no longer on board the vessel. Although the USCG Strike Team has confirmed that bulk hydrocarbons do not exist on the wreck, pollution containment and recovery capacity will be mobilized and available even if large quantities of hydrocarbons are encountered.

The sectioning of the HUI FENG No. 1 will be done by separating the hull lengthwise into sections of approximately equal weight. These sections are shown in drawings HF-01 through HF-03. Sections will have the lengths and weights as noted in Table 2.



Section / Cut Number	Aft Most extent of Section (measured from Stern, Feet)	Forward Most Extent of Section (measured from Stern, Feet)	Length of Section (ft)	Max Weight (Short Tons)
1	House and Superstructure Removal		25.0	10
2	0.0	9.1	9.1	10
3	9.1	16.8	7.7	10
4	16.8	23.5	6.8	10
5	23.5	29.6	6.1	10
6	29.6	35.2	5.6	10
7	35.2	40.5	5.2	10
8	Main Engine Removal		N/A	10
9	40.5	45.5	5.1	10
10	45.5	50.6	5.1	10
11	50.6	55.6	5.1	10
12	55.6	60.7	5.1	10
13	60.7	65.8	5.1	10
14	65.8	70.8	5.1	10
15	70.8	75.9	5.1	10
16	75.9	80.9	5.1	10
17	80.9	86.2	5.2	10
18	86.2	91.8	5.6	10
19	91.8	97.9	6.1	10
20	97.9	104.6	6.8	10
21	104.6	112.3	7.7	10
22	112.3	121.4	9.1	10

Table 2: Length and Weight of Cut Sections



6.3 Specific Equipment to be Used

Equipment Type (Size)	Quantity	Description/Purpose
Elevated Platform (40' L x 20' W x 7'H)	1	Platform consists of (2) 40'x10' S70 Flexifloat modular barge sections. The platform has (4) legs that are 36" diameter each and is capable of elevating the bottom surface of the barge 10 feet above the surface of the water. A 30 ton capacity rough terrain crane will be secured to the platform and will be capable of lifting 10 short tons at a radius of 30 feet. At the work site, the platform will be outfitted with shallow water diving spread, underwater cutting spread, environmental protection equipment, and pollution response gear. The platform will serve as a dive platform from which divers will separate sections of HUI FENG No. 1 and load them onto the Scows using the onboard crane. See Drawing No. PA-01.
Shallow Draft Transport Vessel (SDTV) (24' L x 10' W x 3' D)	2	Shallow Draft Transport Vessels are lightweight aluminum with a flat deck, wide body, and a long-tail surface motor. The deck of the Shallow Draft Transport Vessel contains a raised edge coaming around the perimeter that provides 300 gallons of containment volume in case of any residual within the transported material. The Shallow Draft Transport Vessel is designed to be highly maneuverable while carrying 10 short tons of material and drafting only 2 feet of sea water. These two vessels will be used to transport debris from the wreck to the channel where they will be unloaded by the 185-3 Crane Barge. See Drawing No. PA-02.

Table 3: Equipment to be used at HUI FENG No. 1 Wreck Site

Equipment Type (Size)	Quantity	Description/Purpose
Barge 185-1 (185' x 50' x 12')	1	Flat deck barge. To be used to store and transport recovered debris until final disposal.
Barge 185-3 (185' x 50' x 12')	1	EPA Tier III environmentally compliant, no discharge Crane Barge with galley and accommodations. To be used to unload Shallow Draft Transport Vessels. Environmental and Pollution Response equipment, including a dedicated pollution response skiff, will be staged on the Crane Barge. On-site personnel will live aboard the Crane Barge when not working.
Sarah C	1	EPA Tier III environmentally compliant Oceangoing tugboat used to maneuver and anchor 185-1 and 185-3 Barges.

Table 4: Equipment to be anchored in Channel near HUI FENG No. 1 Wreck Site



6.4 Sequence of Events

1. Upon arrival at the site, the Sarah C will anchor the 185-1 and 185-3 barges in the channel, the position of the vessels is shown in Drawing No. PA-00.
2. Divers will survey the path to the HUI FENG NO. 1 from an SDTV. This survey will mark (by floating poly form buoy and GPS coordinates) any obstruction or coral head that is within 4 feet of the surface at low tide. A known path exists as described in the report of findings from the site visit as indicated in Section 3.
3. The 185-3 Crane Barge will launch the elevated platform. The platform will be in a light configuration with only the jacks (with only one leg) and the crane on board (designed floating draft in this configuration is 4 ft). Both SDTVs will move the platform to the work site on a high tide. One leg of the platform will be deployed to the sea floor, and the platform will be temporarily moored to the wreck to hold position. The remaining legs of the elevated platform will be loaded onto an SDTV and brought to the platform where they will be loaded aboard the platform and assembled using the platform's crane. The elevated platform will jack up to a height above the combination of high tide and surf (estimated to be 5 feet above low water). The SDTVs will bring the environmental protection, pollution response, underwater cutting and dive gear to the platform.
4. Environmental safeguards will be put in place according to the Pollution Mitigation / Response Plan.
5. Divers will conduct a video survey of the entire area around the wreck, and record the findings. They will then assess the wreck, accessing all intact tank areas by a method known as "hot tapping" which creates a watertight valved access into a tank or pipe in a controlled manner without spilling the contents of the tank or pipe. Any liquid pollutants discovered will be pumped to portable tanks on the elevated platform. Portable tanks will be loaded onto SDTVs for transport and emptying on the 185-3 Crane Barge.
6. Divers will commence sectioning of the wreck using exothermic cutting along with pneumatic or hydraulic saws and abrasive cutting disks. Cut sections will approximate those listed in Table 2 and Drawing Nos. HA-01 through HA-03.
7. Sections of the wreck will be loaded by crane onto the SDTVs. Once loaded, the SDTVs will transport material to the 185-3 Crane Barge. The crane on the 185-3 will unload the SDTV onto the 185-1 deck barge.
8. The elevated platform will shift position twice, as shown in Drawing Nos. HA-01 through HA-03. The same footprints for the feet will be able to be used, for a total of only eight foot contacts with the seafloor.
9. When the wreck is completely removed, divers will conduct a digitally recorded final search of the area utilizing an Underwater Metal Detector. This search will extend 200 feet outward from the furthest extents of the wreck. All metals and debris over 6" in size that are located will be recovered thereby ensuring that the site is completely free of all debris.
10. The Agency Representative will examine the information and survey data and declare the removal complete.
11. The elevated platform will return to the 185-3 Crane Barge under the escort of both SDTVs.



12. Divers, working from an SDTV, will remove all markers from the path to the wreck site
13. The SDTVs and push tug will transit to the "RUST ISLAND" debris site.

7 Disposition of Recovered Materials

All metal scrap will be deck loaded onto the ABS barge 185-1. All non-metallic material will be loaded into 40 cubic yard dumpsters with liquid containment liners and covers. These dumpsters will be staged on the forward portion of the deck of the 185-1 barge.

Upon completion of the recovery operation the metal scrap will be discharged in Long Beach, California to SA Recycling located at 482 Pier T Avenue # 118, Long Beach, CA. Non-metallic waste will be disposed of by Waste Management who will take delivery of the 40 cubic yard dumpsters at the Curtin Maritime dock in Long Beach, CA.

8 Schedule

Please see attached GANTT Chart for the project schedule.

9 Environmental Protection

Please reference *Section 2: Kingman Reef – Wreck Removal and Debris Recovery, Section 9 – Environmental Protection* for our detailed Environmental Protection Plan.

10 Work and Site Contingencies

10.1 Crew Orientation

Upon award Global Diving will solicit The Nature Conservancy (TNC) and FWS to plan an orientation class for all crew members assigned to the project. This orientation will be designed to make all crew members aware of the history, rules and protocols specific to Palmyra Atoll and Kingman Reef, thereby ensuring the crew is fully aware of the sensitivities and the importance of preserving the environment within the refuge.

10.2 Invasive Species

Hull Cleaning - Prior to departing Long Beach, CA the hulls of the tug and barges will be thoroughly cleaned of marine growth. The hulls will be inspected by divers in Honolulu and cleaned again if necessary to meet the inspection/quarantine parameters in the bid documents.

Rats – A rat free certification through the approved certifying company will be obtained in Honolulu prior to departing for Palmyra Atoll.

Quarantine – Global will comply with the 10 day notification and will schedule and complete the required inspections prior to departing for Palmyra Atoll.



Corallimorph – Global’s work plan calls for the wreck at Kingman Reef being removed prior to the work at Palmyra which eliminates the concern about transfer of Corallimorph to Kingman Reef via rigging, dive equipment, etc. However, if conditions (i.e. inclement weather at Kingman) dictate a change in plan and the initial operations shift to Palmyra then the rigging and gear will be cleaned with a high pressure power wash prior to departure for Kingman Reef.

10.3 Coral Preservation / Restoration

Work Plan - Global has made every effort to develop a comprehensive work plan that eliminates the need to relocate or impact the existing living or dead coral structures.

The work platform that will be used to remove the Hui Feng #1 is a small footprint jack up that only impacts the corallimorph infested substrate and eliminates the need for heavy anchors and anchor cables arrays that would potentially inflict more damage to a broader area. The jack up is designed to exert 56 pounds per square inch of pressure on the sea floor below the (4) 36 inch diameter legs. This pressure can be reduced by using rectangular feet underneath the legs but these feet will increase the area affected by the elevated platform; we anticipate further discussion with the stakeholders regarding the preferred method by which equipment will make contact with the reef.

During the Phase 1 site visit, Global Diving and Curtin Maritime personnel attending the site visit conducted extensive dive surveys of the reef between the channel, the Hui Feng #1 and Rust Island. Based on their findings Global has developed the Shallow Draft Transport Vessel (SDTV) which will allow transport of the recovered debris across the reef without the need to relocate coral heads and, due to the shallow draft and suitable size, with sufficient vertical clearance to eliminate contacting corals during the transit.

Pre Operation Survey – In order to document the condition of the surrounding reef structure Global will conduct an underwater video survey of the area prior to and after completion of the recovery operation at each location.

Reef Specialist - Global has engaged Windward Environmental LLC to provide a scientist with extensive experience in coral reef preservation and restoration. The scientist selected is Ms. Kathleen Hurley who will serve as a member of our crew on location. Ms. Hurley will monitor the ongoing work and will coordinate any required remediation or stabilization efforts with US Fish & Wildlife and The Nature Conservancy scientists on location.

Coral Restoration – If damage does occur to coral during the operation the situation will be addressed immediately and appropriately. The exact approach to the restoration will depend upon the nature of the damage. Global will be prepared with several cases of Z Spar A-788 2 part epoxy and other tools and restoration components.



10.4 Oil and Hazmat Pollution

In accordance with our operational plan Global Diving will mobilize a comprehensive array of oil spill prevention and response equipment to the project. Portable equipment (dive compressors) on the decks will be placed in secondary containment to prevent any incidental runoff and to provide protection during refueling. As it is being removed, all debris that is not clean metal will be placed in 40' drop boxes with covers to keep water from entering the boxes. All clean metal will be placed within a filter berm to keep sediments and small organisms from being washed overboard. All personnel working with material will have 40 hr certification in HAZMAT.

10.5 Gray and Black Water

The tug and accommodation barge are completely self-contained and store all gray and black water in internal tanks. A portable tank will be placed on board the tug. When necessary, the storage tank on the accommodation barge will be pumped into the portable tank. If storage capacity is reached then the tug will transit to a point beyond the 12 mile refuge boundary where the tank will be discharged into the sea in accordance with the requirements of the International Convention for the Prevention of Pollution from Ships (**MARPOL**).

10.6 Air Pollution

The engines and generators in use on the tug and barges that are dedicated to this operation are EPA Tier 3 compliant and meet the stringent air quality standards of the state of California. This standard of air quality is a capability we believe to not be achievable by most marine operators.

10.7 Weather

Moorage - The work plan provides for the tug and barge flotilla to transit from Honolulu directly to Palmyra where the crew will establish three temporary mooring systems in the lagoon prior to departing for Kingman Reef. This temporary moorage will be of sufficient size to hold all the floating assets during any conceivable weather conditions that may impact the lagoon. In the event heavy weather is forecast, and operations are suspended, then the tug and barges will transit to the lagoon and the mooring will be utilized to secure the tug and barges.

Work Platform - The work platform that will be installed to remove the HUI FENG #1 is a jack up platform that can be raised to a height approximately 10 feet above the water at MHHW. Because the platform is raised clear of the water there will not be a requirement to remove the platform during a normal heavy weather condition. If a severe weather event is forecast, the jack up platform can be returned to a floating condition and stowed on the crane barge.

10.8 Dive Safety

Training – All divers engaged in this operation are highly trained, credentialed and professional commercial divers. In addition, all of the crew engaged in the operation - divers and topside personnel, are trained and current with 40 hr HAZWOPER, First Aid and CPR.



