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U.S. NAVY SALVAGE REPORT HURRICANES KATRINA AND RITA

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Foreword

No natural disaster in U.S. history created a marine salvage effort the size and scope that existed in the aftermath of Hurricanes KATRINA and RITA. Approximately 500 miles of coastline in four different states Alabama, Mississippi, Louisiana, and Texas incurred the wrath of these two storms which left over 3,000 commercial vessels sunken, stranded, or fully aground as the storms' floodwaters receded. Thankfully, only a few of these casualties were deep-draft vessels, and their owners removed them almost immediately with little damage. The remaining thousands included commercial barges and fishing or shrimping vessels, many with displacements over 100 tons.

Previous U.S. hurricanes like CAMILLE, ANDREW and HUGO caused wide-spread devastation and, in their aftermath, various U.S. Navy Salvage commands played a role in the clean-up and restoration process. KATRINA and RITA created an unprecedented demand for the combined efforts of Ships, Mobile Diving and Salvage Units and SUPSALV from 29 August 2005 through 31 January 2006.

Working in support of FEMA, U.S. Coast Guard, and U.S. Army Corps of Engineers, SUPSALV, and a team of local salvage contractors led by Donjon Marine, Detachments from Mobile Diving and Salvage Unit Two, and the USS GRAPPLE (ARS 53) teamed to provide hydrographic survey of miles of critical waterways and clearance of hundreds of vessels and thousands of tons of debris, ensuring safe navigation to vital port facilities from Port Arthur, Texas to Mobile Bay, Alabama.

This report cannot properly capture the human spirit, enthusiasm, and sacrifice of the individuals that constituted this great Salvage Team. Their undaunted endurance and unflinching commitment to doing whatever could be done toward the restoration of the devastated Gulf Region was an inspiration to all involved.

Richard Hooper
Captain, USN
Director of Ocean Engineering,
Supervisor of Salvage and Diving

Table of Contents

Section 1

Introduction and Background

Section 1
Introduction and Background

1.1. Hurricane Damage Details

On the morning of Monday, 29 August 2005, Hurricane Katrina came ashore on the Louisiana, Mississippi, and Alabama Gulf Coast with winds of approximately 130 mph. Katrina had previously reached Category 5 strength but was downgraded to a Category 3 storm right before landfall based on maximum wind speed. The storm surge that hit the coast was extensive and more typical of a Category 5 hurricane. It damaged a nearly 500-mile wide section of the Gulf Coast from the Texas/Louisiana border to the Florida panhandle. Unprecedented damage occurred in Mississippi and Alabama Gulf Coast communities and Louisiana coastal areas, especially the low-lying areas south of New Orleans. Figure 1-1 is a Geostationary Operational Environmental Satellite (GOES)-12 visible image of Hurricane Katrina one day before the eye made landfall.

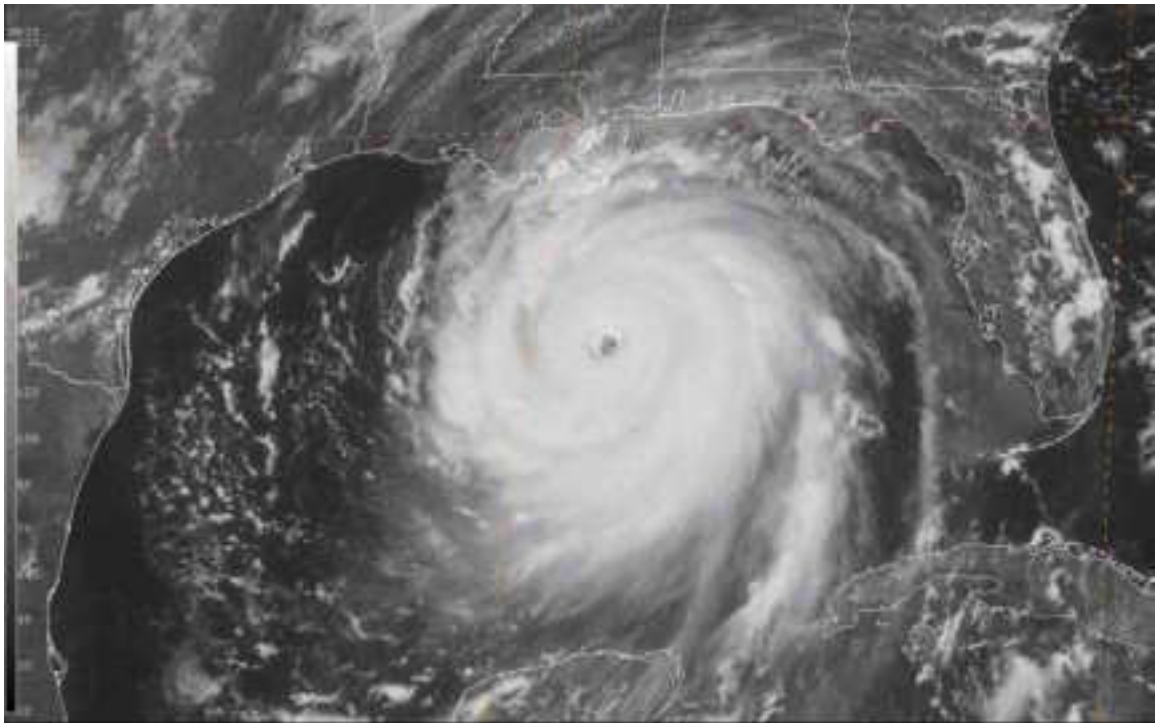


Figure 1-1. August 28, 2005 Satellite Image of Hurricane Katrina.