Compliance - All dive operations will be conducted in strict compliance with OSHA and USCG regulations and the guidelines established by the Association of Diving Contractors International (ADCI).

Safety – Though dive operations are not intended to require decompression, Global will have a recompression chamber with copious breathing O2 on board the derrick barge. All dive crew members are qualified chamber operators. At least one member of the crew will be a Diver Medical Technician (DMT). This crew member will be equipped with a well-stocked DMT kit including IV medicine capabilities. Direct satellite communication can be established between the DMT and a hyperbaric physician if possible.

10.9 Portable Equipment

The equipment selected for use on the project is rugged and proven reliable through rigorous experience. Critical systems are provided with built in redundancy or the equipment is duplicated to provide backup. Spares and spare parts kits for all equipment are standard on all projects, and will be tautologically represented on this project.

10.10 MEDEVAC / Resupply by Air

Global does not anticipate the need to resupply during the project. However, should a medical emergency arise requiring MEDEVAC, or a critical equipment issue develop, we will coordinate with the US F&WS contractor Bradley Aviation in Honolulu to provide air transport. Global Diving & Salvage is insured to provide medical evacuations.

10.11 Resupply / Emergency Transportation by Sea

Global does not anticipate the need to resupply during the project. However, should the need arise we have identified firms in Honolulu that can be contracted to transport equipment and/or personnel to or from the project. These firms include P&R Water Taxi LLC and Healy Tibbits.

10.12 Communications

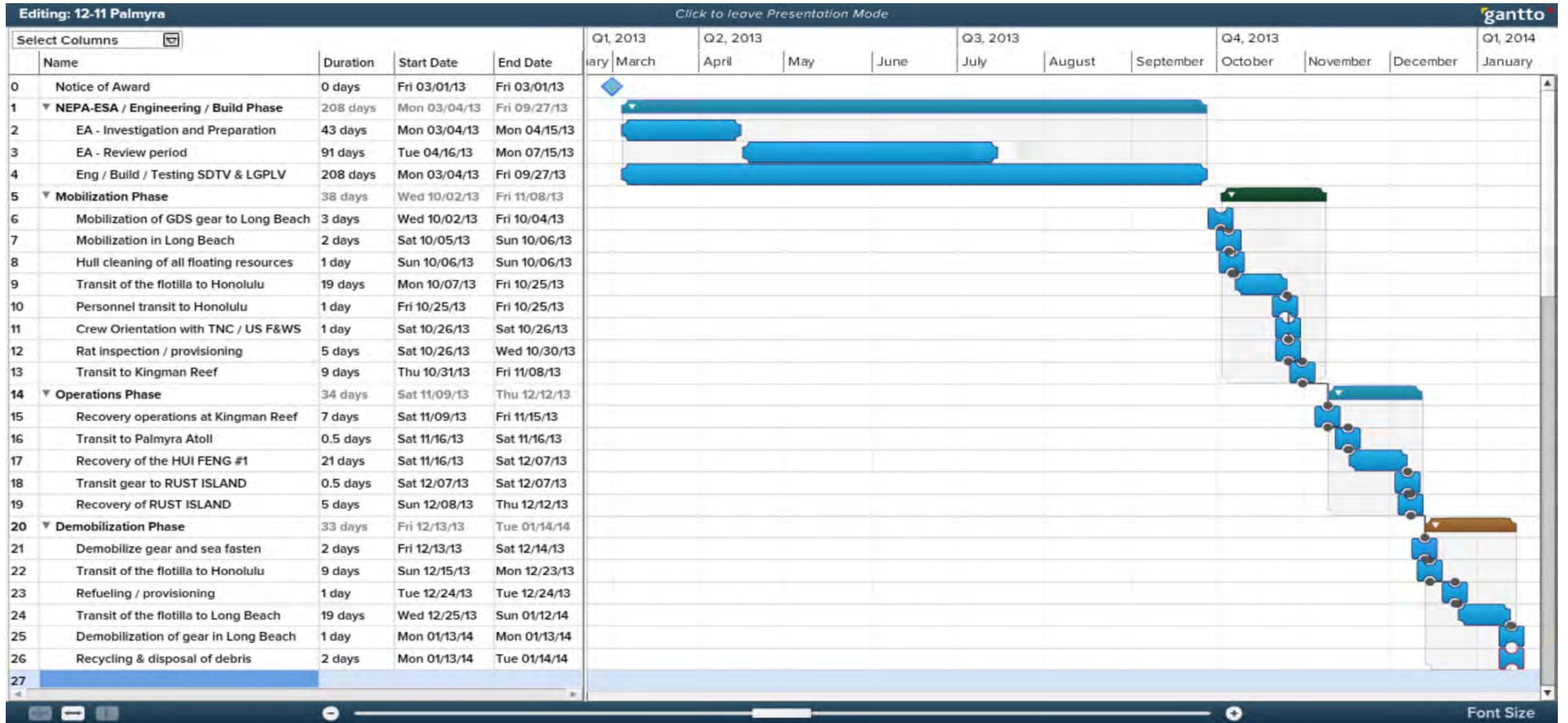
The tug and Barge will be equipped with satellite communications with data and voice capabilities.

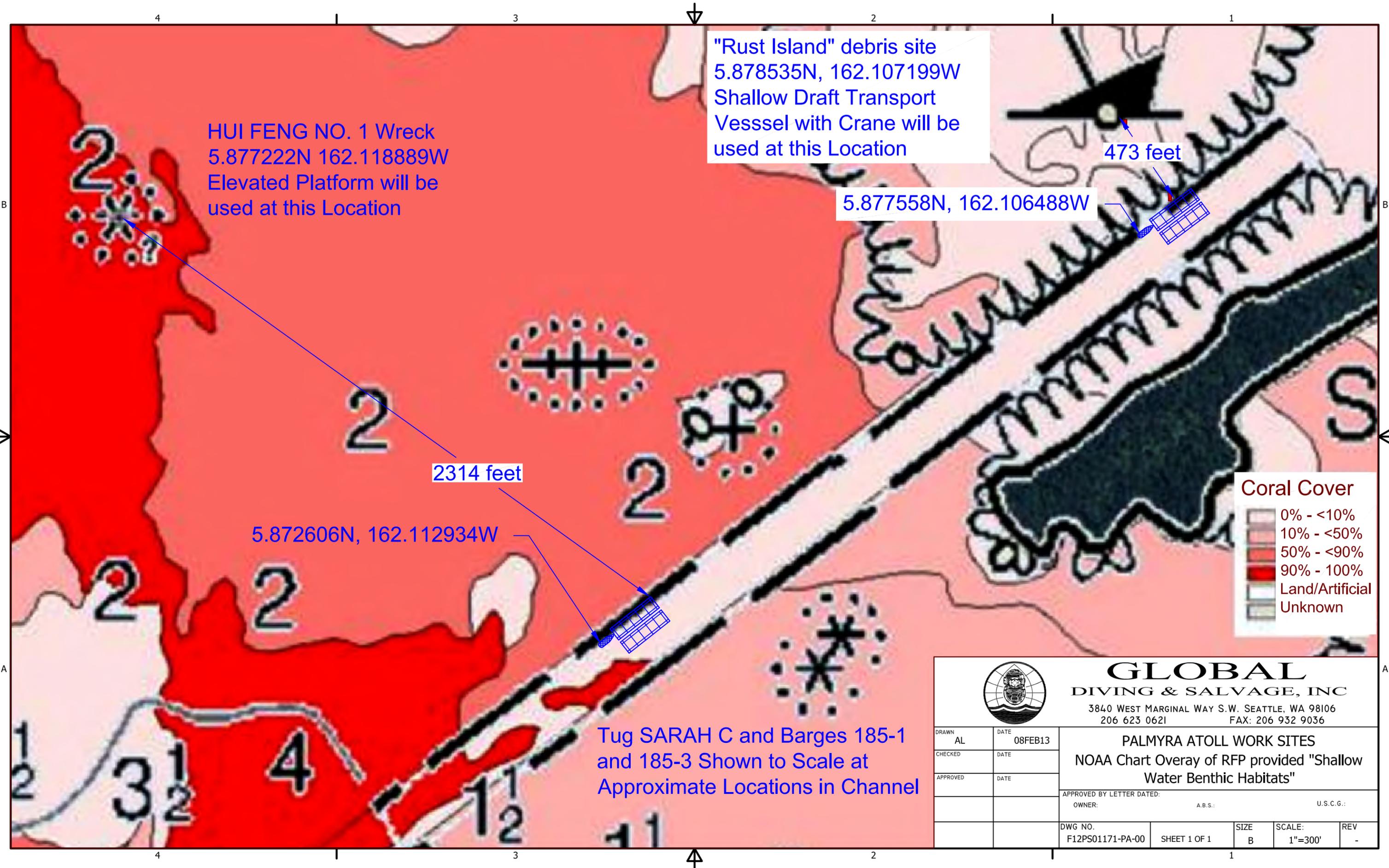
11 Demobilization

Demobilization will be limited to the recovery and stowing of the elevated work platform and the shifting of the tug and barge location to the position designated for the RUST ISLAND recovery operations as detailed on drawing PA-00.

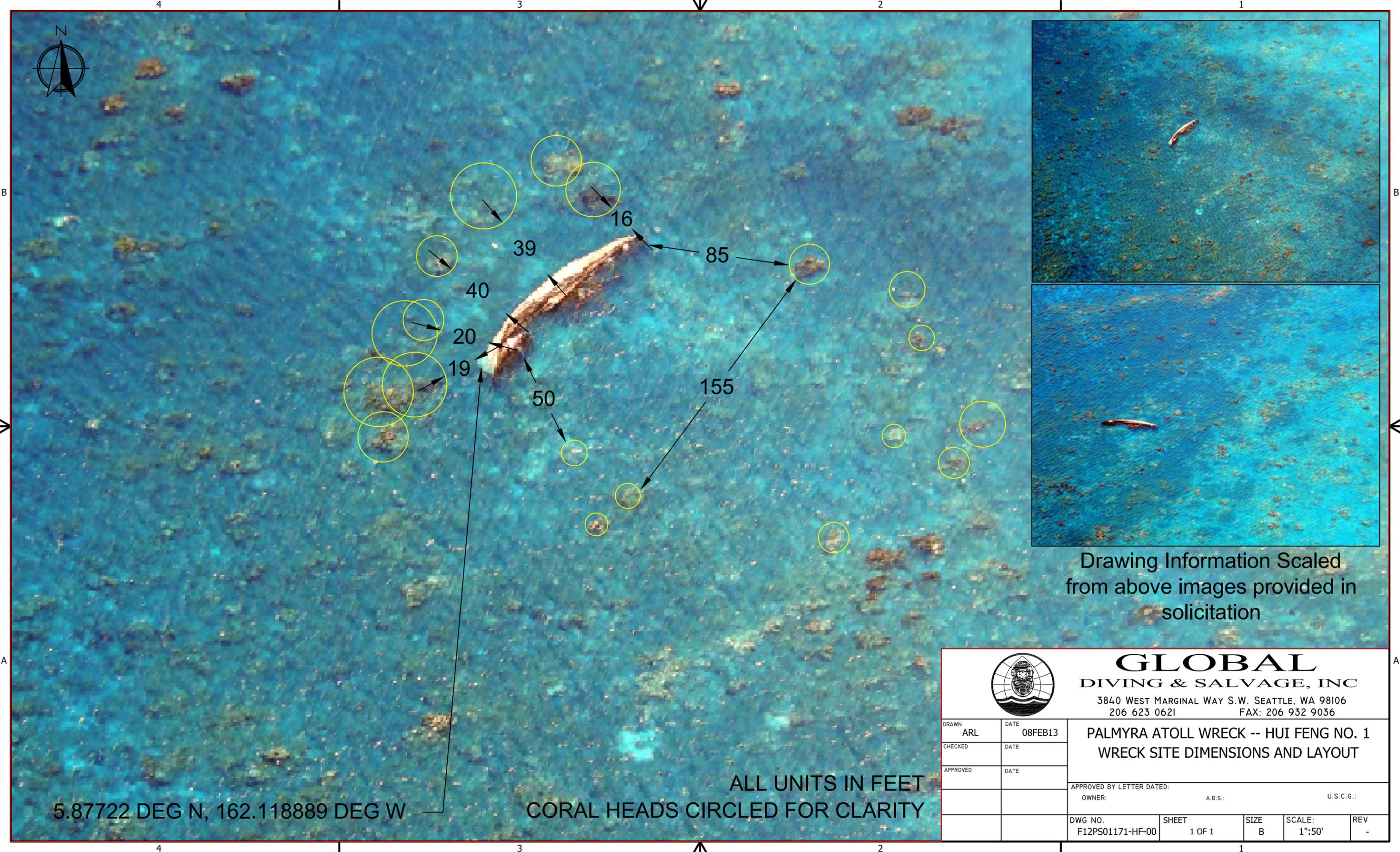
12 Drawings







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Drawing Information Scaled from above images provided in solicitation

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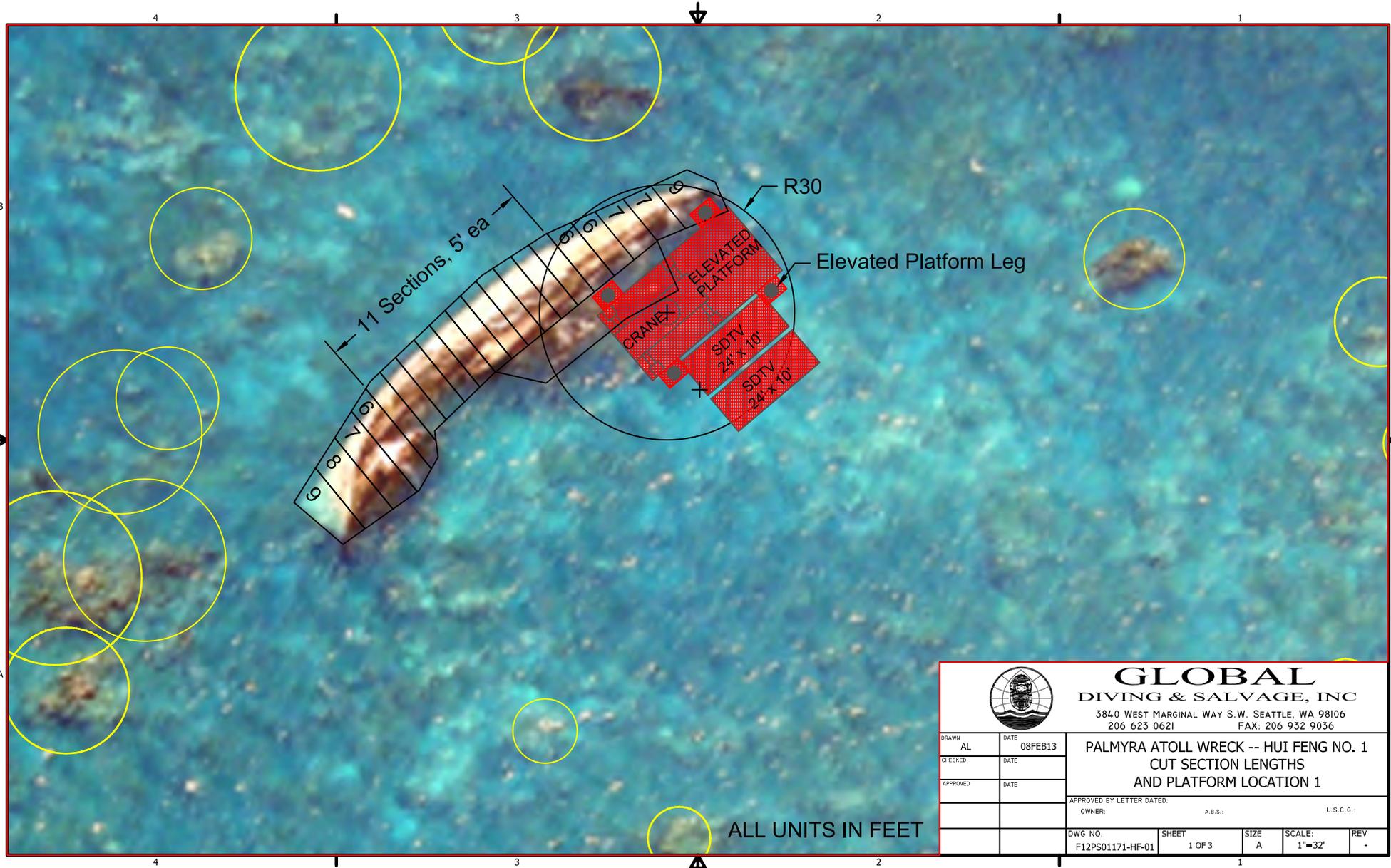
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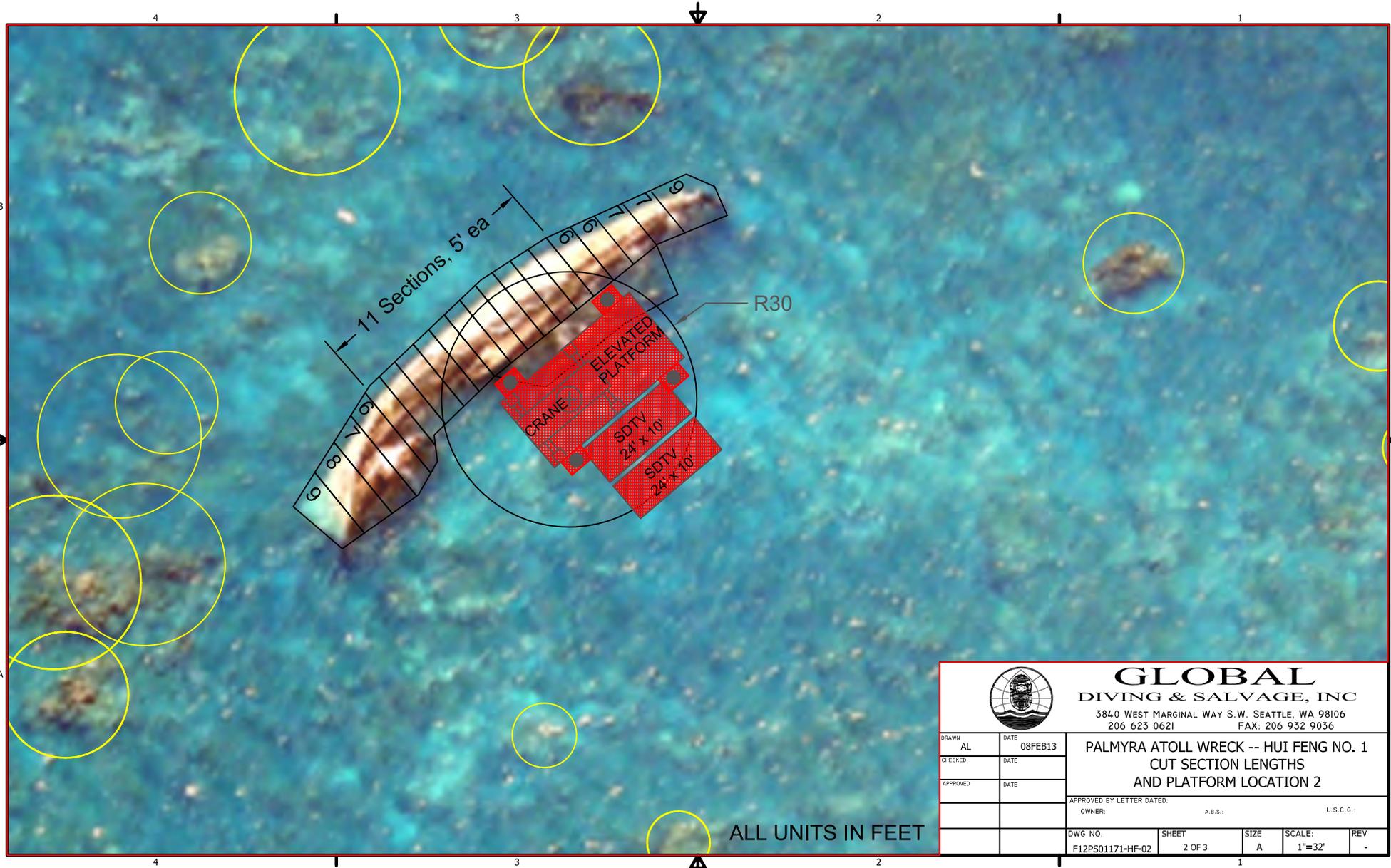
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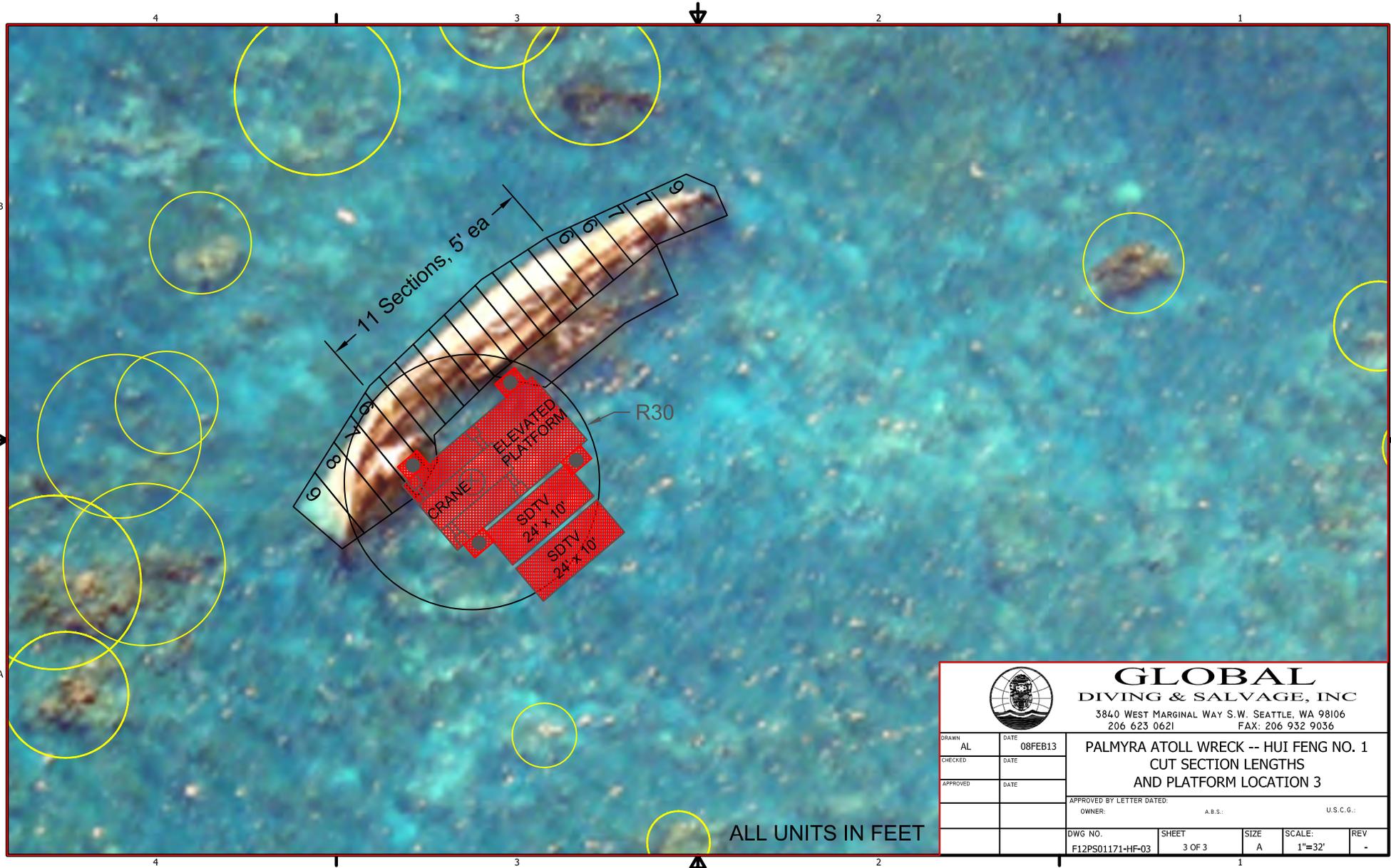
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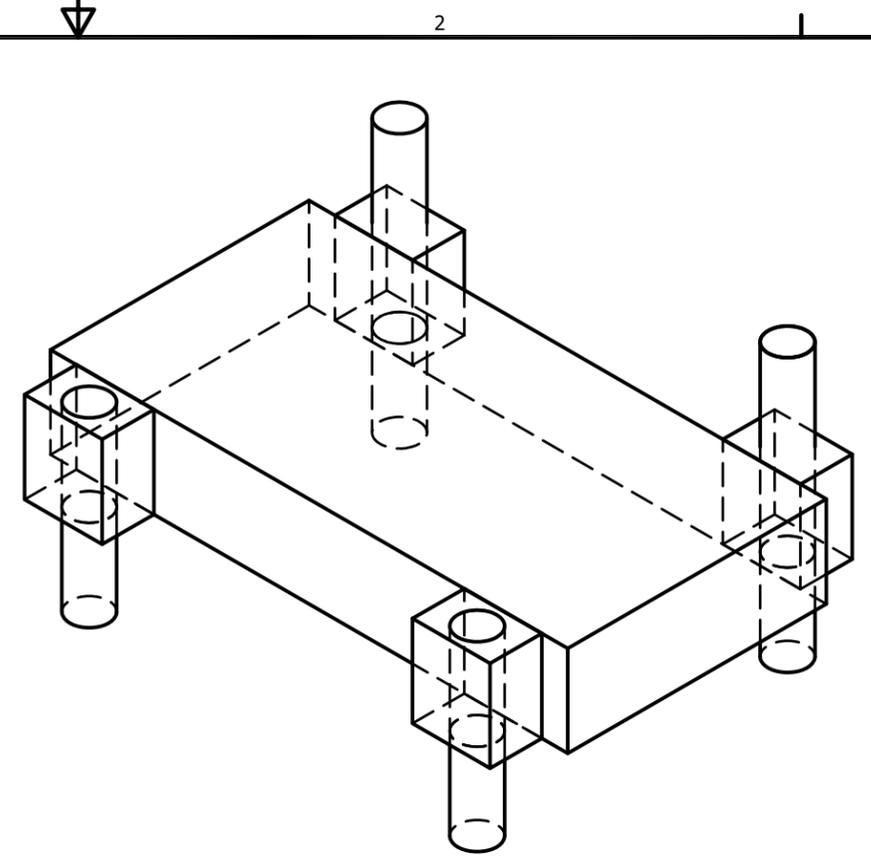
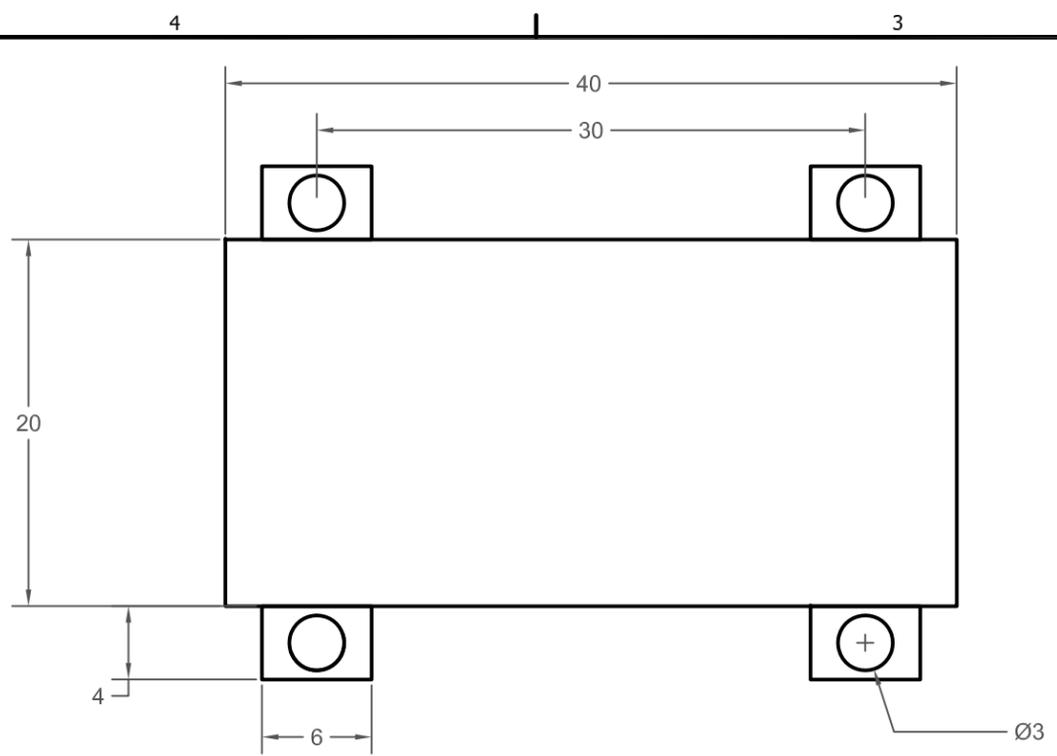
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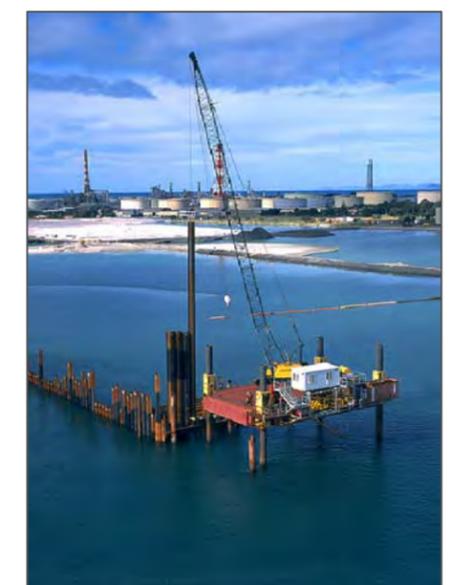