Katrina's effect on the Gulf Coast was unusual as well. A typical hurricane comes ashore, causes damage and then moves out of the area, allowing emergency crews to enter and begin recovery. Generally, water pushed ashore due to the hurricane's storm surge quickly drains off into local waterways and returns to the ocean. In the case of Katrina, as a result of the rising water levels in the Mississippi River and Lake Ponchartrain, coupled with power outages in

the New Orleans area, which reduced the effectiveness of the pumping system, the levees were breached causing the city to quickly flood. Due to New Orleans' bowl-like, below sea-level topography, water pushed into the city from Katrina's storm surge was unable to drain off. It was estimated that 90% of the city of New Orleans was under water after the levees were breached. Water depths in some flooded areas were as much as 20 feet. Figure 1-2 portrays the city of New Orleans after the levee breaches.

Figure 1-2. New Orleans City after the Levee Breaches. ***Map courtesy of Time Magazine.***

Recovery efforts were complicated by the arrival of a second hurricane about one month later. Hurricane Rita came ashore in the morning hours of Saturday, September 24, 2005 near Port Arthur, Texas and Lake Charles, Louisiana as a Category 3 storm. Though less destructive than Hurricane Katrina, Rita's 120 mph winds and rain caused extensive damage to areas on the Texas-Louisiana border and, it disrupted ongoing recovery efforts from Katrina. Figure 1-3 is a GOES-12 visible image of Hurricane Rita one day before eye landfall.

Figure 1-3. September 23, 2005 Satellite Image of Hurricane Rita Prior to Landfall.

1.2. Purpose of Report

This report documents the efforts of the U.S. Navy Office of the Director of Ocean Engineering, Supervisor of Salvage and Diving (SUPSALV) in response to these hurricane disasters and provides insight and relevant information to responders of future, similar operations. Hundreds of people from dozens of organizations were employed over a period of five months to support these maritime infrastructure recovery efforts.

1.3. SUPSALV Tasking and Scope of Mission

Under the direction of the Federal Emergency Management Agency (FEMA), SUPSALV was tasked to provide coordinated strategic direction of national assets for Hurricanes Katrina and Rita-related hydrographic survey, marine salvage response, and oil pollution abatement in selected off-shore areas, channels, waterways, ports and harbors, with an ultimate goal of restoring the region's critical maritime infrastructure. SUPSALV and its team of contractors accomplished this work on-site for the five-month period from September 2, 2005 through January 31, 2006.

During this time, SUPSALV received the majority of its salvage and wreck removal tasking from the United States Coast Guard (USCG) and United States Army Corps of Engineers (USACE).

1.4. Operational Considerations

The primary goal of the maritime responders was to ensure the ports were open due to the region's importance as one of the country's most vital shipping arteries. Delayed recovery of the affected ports would have resulted in crippling shortages of oil and gas supplies to the mid-section of the country. FEMA also identified economic recovery of the maritime industry as another goal. In support of this effort, the debris removal tasks involved recovering commercial fishing boats, barges, and pleasure boats in a manner that allowed placing them back in service in the least amount of time. To do this, the salvors pulled boats from the water, patched holes, pumped out the water and mud and either placed them in the water in a slip so the owner could take custody or set the vessels on blocks out of the water. This task was much more complicated than just pulling vessels and placing them on storage barges and the details associated with vessel disposition became one of the primary challenges of the operation.

Marine salvage in the Gulf Coast area following Hurricane Katrina posed several operational considerations that affected the approach to this operation. These included:

- The Port of New Orleans is one of the largest commercial ports for commerce in the United States and its inability to support river and ocean vessel traffic would have a significant impact on the economy of the United States.
- Hurricane Katrina inflicted crippling damage to the coastline of three states. The support infrastructure, including roads, utilities, and communications across the region was devastated. Roads were closed, hotels were filled with evacuees, and gasoline was in short supply. Cell phone coverage was sporadic.
- Computer connectivity in a multi-agency operation using Navy Marine Corp Intranet (NMCI) computers was challenging.
- The number of vessels that were stranded or wrecked was unprecedented. Over 2,600 vessels were identified, plotted, and tracked as potential salvage or wreck removal cases.
- For a number of days after the flooding of New Orleans, lawlessness prevailed. When SUPSALV deployed survey teams to certain areas in New Orleans, they were escorted by armed patrols.
- Issues related to diving in contaminated water had to be addressed.
- A second hurricane hit the area only one month after the first, disrupting and delaying recovery efforts.
- SUPSALV had no direct mission statement from FEMA and was subject to the tasking and funding regulations of other federal organizations.