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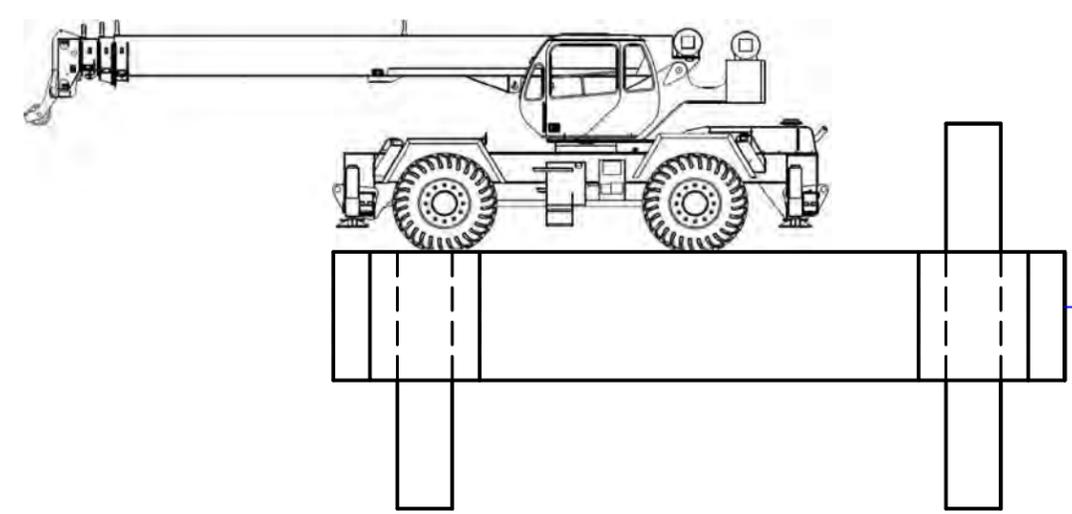
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Platform Legs Loaded on Trailer

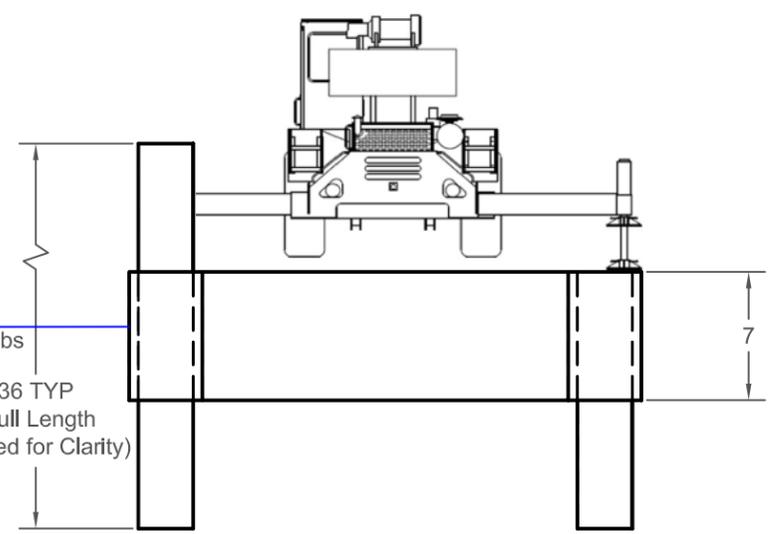


Working Elevated Platform Using Modular Barge Sections



Floating Waterline: 4'
Displacement: 133,333 lbs

36 TYP
(Full Length
Omitted for Clarity)



30 Ton Capacity Rough Terrain Crane

Hydrostatic Properties

Draft (ft)	Displacement Weight (lbs)
1.50	5,500
1.75	18,283
2.00	31,067
2.25	43,850
2.00	82,200
2.25	94,983
3.50	107,767
3.75	120,550
4.00	133,333
4.25	146,117

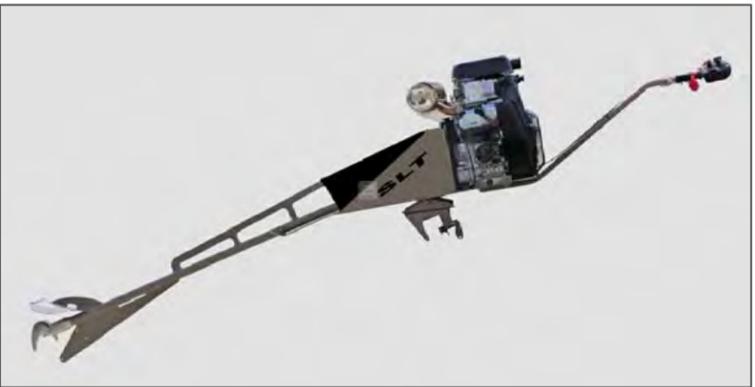
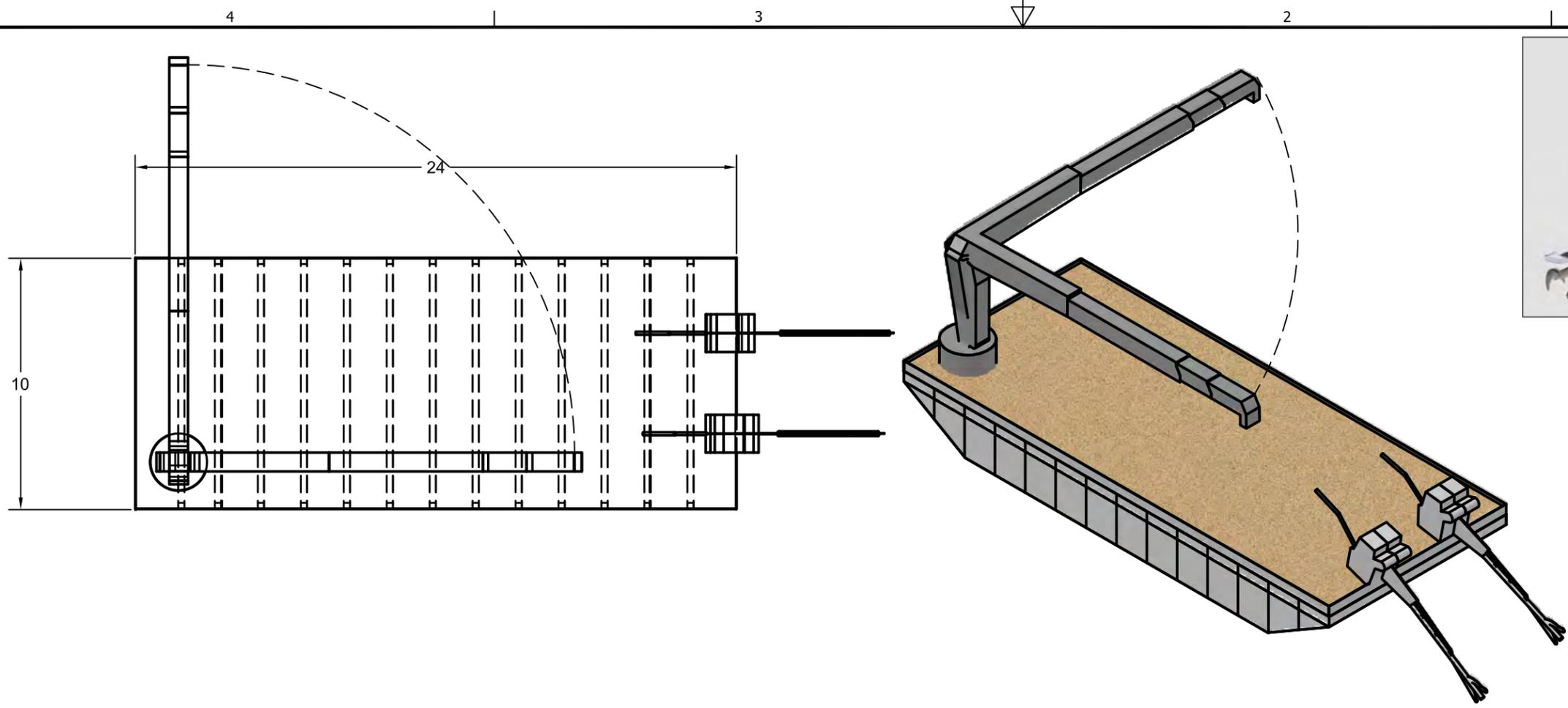
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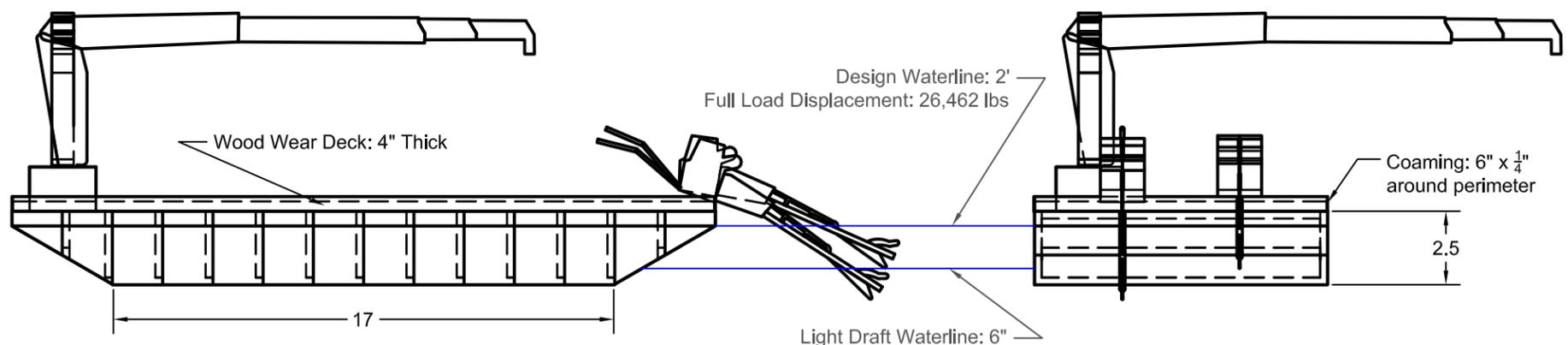
ELEVATED PLATFORM FOR REMOVAL OF HUI FENG NO. 1 WRECK AT PALMYRA ATOLL				
APPROVED BY LETTER DATED:				
OWNER:	A. B. S.:	U. S. C. G.:		
DWG NO. F12PS01171-PA-01	SHEET 1 OF 1	SIZE B	SCALE: 3/32":1'	REV -



35 HP Long Tail Motor



HIAB 045-2 Light Crane



Hydrostatic Properties

Draft (ft)	Displacement Weight (lbs)	Cargo Weight (lbs)
0.500	5,755	0
0.750	8,866	2,466
1.000	12,118	5,718
1.250	15,509	9,109
1.500	19,035	12,635
1.750	22,685	16,285
2.000	26,462	20,062

Equipment in Work Mode

Type	Weight (lbs)
HIAB 045-2 Crane	1,671
Crane HPU	1,310
Cutting Spread	4,000
Dive Spread	4,000
(2) Longtail Motors	600

ALL UNITS IN FEET
(UNLESS NOTED)



GLOBAL DIVING & SALVAGE, INC
 3840 WEST MARGINAL WAY S.W. SEATTLE, WA 98106
 206 623 0621 FAX: 206 932 9036

DRAWN AL	DATE 08FEB13	SHALLOW DRAFT TRANSPORT VESSEL FOR DEBRIS REMOVAL AT PALMYRA AND KINGMAN ATOLL			
CHECKED	DATE				
APPROVED	DATE				
APPROVED BY LETTER DATED:		OWNER:	A.B.S.:	U.S.C.G.:	
DWG NO. F12PS01171-PA-02	SHEET 1 OF 1	SIZE B	SCALE: 3/16":1'	REV -	

Section 4: Palmyra Atoll – RUST ISLAND Removal and Debris Recovery

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1 Palmyra Atoll - “RUST ISLAND” – Operations Overview

RUST ISLAND has been a fixture at Palmyra Atoll for quite some time. The pontoon barge that originally sank there has degraded with a buildup of sediment that now supports flora and fauna. The area is challenging to work in given the depth of water that is both shallow, but not dry at low tide. Various underwater obstructions and coral heads do not allow a smooth approach from navigable water. Global Diving is proposing the build of specialty Shallow Draft Transport Vessels (SDTV’S) that will be able to access RUST ISLAND. Together with the shallow draft propulsion on the SDTVs, soft lines on pulleys will allow us to get to the wreck and back to the crane barge without the need to set anchors or having wires run through coral.

Rather than ocean dumping of the recovered material, all recyclable material will be recycled through a proper facility. All non-recyclable material will be disposed of through Waste Management.

With the environmentally sensitive equipment we have chosen to work in the area, previously outlined in earlier sections, we feel as though we can remove RUST ISLAND with no lasting impact to the unique and magnificent place of Palmyra.

2 Scope of Work

Provide all labor, equipment, materials and supplies necessary to plan and implement the removal and disposal of the hull and debris associated with the abandoned pontoon RUST ISLAND located at the Palmyra Atoll National Wildlife Refuge.

3 Findings from Initial Assessment

RUST ISLAND is a craft that has been abandoned in place for some time now and lies in an increasingly degraded condition. The craft was originally a pontoon style barge of a style that was heavily used by the US Navy in various configurations as easily portable floating platforms to be employed as barges, bridges, and docks. Specifications of these P-Series pontoons and their applications are detailed below in Section 6.

Each pontoon section was originally constructed to weigh 2050 pounds. RUST ISLAND has suffered significant degradation through corrosion of the structure resulting in many missing plates and large holes. Sediment has accumulated on and in the barge to a point it sustains a varied array of vegetation including palm trees. Many crabs and some birds use RUST ISLAND as refuge.

The area where the RUST ISLAND is located is roughly 4 -8 FSW deep, with coral heads that rise near the surface of the water at low tide. It lies roughly 200 yards from the channel.



4 Environmental Compliance Support (ESA and NEPA)

The activities outlined in the solicitation *Shipwrecks Removal at Palmyra Atoll and Kingman Reef National Wildlife Refuge* constitute a federal action by the US Fish and Wildlife Service (USFWS) and trigger alternatives analysis and public participation requirements as defined by the National Environmental Policy Act (NEPA). The solicitation tasks the contractor with developing compliance documents for NEPA and the Endangered Species Act (ESA) of 1973. Windward will conduct analyses and prepare documents to meet the requirements of these authorities.

4.1 National Environmental Policy Act

Although Windward will investigate the availability of a Categorical Exclusion (CE) for these actions, it is likely that an Environmental Assessment (EA) will be required due to the nature of the project. Approximately six weeks will be necessary to develop an EA, and the US Department of the Interior (DOI) review/approval period will be at least three months. The EA will assess all potential effects of multiple alternative remediation options on the environment at Palmyra Atoll and Kingman Reef, including leaving the wrecks “as is” (i.e., no action).

If it is determined in the EA that the preferred remediation alternative is a “major federal action significantly affecting the quality of the human environment,” an Environmental Impact Statement (EIS) will be required. However, an EIS is not expected to be necessary, based on previously documented shipwreck removal actions by the US Coast Guard (USCG) in similar habitats (Government of American Samoa et al. 1999).

4.2 Environmental Assessment

The EA will follow the general format of the Government of American Samoa’s *Emergency Restoration Plan and Environmental Assessment*, hereafter referred to as the Pago Pago EA (Government of American Samoa et al. 1999), and will incorporate location-specific information on the legal framework of the shipwreck’s removal; the designated purpose for the proposed removal; input from all concerned agencies and parties consulted; and an in-depth assessment of the physical, biological, and chemical issues relevant to biota at Palmyra Atoll and Kingman Reef. Within that established context, alternatives will be outlined and assessed for possible adverse effects on biota, predicted ecological benefits relative to a no-action scenario, and predicted project costs. The EA may also employ ecosystem services accounting in order to semi-quantitatively compare environmental impacts, as was done in the Pago Pago EA.

Specific issues to be addressed as part of the EA’s description of baseline conditions (i.e., conditions associated with a no-action alternative to removal) will include the effects of iron supplementation on iron-limited marine systems; the development of “black reefs,” as Kingman Reef is described by Kelly et al. (2012); and effects commonly correlated with shipwrecks, such as phase shifts and corallimorph proliferation in coral communities (Kelly et al. 2012; Norström et al. 2009; Work et al. 2008; Schroeder et al. 2008; Government of American Samoa et al. 1999). Potential effects on biota to be discussed in



the EA in connection with the removal action will include physical damages caused by removal (i.e., crushing of corals), short-term degradation of water quality (i.e., increased turbidity during work and removal), disturbance of sensitive wildlife, and possible releases of ship-borne chemicals (e.g., petroleum products).

In addition to textual discussion, figures (e.g., maps) and tables will be included to the extent practical to summarize information, and to provide visual representations of the site, habitat, and descriptions of the removal options.

4.3 Environmental Impact Statement

In the event than an EIS must be conducted, the process of evaluating the impacts of the removal action will be repeated in a more detailed manner, allowing for public input as to what valued resources should be assessed. The structure of the EIS will be similar to that of the EA, but the content will focus on public concerns (in addition to agency concerns) and quantified effects. Preparation time could likely increase exponentially, especially if a great deal of coordination with other agencies or non-governmental organizations (NGOs) is required to complete the process. Preparation costs would also increase accordingly.

4.4 ESA Section 7 Approach

Pursuant to Section 7 of the ESA (16 USC 1531 et seq.), a Section 7 consultation must be conducted to determine what effect, if any, the shipwreck removal action will have on ESA-protected species. Such species at the sites currently include Hawaiian monk seal, green turtle, and hawksbill sea turtle; none of these species have critical habitat within either action area. The Palmyra Atoll stock of false killer whale has been determined to be genetically distinct from the Hawaiian Islands stocks, and as a result may require special focus. Initially, an informal consultation with USFWS will be attempted in order to show that the shipwreck removal action will not have a significant adverse effect on the above-listed species. Based on the infrequent use of Palmyra Atoll and Kingman Reef by protected species and the lack of any critical habitat that could be affected by the removal action, it is not expected that a formal Biological Assessment (BA) or Biological Opinion (BO) will be required by USFWS.

If, during the informal consultation with USFWS, it is determined that protected species may be impacted by the removal action, a formal BA will be prepared to assess all possible impacts, at the individual level, on endangered and threatened species at Palmyra Atoll and Kingman Reef. The BA will result in a Determination of Effect for each protected species: either likely to adversely affect (LAA) or not likely to adversely affect (NLAA). If it is determined that even a single individual within the protected populations may be subject to incidental take, then an LAA determination will be warranted. At that point, a BO will need to be prepared by USFWS to assess the impact of the removal action on the entire protected population.

The BA, if deemed necessary, will have a structure similar to that of the EA (see above), although it will exclude any discussion of the costs and benefits of shipwreck removal options and alternatives. The



document will contain a discussion of the legal context and potential effects of all removal action options and alternatives for protected species only, including a discussion of the ecological baseline and the imminent need for the removal action.

4.5 References

BA – Biological Assessment

EA – Environmental Assessment

EIS – Environmental Impact Statement

ESA – Endangered Species Act

NEPA – National Environmental Policy Act

NWR – National Wildlife Refuge

Government of American Samoa, DOI, NOAA. 1999. Emergency restoration plan and environmental assessment. Pago Pago Harbor, American Samoa. The Government of American Samoa, The US Department of the Interior, and The National Oceanic and Atmospheric Administration.

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Norström AV, Nyström M, Lokrantz J, Folke C. 2009. Alternative states on coral reefs: beyond coral-macroalgal phase shifts. *Mar Ecol Prog Ser* 376:295-306.

Schroeder RE, Green AL, DeMartini EE, Kenyon JC. 2008. Long-term effects of a ship-grounding on coral reef fish assemblages at Rose Atoll, American Samoa. *Bull Mar Sci* 82(3):345-364.

Work TM, Aeby GS, Maragos JE. 2008. Phase shift from a coral to a corallimorph-dominated reef associated with a shipwreck on Palmyra Atoll. *Plos ONE* 3(8):e2989.

5 Mobilization

Please reference *Section 2: Kingman Reef – Wreck Removal and Debris Recovery*, *Section 6 – Mobilization* for details on the overall mobilization for the project.

The equipment and personnel will be mobilized to the RUST ISLAND after completion of the HUI FENG #1 recovery efforts. The transition from the HUI FENG #1 configuration to that required for the RUST ISLAND is expected to take less than one day.