1.5. Overview of Operations

SUPSALV was faced with tasks that required immediate response (hours or days) and tasks that were longer term in nature (weeks or months). The majority of work accomplished by SUPSALV took place in the waterfront parishes of Louisiana where the team handled more than 470 salvage and wreck removal tasks.

1.5.1. Immediate Tasks

SUPSALV worked alongside and with the Department of Defense Joint Task Force (JTF) Katrina during the first few weeks of the operation. The Joint Force Maritime Component Commander (JFMCC) of Joint Task Force Katrina, located in USS IWO JIMA (LHD 7) designated Commanding Officer Mobile Diving and Salvage Unit (MDSU) Two as Commander Task Element (CTE) 20.7.1.3 which consisted of detachments from MDSU 2, Canadian and French Navy Diving Detachments and USS GRAPPLE (ARS 53). CTE 20.7.1.3 responded to numerous requests from Army Corps of Engineers and Coast Guard to clear channels, survey waterways, and support the immediate needs of the communities along the Alabama, Mississippi, and Louisiana coastlines. SUPSALV supported these operations with the issuance of contaminated water diving procedures, provision of leased derricks and barges for wreck removal, and coordination support during the coast-wide hydrographic survey of inlets and navigation channels including the Mississippi River. SUPSALV also provided standby pollution response capability by tasking its Emergency Ship Salvage Material (ESSM) contractor, GPC, to prepare and transport oil spill containment material to the Gulf Coast. Harbor clearance was also conducted in Lake Charles, Louisiana where Hurricane Rita left acres of floating vegetation obstructing access to a liquid natural gas (LNG) terminal.

Below is a summary list of immediate response tasks that SUPSALV accomplished. Details of these tasks are provided in the subsequent chapters.

- Coordinated hydrographic expertise supporting MDSU TWO survey of the Mississippi River
- Assisted MDSU TWO with commercial lift equipment for vessels in Harrison County, Mississippi and Bayou La Batre, Alabama.
- Readied ESSM pollution response equipment near Baton Rouge, Louisiana
- Provided a HAZMAT-qualified contractor dive team to dive and clear the City of New Orleans' pump intakes that were clogged during city dewatering efforts
- Reopened the Lake Charles, Louisiana Liquid Natural Gas (LNG) Trunkline Terminal by removing tons of Hurricane Rita debris from the terminal turning basin.

1.5.2. Long Term Task

Working outside the Joint Task Force, SUPSALV laid the groundwork for long-term support of the federal activities responsible for the Gulf Coast recovery. SUPSALV offered marine salvage and wreck removal services to local, state and federal officials in Alabama, Mississippi, and Louisiana. Of the three states that were severely impacted by Hurricane Katrina, only Louisiana used SUPSALV to conduct marine related hurricane recovery so the remainder of SUPSALV's time on the Gulf Coast was in support of USACE and USCG tasking in the State of Louisiana.

Before Katrina came ashore, the New Orleans sector of the United States Coast Guard evacuated their Gulf Coast installations and relocated command and control facilities to Alexandria, Louisiana, about 220 miles northwest of New Orleans per their pre-established disaster operation plan. SUPSALV co-located with the Coast Guard in Alexandria in order to develop close working ties and streamline coordination efforts.

SUPSALV worked closely with the USCG, USACE, and FEMA to obtain tasking, coordinate priorities, and assign work to SUPSALV's lead salvage contractor, Donjon Marine Co., Inc., (Donjon) who had assembled a team of subcontractors to execute salvage tasks in Louisiana. The cases were tracked in a Marine Debris Target database that grew to over 3,000 cases. SUPSALV's search and recovery contractor, Phoenix International, developed and managed this database. The number of "federalized" cases was only a small portion of the total cases, reaching about 650 by January 31, 2006 when SUPSALV turned over the debris removal task to the Coast Guard. Three primary salvage teams conducted fishing boat recovery operations in Venice, Empire, and later a number of vessels along the Mississippi River.

Due to the unprecedented storm surge, a large number of barges washed up onto the banks of the Mississippi River during Hurricane Katrina. The storm surge swept up the river in Plaquemines and Orleans parishes in Louisiana and pushed the barges and marine vessels out of the river and onto the banks of the levees.

In Alabama, under Chief of Naval Operations (CNO) tasking, SUPSALV managed the Navy's efforts to refloat the Naval Research Laboratory's (NRL) fire effect test vessel Ex-USS SHADWELL (LSD 15) and USCG's fire effect test vessel Ex-STATE OF MAINE in Mobile Bay, Alabama. Shown in Figure 1-4, this task is described in detail in a separate report.

Figure 1-4. Ex-USS SHADWELL (LSD 15) stranded in Mobile Bay, Alabama. Pictured to the right is USCG's Ex-STATE OF MAINE.

Section 2

Command and Organization

Section 2
Command and Organization

2.1. National Response

Hurricanes Katrina and Rita inflicted damage unprecedented in U.S. maritime history. Thousands of individual barges, commercial fishing vessels and oil industry support vessels were damaged, stranded, or sunk as a result of the back-to-back storms. The wreckage was spread from Mobile Bay in Alabama in the east to the Texas–Louisiana border to the west. Response to these casualties was managed differently by each state and their relationship with SUPSALV was different as well.

The U.S. Navy's initial response to Katrina came from the Joint Forces Maritime Component Commander (JFMCC) as CTF 20.7.1.3 that included USS GRAPPLE (ARS 53) and Mobile Diving and Salvage Unit TWO. These assets operated in Mississippi, Alabama, and Louisiana immediately after Katrina through to the end of September 2005. Because of the long-term nature of SUPSALV's expected response, the CNO removed SUPSALV personnel from the Joint Navy Task Force and directed them to respond directly to FEMA tasking, working in conjunction with the U.S. Coast Guard (USCG) and the U.S. Army Corps of Engineers (USACE), primarily in the State of Louisiana.

The Army Corps of Engineers has statutory authority to maintain the navigational waterways within the United States. The Coast Guard has statutory authority to oversee maritime traffic and public safety, maintain the aids to navigation, provide federal oversight of U.S. ports, and remove pollution hazards from the waterways. The U.S. Navy Supervisor of Salvage (SUPSALV) maintains competitively awarded emergency services contracts to perform salvage and related tasks throughout the world as directed by the Department of Defense. These organizations formed the core of the unified command (within the incident command system, or ICS) that worked to support the recovery of the marine industry in Louisiana.

FEMA's Mission Assignment (MA) specified that the Wreck and Debris Removal Task Force should be headed by an Incident Management Team (IMT) consisting of USACE, USCG, FEMA, and other entities with jurisdictional responsibilities over the waters of Louisiana. SUPSALV participated on the IMT, but deferred to the other members for prioritization. With this premise, SUPSALV organized to assist the Coast Guard and USACE by developing a database for documenting the cases, standing-up a salvage team to prepare salvage plans, develop salvage cost estimates, perform salvage tasking, track costs by case or task, and provide pollution abatement equipment to support response to potential oil spills.

2.2. Origins of Debris Removal Tasking

As a result of Hurricane Katrina, President George W. Bush issued Major Disaster Declarations on August 29, 2005 for the States of Louisiana (FEMA-1603-DR), Mississippi (FEMA-1604-DR), and Alabama (FEMA-1605-DR). Major Disaster Declarations were later issued as the result of Hurricane Rita on September 24, 2005 for the States of Texas (FEMA-1606-DR) and Louisiana (FEMA-1607-DR). Disaster declarations trigger Stafford Act funding (Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended by Public Law 106-390, October 30, 2000) which dovetails with activation of the National Response Plan (NRP). The NRP establishes a comprehensive all-hazards approach to enhance the ability of the United States to manage domestic incidents. It forms the basis for the federal government coordination with state, local, and tribal governments and the private sector during incidents. Under the Stafford Act, FEMA plays a lead role in funding response and recovery efforts.

FEMA issued Mission Assignment 1509-34039 to the United State Coast Guard to remove wrecks and debris from the waterways and navigable channels of the State of Louisiana. The funding for this Mission Assignment was under Emergency Support Function 3 (ESF-3).

FEMA issued Mission Assignment 1509-33133 to the Environmental Protection Agency (EPA) for the disposal of oil and hazardous material in the State of Louisiana. Specifically, EPA was tasked to provide the capability to conduct the removal and disposal of actual and potential oil discharges or releases of hazardous material, pollutants, and contaminants. The Coast Guard was better prepared to support maritime cleanup than the EPA, so the management of this task was transferred to the Coast Guard. The tasking supporting oil and hazardous material spill prevention and cleanup eventually came under Emergency Support Function 10 (ESF 10).

2.2.1. Federal Players

One of the largest challenges of attempting to coordinate a gulf-wide regional approach to the hurricane response salvage problem was the number of federal organizations with a stake in the prioritization and clean up process. The United States Coast Guard is divided into districts. The Eighth District serves most of the Gulf Coast and was broken up into Groups and Sectors. Galveston Group and the New Orleans and Mobile Sectors were significant players in this task. Each Sector and/or Group had a Captain of the Port.

The U.S. Army Corps of Engineers had significant interaction with SUPSALV during the initial recovery period and over the course of the operation. The Corps is divided into divisions and districts. SUPSALV worked primarily with South Atlantic and Mississippi Valley Divisions. A map depicting the paths of the two storms and the activities impacted by the storms is provided as Figure 2-1.