6 RUST ISLAND Removal operations

6.1 Overview

The location and condition of RUST ISLAND poses significant challenges to removal operations; water depth and coral heads in the area restrict the capacity of work vessels while the deterioration of the



barge structure prevents refloating the barge. Removal of the RUST ISLAND barge will be performed by removing the modular sections individually using a light crane working from a purpose built vessel for the task, the Shallow Draft Transport Vessel (SDTV) which is shown in Drawing PA-02.

Although the SDTV will be a functional dive platform, much of the deconstruction of RUST ISLAND will occur above the water surface. Modular pontoon sections, such as RUST ISLAND, are designed to be assembled and disassembled from the surface and personnel will first attempt to use the designed connection system to separate each section. If necessary, sections of the barge will be separated using exothermic cutting (commonly referred to by the proprietary name Broco, as shown in Figure 1).

Exothermic cutting creates a fast, clean cut through marine growth, rust, and mill scale without generating slag. Alternatively, personnel may employ hydraulic or pneumatic cutting saws.



Figure 1: Diver Cutting with Exothermic Process

Once separated, personnel will rig each of the barge sections for lifting by the hydraulic light crane on board work platform which will move debris from the water to a second SDTV. SDTV's are lightweight aluminum with a flat deck, wide body, and a long-tail surface motor. The SDTV is designed to be highly maneuverable while carrying 10 short tons of material and drafting only 2 feet of sea water. When loaded with the work equipment to remove RUST ISLAND, the SDTV is designed to draft only 18 inches.

Because water depths less than two feet are anticipated and the surface long-tail motor may not have sufficient water depth, a floating line will be used between the 185-3 Crane Barge and the Working SDTV (approximately 500 feet). The SDTVs acting as a material ferry can be pulled by a winch onboard the 185-3 Crane Barge when water depth is not sufficient for self-propulsion. All debris from RUST ISLAND will be transported in this manner to the 185-3 Crane Barge for offloading onto the 185-1 Materials Barge.

During the pre-bid site visit, personnel performed an in-water survey of the approach from the ship channel to RUST ISLAND. The results of this survey confirms that a suitable channel exists within which our SDTVs can transit. Prior to actual transit through the coral reef, a thorough second survey will be performed. Divers will use buoys and GPS coordinates to mark coral heads and identify a channel for the SDTVs. Buoys will be foam "crab floats" tied with polypropylene rope to a clump of weight bags (the scope on the rope from the weight to the buoy will be short enough to prevent the buoy from contacting the coral head). The channel will be prepared specifically for the SDTVs which have a small waterline footprint at only 24 feet long and 10 feet wide.





Figure 2: JW Fisher PX8 Submersible Metal Detector

Once removal of the wreck is complete, divers will conduct an underwater search of the wreck site using a submersible metal detector as shown in Figure 2. This search will be digitally recorded and will be provided to stakeholders.

This methodology will have the least impact on the ecosystem; it is intended that no coral will be displaced or contacted.

6.2 Assumptions

The RUST ISLAND barge is assumed to consist of US Navy P1 and P2 Pontoon Sections. From the site survey, the barge rests in water that is approximately 3 feet above mean low low water (MLLW) with numerous coral heads rising above the sea floor. The standard configuration for a barge with this number of Pontoon Sections is the “4 by 12 Pontoon Barge” as noted in the US Army Field Manual (FM5-480, Chapter 10).

The barge dimensions are therefore assumed to be 64.3 feet long by 28 feet wide. The mid-section of the barge consists of (10) rows of (4) P1 pontoons with a row of (4) P2 pontoons on each end. Figure 3 provides the dimensions of P1 and P2 pontoons.

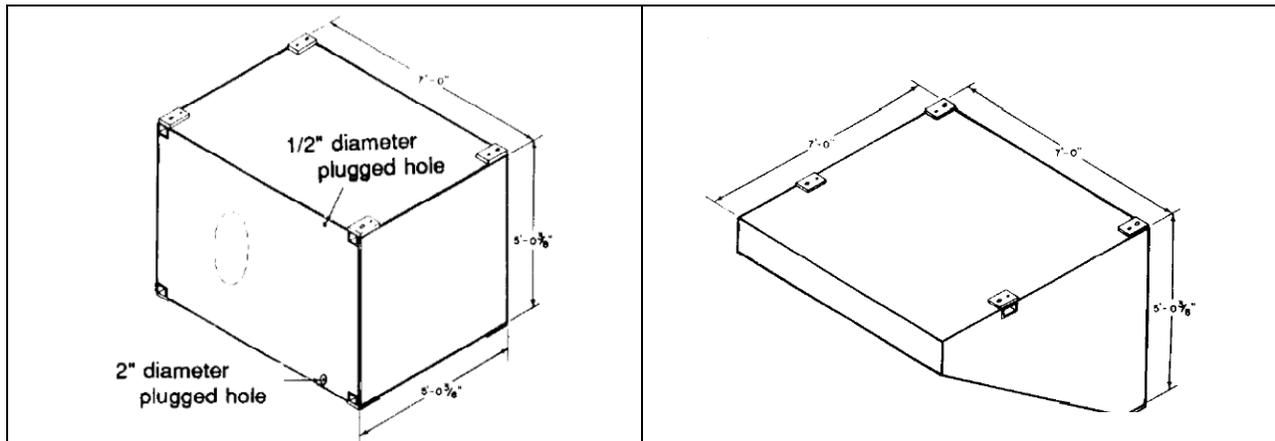


Figure 3: US Navy P1 (right) and P2 (left) Pontoon Sections

The weights and dimensions and quantity of the pontoon sections are provided in Table 1.

Type	Quantity	Length (ft)	Breadth (ft)	Height (ft)	Weight (lbf)
P1	40	5.031	7.000	5.031	2050
P2	8	7.000	7.000	5.031	2700
Total	48	64.313	28.000	5.031	104000

Table 1: US Navy Pontoon Specifications



6.3 Specific Equipment to be Used

Equipment Type (Size)	Quantity	Description/Purpose
Shallow Draft Transport Vessel (SDTV) (24' L x 10' W x 3' D)	1	SDTVs are lightweight aluminum with a flat deck, wide body, and a long-tail surface motor. The deck of the SDTV contains a raised edge coaming around the perimeter that provides 300 gallons of containment volume in case of any residual within the transported material. The SDTV is designed to be highly maneuverable while carrying 10 short tons of material and drafting only 2 feet of sea water. This vessel will be used to transport debris from RUST ISLAND to the channel where it will be unloaded by the 185-3 Crane Barge. See Drawing No. PA-02.
Work Platform: SDTV (24' L x 10' W x 3' D)	1	A 5 ton capacity hydraulic crane will be attached to the SDTV. This vessel will be outfitted with shallow water diving spread, cutting spread, environmental protection equipment, and pollution response gear. This vessel will serve as a dive platform from which divers will separate sections of RUST ISLAND and load them onto the other SDTV using the onboard crane.

Table 2: Equipment to be used at RUST ISLAND Site

Equipment Type (Size)	Quantity	Description/Purpose
Barge 185-1 (185' x 50' x 12')	1	Flat deck barge. To be used to store and transport recovered debris until final disposal.
Barge 185-3 (185' x 50' x 12')	1	EPA Tier III environmentally compliant Crane Barge. To be used to unload SDTVs. Environmental and Pollution Response equipment, including a dedicated pollution response skiff, will be staged on the Crane Barge. On-site personnel will live aboard the Crane Barge when not working. The barge is equipped with a full galley and comfortable living quarters. Water making capabilities and no-discharge equipment is installed.
Sarah C	1	EPA Tier III environmentally compliant Oceangoing tugboat used to maneuver and anchor 185-1 and 185-3 Barges.

Table 3: Equipment to be Anchored in Channel near RUST ISLAND Site

6.4 Sequence of Events:

1. Upon arrival at the site, the Sarah C will anchor the 185-1 and 185-3 barges in the channel, the position of the vessels is shown in Drawing No. PA-00.
2. Divers will survey the path to RUST ISLAND from an SDTV. This survey will mark (by floating poly form buoy and GPS coordinates) any obstruction or coral head that is within 2 feet of the surface at low tide.



3. At the 185-3 Crane Barge, a light crane and hydraulic power unit will be attached to a corner of the work SDTV as shown in Drawing No. PA-02. The work SDTV will move through the marked channel to the work site on a high tide where the SDTV will be temporarily moored to RUST ISLAND. A 1" polypropylene line, attached to the 185-3 Barge will be carried to RUST ISLAND by this SDTV.
4. The second SDTV will be rigged in a similar fashion as a floating line cable ferry using the line connecting RUST ISLAND and the 185-3 Barge. Power for the floating line cable system will be provided by a capstan on the 185-3 Barge.
5. The environmental safeguards will be put in place according to the Pollution Mitigation / Response Plan.
6. Divers will commence the disassembly of RUST ISLAND by detaching the existing pontoon connectors. If deterioration of the barge prevents use of the connectors, the individual pontoons will be cut free by the divers using either saws or exothermic cutting. Sectionalizing above the water line will be done with normal cutting equipment. Approximate sections of RUST ISLAND to be removed are shown in Drawing No. RI-01
7. Sections of the wreck will be loaded by crane onto the SDTV. Once the SDTV is loaded, the 185-3 Barge will use a capstan to bring the it alongside. The crane on the 185-3 will unload the SDTV onto to 185-1 deck barge and it will be returned to RUST ISLAND to repeat the loading process
8. When the wreck is completely removed, divers will conduct a digitally recorded final search of the area utilizing an Underwater Metal Detector. This search will extend 80 feet outward from the furthest extents of the wreck. All metals and debris over 6" in size located will be recovered thereby ensuring that the site is completely free of all debris.
9. The working SDTV will transit back to the 185-3 Crane Barge and personnel will remove all markers from the path to RUST ISLAND.
10. All equipment will begin the demobilization process.

7 Disposition of Wreckage

All metal scrap will be deck loaded onto the ABS barge 185-1. All non-metallic material will be loaded into 40 cubic yard dumpsters with liquid containment liners. These dumpsters will be staged on the forward portion of the deck of the 185-1 barge.

Upon completion of the recovery operation the metal scrap will be discharged in Long Beach, California to SA Recycling located at 482 Pier T Avenue # 118, Long Beach, CA. Non-metallic waste will be disposed of by Waste Management who will take delivery of the 40 cubic yard dumpsters at the Curtin Maritime dock in Long Beach, CA.

8 Schedule

Please see attached GANTT Chart for the project schedule.



9 Environmental Protection

Please reference *Section 2: Kingman Reef – Wreck Removal and Debris Recovery, Section 9 – Environmental Protection* for our detailed Environmental Protection Plan.

10 Work and Site Contingencies

10.1 Crew Orientation

Upon award Global Diving will solicit The Nature Conservancy (TNC) and FSW to plan an orientation class for all crew members assigned to the project. This orientation will be designed to make all crew members aware of the history, rules and protocols specific to Palmyra Atoll and Kingman Reef, thereby ensuring the crew is fully aware of the sensitivities and the importance of preserving the environment within the refuge.

10.2 Invasive Species

Hull Cleaning - Prior to departing Long Beach, CA the hulls of the tug and barges will be thoroughly cleaned of marine growth. The hulls will be inspected by divers in Honolulu and cleaned again if necessary to meet the inspection/quarantine parameters in the bid documents.

Rats – A rat free certification through the approved certifying company will be obtained in Honolulu prior to departing for Palmyra Atoll.

Quarantine – Global will comply with the 10 day notification and will schedule and complete the required inspections prior to departing for Palmyra Atoll.

Corallimorph – Global’s work plan calls for the wreck at Kingman Reef being removed prior to the work at Palmyra which eliminates the concern about transfer of Corallimorph to Kingman Reef via rigging, dive equipment, etc. However, if conditions (i.e. inclement weather at Kingman) dictate a change in plan and the initial operations shift to Palmyra then the rigging and gear will be cleaned with a high pressure power wash prior to departure for Kingman Reef.

10.3 Coral Preservation / Restoration

Work Plan - Global has made every effort to develop a comprehensive work plan that eliminates the need to relocate or impact the existing living coral structures.

The work platforms that will be used to remove Rust Island consist of light draft vessels that are intended for maximum clearance and maneuverability through the coral heads. This plan eliminates the need for heavy anchors and anchor cables arrays that would potentially inflict more damage to a broader area.



During the Phase 1 site visit the Global Diving and Curtin Maritime personnel attending the site visit conducted extensive dive surveys of the reef between the channel and Rust Island. Based on their findings Global has developed the Shallow Draft Transport Vessel (SDTV) which will allow transport of the recovered debris across the reef without the need to relocate coral heads and, due to the shallow draft and suitable size, with sufficient vertical clearance to eliminate contacting corals during the transit.

Pre Operation Survey – In order to document the condition of the surrounding reef structure Global will conduct an underwater video survey of the area prior to and after completion of the recovery operation at each location.