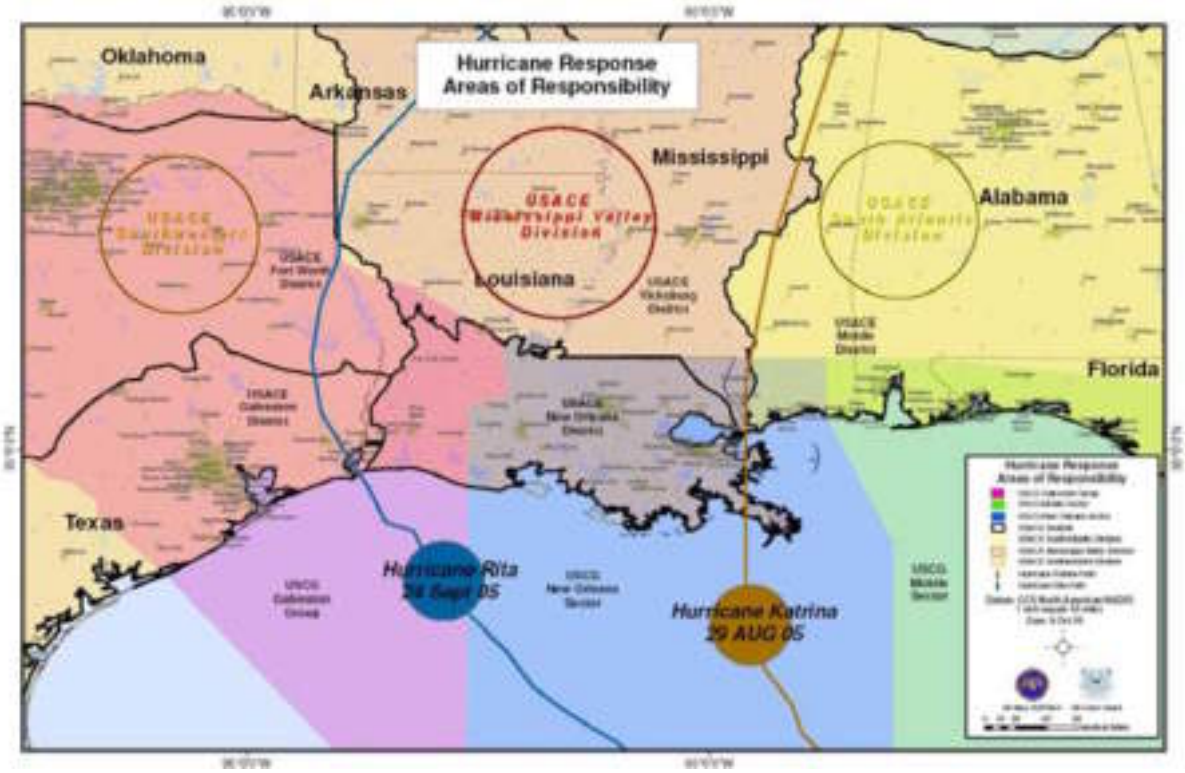


Figure 2-1. Hurricane Impact on Federal Organizations Command and Control.

Coast Guard operational responsibility in Louisiana during Hurricane Katrina resided with USCG Captain Frank Peskawich, who was dual hatted as New Orleans Region Sector Commander and Captain of the Port, New Orleans. Responsibility was initially shared with Morgan City Captain of the Port, Captain Terry Gilbreath. The New Orleans Sector manned the Salvage and Wreck Removal Task Force with Coast Guard staff augmented from all over the country. Most of the OICs stayed 3 to 5 weeks and were supported by local Coast Guard staff as well as staff from other CG activities. USCG LCDR Scott Calhoun and later CDR Brian Poskaitis and LCDR Charlie Ranson were the USCG Officers in Charge of the Salvage and Wreck Removal Task Force. Figure 2-2 represents the USCG Wreck Removal and Salvage Incident Command structure.

2.2.2. SUPSALV Organization

SUPSALV's wreck removal task was largely a planning and management task. SUPSALV's team was co-located with Coast Guard Salvage and Wreck Removal Incident Command Team in the Louisiana Convention Centre in Alexandria, Louisiana during the months of September, October, and November 2005. Additionally, FEMA placed staff on site to assist in coordination. This group of about 40 people worked the cases identified by field activities and survey teams. The Alexandria site was chosen in advance by the Coast Guard Sector New Orleans as a base of operations in the event of forced evacuation. Because of this plan, the entire Coast Guard Sector New Orleans office moved

from their New Orleans headquarters into Alexandria's Louisiana Convention Centre.

USCG Wreck Removal and Salvage IC Structure

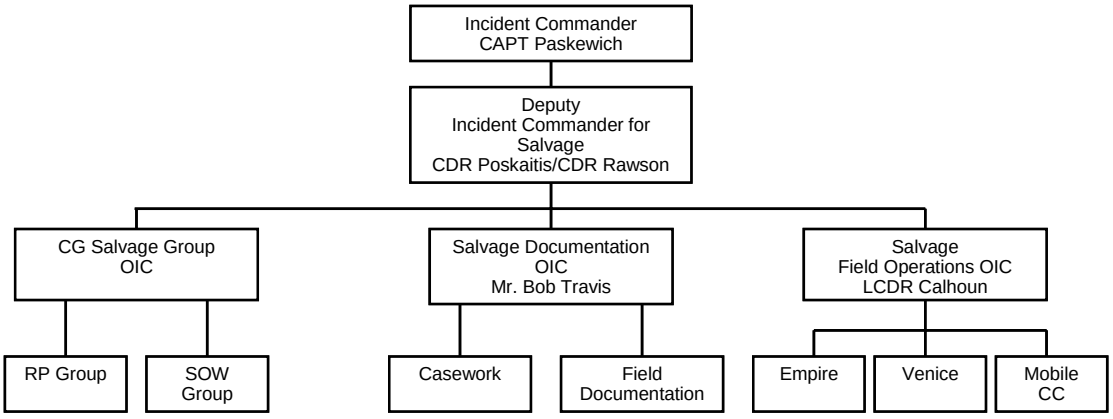


Figure 2-2. U.S. Coast Guard Incident Command Structure.

SUPSALV organization was structured to support field operations, environmental protection, documentation, provide government oversight at the headquarters and in the field, and manage the salvage contracts and tasking associated with the operation. The structure of the SUPSALV organization is documented by the organization chart portrayed in Figure 2-3. This group worked in conjunction with the Coast Guard's Salvage Emergency Response Team (SERT) and Documentation teams and the FEMA site representative.

SUPSALV mobilized a number of organizations and assigned task orders to a number of their standing contracts. The organizations and the role they served follow:

- Salvage lead was assigned to Donjon Marine Co., Inc. SUPSALV's East Coast Salvage Contractor.
- Mapping and data management was performed by Phoenix International, SUPSALV's Ocean Search Contractor.
- Pollution abatement and emergency response equipment was provided by Global Phillips Cartner (GPC), the Emergency Ship Salvage Material (ESSM) Contractor.
- Administrative and documentation support for the operation was assigned to ROH, Incorporated who holds SUPSALV's technical support contract.
- Financial support was provided by DTI who assisted the SUPSALV Contracts Branch Head in managing the numerous task documents.

- Engineering and administrative support was provided by SUPSALV's Naval Reserve Detachment, which manned the operation with a senior reservist throughout most of the operation and by various Engineering Duty Divers who, on temporary assignment from their permanent commands, provided additional technical expertise on the ground to support management of the field operations.
- Local contractors were placed on tasks suitable to their capabilities. Politically, it became important to give local firms the chance to bid and work on the salvage tasks. SUPSALV encouraged Donjon to evaluate individual firms' capabilities and task them with wreck removal jobs as appropriate. Appendix A contains a table of SUPSALV subcontractors who supported the operation.

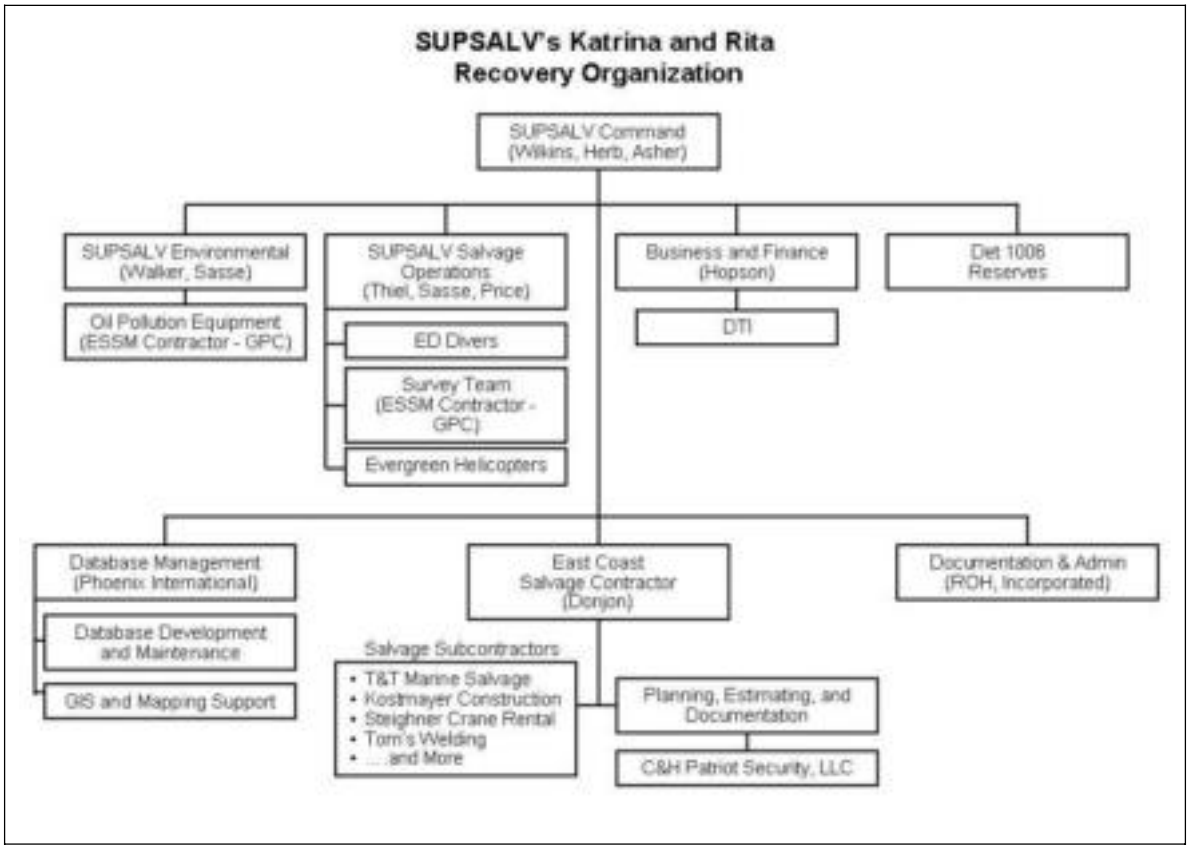


Figure 2-3. SUPSALV Organization Chart.