Reef Specialist - Global has engaged Windward Environmental LLC to provide a scientist with extensive experience in coral reef preservation and restoration. The scientist selected is Ms. Kathleen Hurley who will serve as a member of our crew on location. Ms. Hurley will monitor the ongoing work and will coordinate any required remediation or stabilization efforts with US Fish & Wildlife and The Nature Conservancy scientists on location.

Coral Restoration – If damage does occur to coral during the operation the situation will be addressed immediately and appropriately. The exact approach to the restoration will depend upon the nature of the damage. Global will be prepared with several cases of Z Spar A-788 2 part epoxy and other tools and restoration components.

10.4 Oil and Hazmat Pollution

In accordance with our operational plan Global Diving will mobilize a comprehensive array of oil spill prevention and response equipment to the project. Portable equipment (dive compressors, on the decks will be placed in secondary containment to prevent any incidental runoff and to provide protection during refueling. As it is being removed, all debris that is not clean metal will be placed in 40' drop boxes with covers to keep water from entering the boxes. All clean metal will be placed within a filter berm to keep sediments and small organisms from being washed overboard. All personnel working with material will have 40 hr certification in HAZMAT.

10.5 Gray and Black Water

The tug and accommodation barge are completely self contained and store all gray and black water in internal tanks. A portable tank will be placed on board the tug. When necessary the storage tank on the accommodation barge will be pumped into the portable tank. If storage capacity is reached then the tug will transit to a point beyond the 12 mile refuge boundary where the tank will be discharged into the sea in accordance with the requirements of the International Convention for the Prevention of Pollution from Ships (MARPOL).



10.6 Air Pollution

The engines and generators in use on the tug and barges that are dedicated to this operation are EPA Tier 3 compliant and meet the stringent air quality standards of the state of California. This standard of air quality is a capability we believe to not be achievable by most marine operators.

10.7 Weather

Moorage - The work plan provides for the tug and barge flotilla to transit from Honolulu directly to Palmyra where the crew will establish a temporary mooring system in the lagoon prior to departing for Kingman Reef. This temporary moorage will be of sufficient size to hold all the floating assets during any conceivable weather conditions that may impact the lagoon. In the event heavy weather is forecast, and operations are suspended, then the tug and barges will transit to the lagoon and the mooring will be utilized to secure the tug and barges.

10.8 Dive Safety

Training – All divers engaged in this operation are highly trained, credentialed and professional commercial divers. In addition, all of the crew engaged in the operation - divers and topside personnel, are trained and current with 40 hr HAZWOPER, First Aid and CPR.

Compliance - All dive operations will be conducted in strict compliance with OSHA and USCG regulations and the guidelines established by the Association of Diving Contractors International (ADCI).

Safety – Though dive operations are not intended to require surface decompression Global will have a recompression chamber with copious breathing O2 on board the derrick barge. All dive crew members are qualified chamber operators. At least one member of the crew will be a Diver Medical Technician (DMT). This crew member will be equipped with a well stocked DMT kit including IV medicine capabilities. Direct satellite communication can be established between the DMT and a hyperbaric physician if possible.

10.9 Portable Equipment

The equipment selected for use on the project is rugged and proven reliable through rigorous experience. Critical systems are provided with built in redundancy or the equipment is duplicated to provide backup. Spares and spare parts kits for all equipment are standard on all projects, and will be tautologically represented on this project.

10.10 MEDEVAC / Resupply by Air

Global does not anticipate the need to resupply during the project. However, should a medical emergency arise requiring MEDEVAC, or a critical equipment issue develop, we will coordinate with the US F&WS contractor Bradley Aviation in Honolulu to provide air transport. Global Diving & Salvage is insured to provide medical evacuations.



10.11 Resupply / Emergency Transportation by Sea

Global does not anticipate the need to resupply during the project. However, should the need arise we have identified firms in Honolulu that can be contracted to transport equipment and/or personnel to or from the project. These firms include P&R Water Taxi LLC and Healy Tibbits.

10.12 Communications

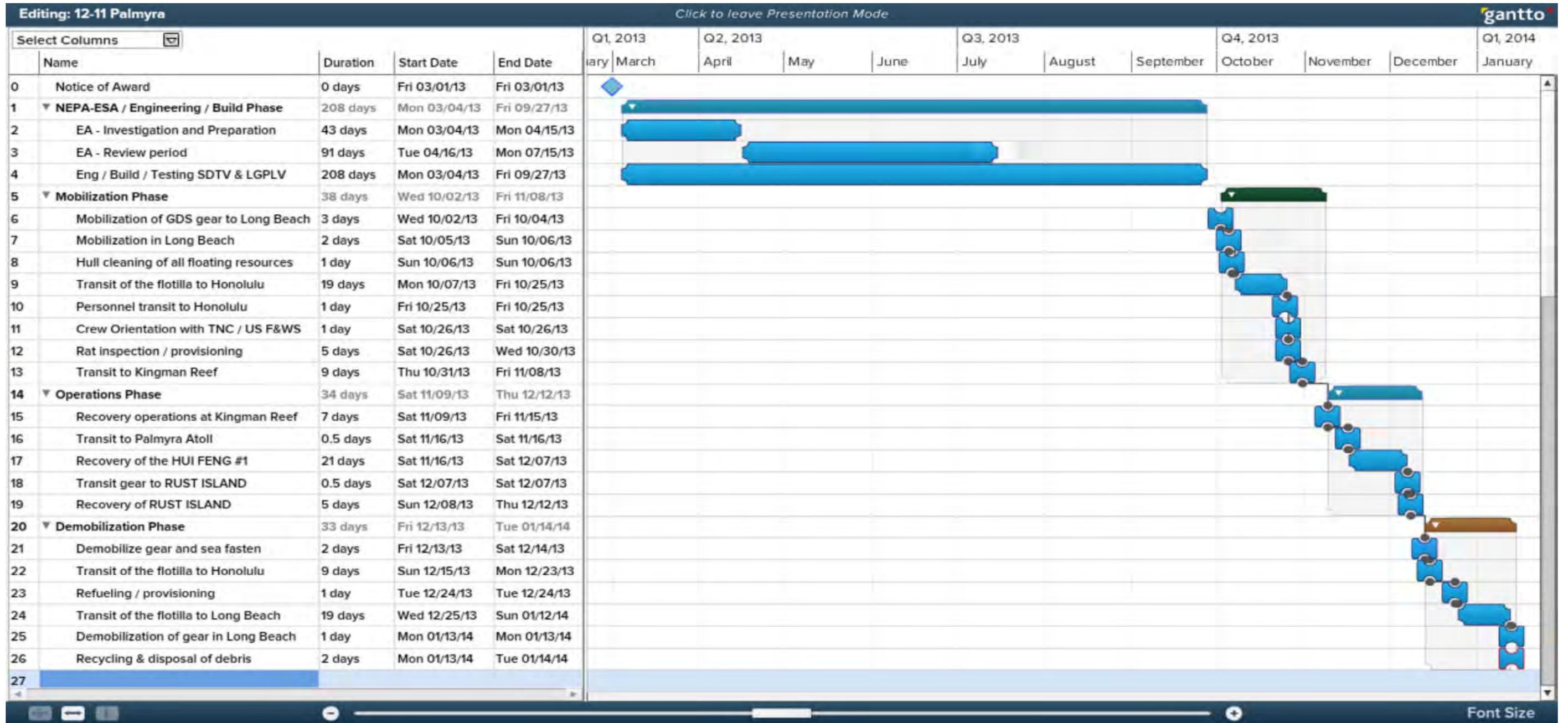
The tug and Barge will be equipped with satellite communications with data and voice capabilities.

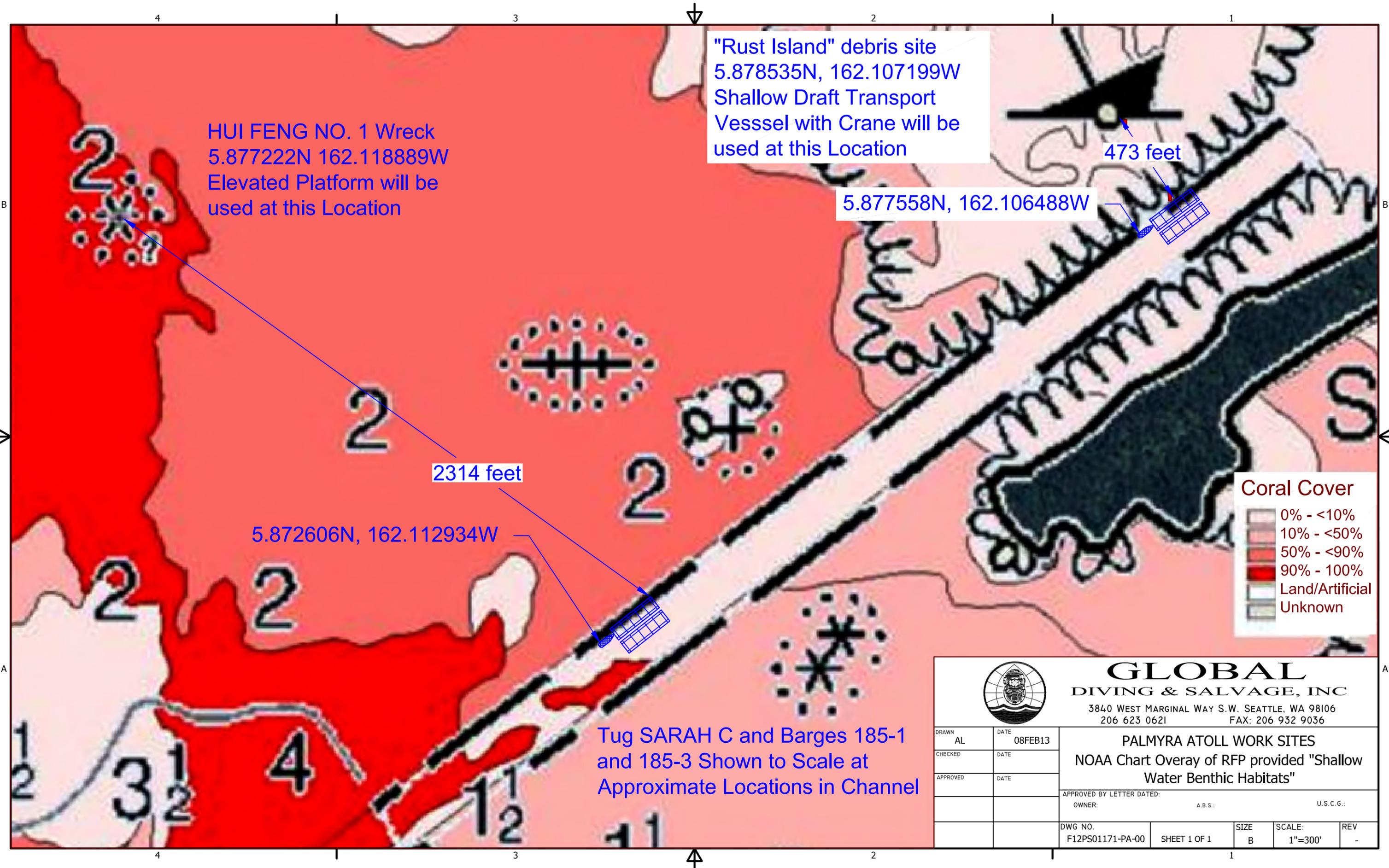
11 Demobilization

Completion of the RUST ISLAND removal operation will conclude the work effort for the entire project. All equipment will be stowed and sea fastened. The diving and salvage personnel will be flown off the island by the pre-approved charter jet company. When personnel have departed Palmyra Atoll the SARAH C will depart with the tandem barge tow and return to Honolulu where she will refuel and provision for the voyage to Long Beach, CA.