SUPSALV prepared and issued regular situation reports (SITREPs) during the operation in order to keep interested Navy personnel advised of ongoing events. The SITREPS were issued daily through October 2005 and then three times a week until operation completion. Copies of relevant SUPSALV SITREPs are included in Appendix A.

In early November, SUPSALV began looking for a place closer to the waterfront operations that could host the command center and provide berthing for the team. Berthing was one of the initial challenges as the citizens displaced

by the hurricanes were occupying the majority of the hotels along the coast. Initially, they looked in Houma, Louisiana but the Coast Guard Salvage Group was interested in working near New Orleans for easier coordination with the Sector New Orleans HQ. On or about November 14, 2005, SUPSALV and the Coast Guard jointly contracted with Loews Hotel and on the weekend of November 18 and 19, the team moved to downtown New Orleans. The SUPSALV team occupied one of three conference rooms and hotel rooms from November 19 through the end of the operation on January 31, 2006.

Section 3

Tasking and Funding

Section 3
Tasking and Funding

3.1. U.S. Navy and SUPSALV Missions

On August 30, 2005, the day after Hurricane Katrina made landfall, Commander, U.S. Northern Command (COMNORTHCOM) established a Department of Defense Joint Task Force (JTF) to operate in the states of Louisiana, Mississippi, Alabama, Florida, Kentucky, Tennessee, and Georgia to provide military assistance to organizations such as Federal Emergency Management Agency (FEMA), USCG, and state organizations as required. The August 30, 2005 COMNORTHCOM message that established a joint operational area in order to coordinate DoD response in support of FEMA is provided in Appendix B, Tasking and Funding Documents. The message identifies USN SUPSALV Emergency Ship Salvage Material as the recommended source for providing potential marine salvage mitigation for disabled, stranded, or grounded vessels.

The Naval element of the Joint Task Force was designated CTF-20 and included Mobile Diving and Salvage Unit Two (MDSU TWO) and USS GRAPPLE (ARS 53), among others. SUPSALV was not attached to the JTF because SUPSALV was tasked by CNO to support the FEMA directly. As a part of this direct support, SUPSALV provided coordination efforts for the CTF-20 units, specifically, CTE 20.7.1.3, which were performing marine salvage, diving, and hydrographic surveys. Figures 3-1 and 3-2 show USS GRAPPLE and MDSU TWO divers at work.

Figure 3-1. USS GRAPPLE (ARS 53) removing damaged channel marker in Mobile Bay

Figure 3-2. MDSU TWO divers working off the stern ramp/well deck of USS TORTUGA (LSD 46).

Under the direction of FEMA, SUPSALV was tasked to provide coordinated strategic direction of national assets for Katrina–related hydrographic survey and marine salvage response in selected off-shore areas, channels,

waterways, ports and harbors, with the ultimate goal of providing critical maritime reconstitution consistent with FEMA priorities. National assets included the major capabilities of industry, DoD, and other Federal agencies for hydrographic survey, marine salvage, and oil pollution abatement. A copy of FEMA's Mission Assignment for the State of Louisiana is included in Appendix A, Command and Organization Documents.

3.2. SUPSALV Initial Tasking – Immediate Response

As the extent of damage caused by Hurricane Katrina became apparent, there was a growing awareness that immediate help and resources needed to be deployed. CAPT Jim Wilkins (SUPSALV) alerted his SUPSALV staff to prepare for deployment as he identified the support SUPSALV could provide.

On September 1, 2005, CAPT Wilkins met with VADM Paul Sullivan, Commander, Naval Sea Systems Command (NAVSEA) briefing him on SUPSALV's informal role as National Salvage Advisor in connection with the Salvage Facilities Act (SFA). VADM Sullivan tasked SUPSALV to deploy to the Gulf Coast region to coordinate area-wide salvage and assist in re-opening Katrina ravaged waterways. VADM Sullivan subsequently proposed this to VADM Morgan, OPNAV N3/N5, at that morning's CNO meeting. At the request of VADM Morgan, SUPSALV prepared a draft Incident Response Plan (IRP) to work in the interagency arena outside of the Joint Task Force (JTF). This plan outlined the Federal, DoD, and NOAA organizations that were expected to be involved. SUPSALV was given responsibilities in the areas of hydrographic surveys and marine salvage efforts. VADM Morgan's office prepared a letter endorsing the plan to Michael Chertoff (DHS) via CNO and Secretary of Defense (SECDEF), Donald Rumsfield, for a 90-day deployment under direction of FEMA. Responsibilities included area-wide coordination of hydrographic surveys, salvage, and oil pollution abatement.

After this direction was received, SUPSALV deployed a small team consisting of federal employees and support contractors to the Gulf Coast region and tasked a number of contractors to support the operation. These included: the East Coast Salvage Contractor (Donjon), the Search and Recovery Contractor (Phoenix International), the Emergency Salvage and Oil Pollution Abatement Equipment Manager (GPC), and Professional Support Services Contractor (ROH, Incorporated.) Details of SUPSALV's coordination and task identification efforts during the first days of the operation are summarized in Appendix B, Tasking and Funding Documents.