12 Drawings







"Rust Island" debris site
 5.878535N, 162.107199W
 Shallow Draft Transport
 Vessel with Crane will be
 used at this Location

HUI FENG NO. 1 Wreck
 5.877222N 162.118889W
 Elevated Platform will be
 used at this Location

5.877558N, 162.106488W

473 feet

2314 feet

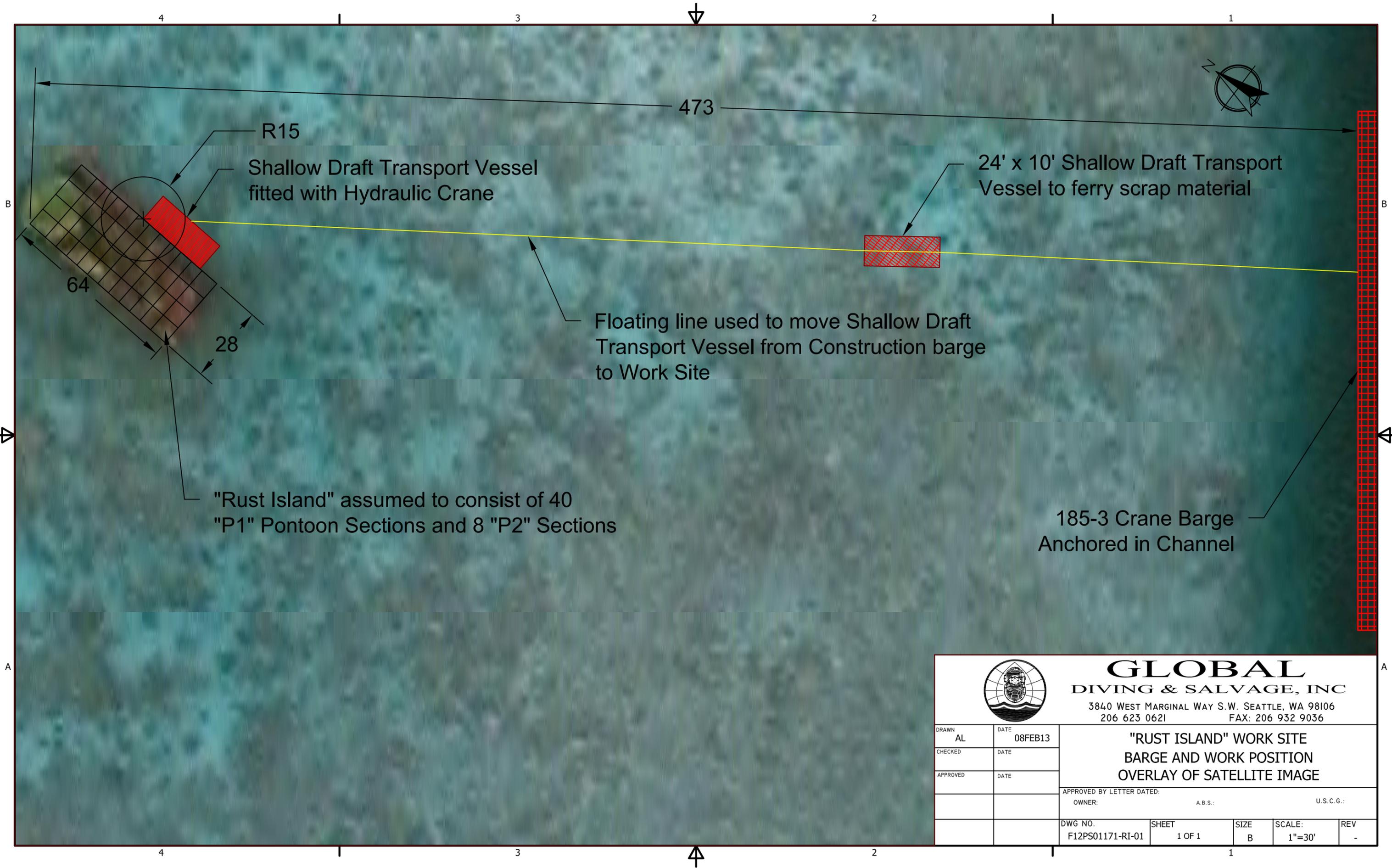
5.872606N, 162.112934W

Tug SARAH C and Barges 185-1
 and 185-3 Shown to Scale at
 Approximate Locations in Channel

Coral Cover

- 0% - <10%
- 10% - <50%
- 50% - <90%
- 90% - 100%
- Land/Artificial
- Unknown

		GLOBAL DIVING & SALVAGE, INC. 3840 WEST MARGINAL WAY S.W. SEATTLE, WA 98106 206 623 0621 FAX: 206 932 9036		
		PALMYRA ATOLL WORK SITES NOAA Chart Overlay of RFP provided "Shallow Water Benthic Habitats"		
DRAWN: AL CHECKED: APPROVED:	DATE: 08FEB13 DATE: DATE:	APPROVED BY LETTER DATED: OWNER: A.B.S.: U.S.C.G.:		
DWG NO.: F12PS01171-PA-00 SHEET 1 OF 1		SIZE: B	SCALE: 1"=300'	REV: -



R15
 Shallow Draft Transport Vessel
 fitted with Hydraulic Crane

24' x 10' Shallow Draft Transport
 Vessel to ferry scrap material

Floating line used to move Shallow Draft
 Transport Vessel from Construction barge
 to Work Site

"Rust Island" assumed to consist of 40
 "P1" Pontoon Sections and 8 "P2" Sections

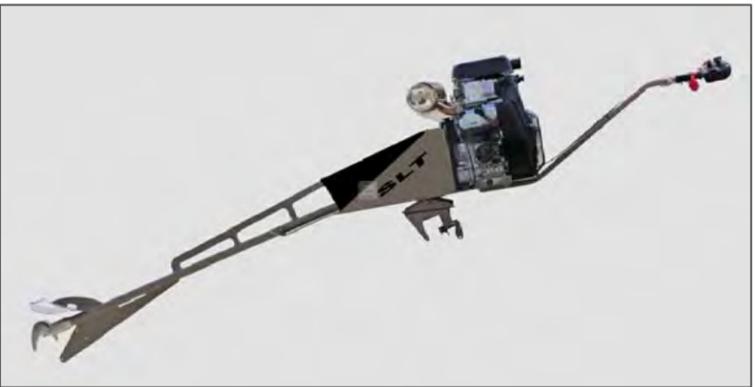
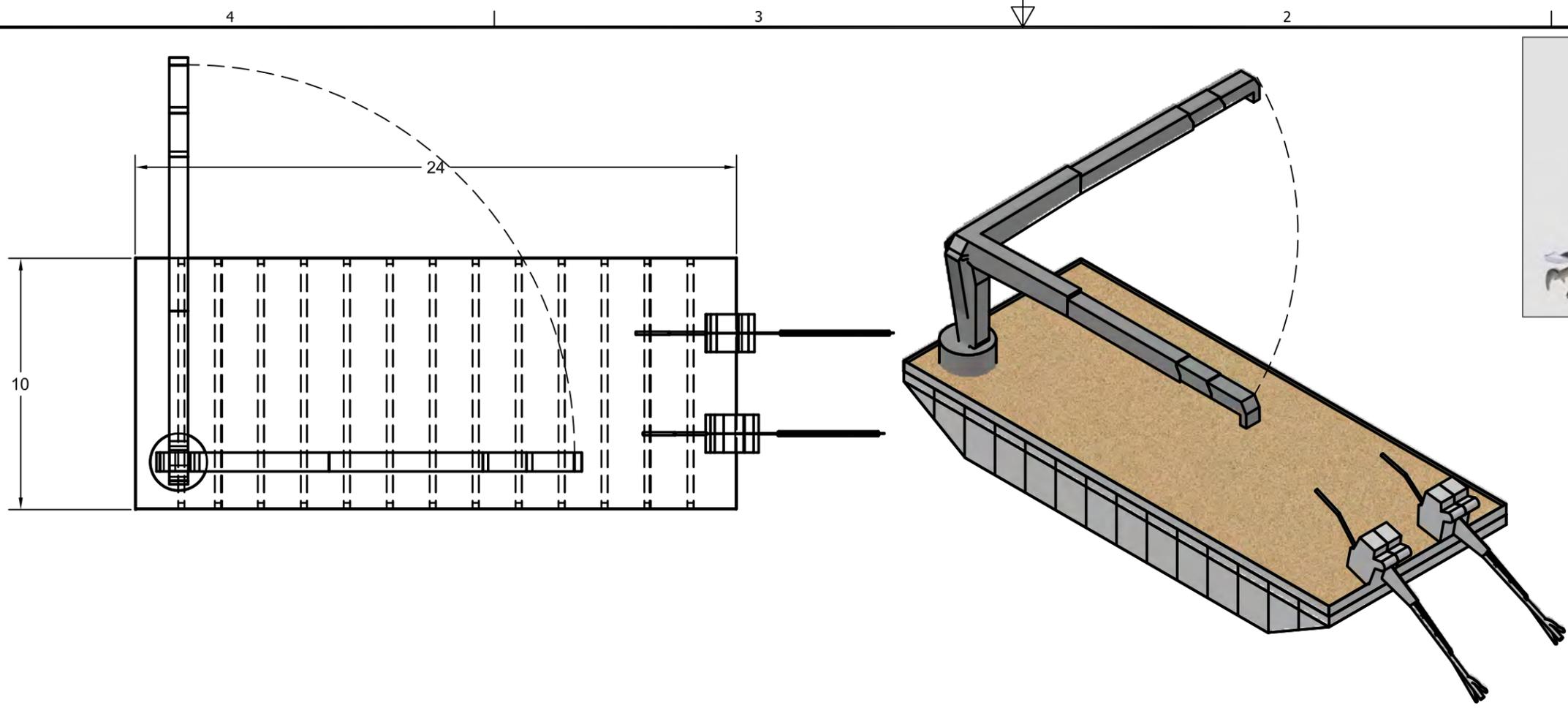
185-3 Crane Barge
 Anchored in Channel



GLOBAL
 DIVING & SALVAGE, INC
 3840 WEST MARGINAL WAY S.W. SEATTLE, WA 98106
 206 623 0621 FAX: 206 932 9036

DRAWN	DATE
AL	08FEB13
CHECKED	DATE
APPROVED	DATE

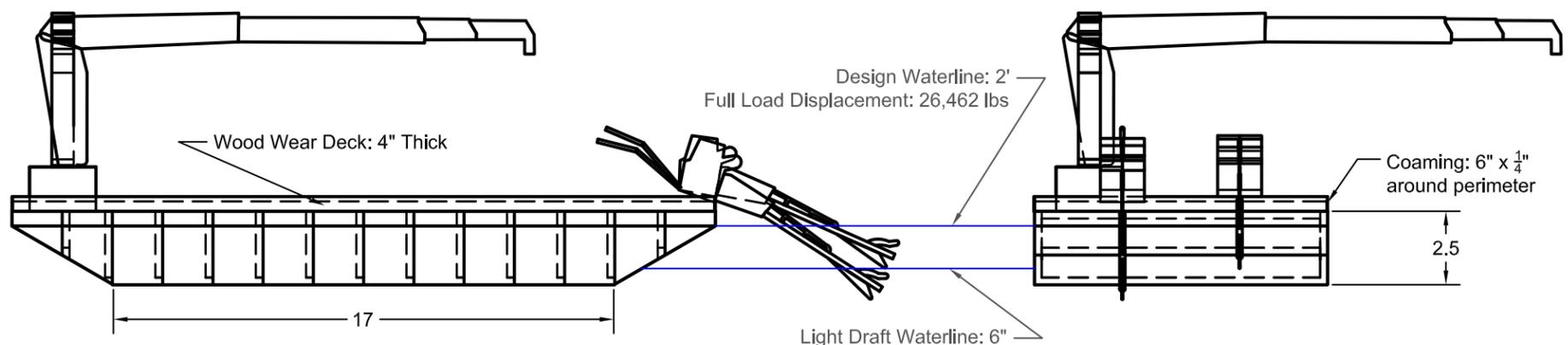
"RUST ISLAND" WORK SITE BARGE AND WORK POSITION OVERLAY OF SATELLITE IMAGE				
APPROVED BY LETTER DATED:				
OWNER:	A.B.S.:	U.S.C.G.:		
DWG NO.	SHEET	SIZE	SCALE:	REV
F12PS01171-RI-01	1 OF 1	B	1"=30'	-



35 HP Long Tail Motor



HIAB 045-2 Light Crane



Hydrostatic Properties

Draft (ft)	Displacement Weight (lbs)	Cargo Weight (lbs)
0.500	5,755	0
0.750	8,866	2,466
1.000	12,118	5,718
1.250	15,509	9,109
1.500	19,035	12,635
1.750	22,685	16,285
2.000	26,462	20,062

Equipment in Work Mode

Type	Weight (lbs)
HIAB 045-2 Crane	1,671
Crane HPU	1,310
Cutting Spread	4,000
Dive Spread	4,000
(2) Longtail Motors	600

**ALL UNITS IN FEET
(UNLESS NOTED)**



GLOBAL DIVING & SALVAGE, INC

3840 WEST MARGINAL WAY S.W. SEATTLE, WA 98106
206 623 0621 FAX: 206 932 9036

DRAWN	DATE
AL	08FEB13
CHECKED	DATE
APPROVED	DATE

SHALLOW DRAFT TRANSPORT VESSEL FOR DEBRIS REMOVAL AT PALMYRA AND KINGMAN ATOLL

APPROVED BY LETTER DATED:
OWNER: A.B.S.: U.S.C.G.:

DWG NO. F12PS01171-PA-02	SHEET 1 OF 1	SIZE B	SCALE: 3/16":1'	REV -
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