SUPSALV set up its command center at the Louisiana Convention Centre, in Alexandria, Louisiana where they were collocated with the USCG. SUPSALV stayed in Alexandria from September 3, 2005 to November 19, 2005.

On September 5, SUPSALV Oil Pollution Response Project Officer, Bill Walker and GPC (ESSM) Project Manager, Ron Worthington, deployed to the

region. On 7 September, USCG requested staging the SUPSALV spill response equipment at the Coast Guard Baton Rouge Command Center, located just north of Baton Rouge at Clean Harbors, Environmental Services, Inc. This equipment remained in place until it was redeployed on October24, 2005.

3.3. SUPSALV Support to the Joint Task Force

The Navy's first responders, in the form of Mobile Diving Salvage Unit TWO (MDSU TWO) and USS GRAPPLE (ARS 53), in their role with the JTF, accomplished all the emergency marine salvage work in the states of Alabama and Mississippi. SUPSALV assisted them with lift craft and platform support.

3.3.1. Responsibility

From the onset, one of the challenges SUPSALV faced was clarification of responsibility for funding the various salvage tasks. This required significant coordination with the agencies involved. Hurricane Katrina maritime relief efforts were potentially funded by the FEMA, U.S. Army Corp of Engineers (USACE), or USCG. Agency overlap and lack of clear funding responsibility based on statutory responsibility resulted in significant delays at the start of salvage operations. Figure 3-3 was developed by SUPSALV to help the dialogue regarding funding responsibilities. It depicts the funding confusion SUPSALV faced when asked to respond to a vessel in the vicinity of a navigation channel.

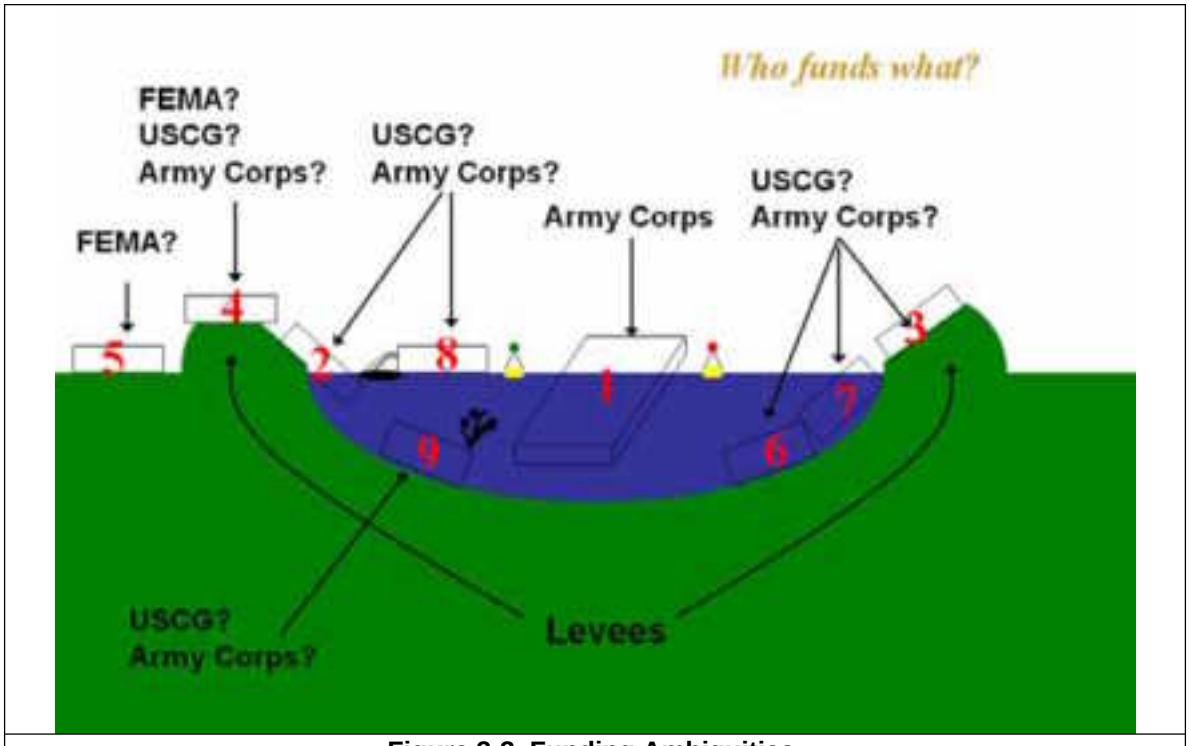


Figure 3-3. Funding Ambiguities.

In Figure 3-3, the labels with question marks are those areas where responsibility was uncertain. The following is a key to the vessel numbers in the figure.

Vessel 1 – In the channel, hazard to navigation – responsibility clearly USACE

Responsibility for funding the removal of vessels 2 – 9 was unclear and negotiations between the parties were needed to establish the ground rules.

Vessel 2 – Part on levee, part in water
Vessel 3 – On the side of the levee (could slide into water)
Vessel 4 – On the crown of the levee
Vessel 5 – On ground, outside the levee
Vessel 6 – Fully submerged
Vessel 7 – Partially submerged
Vessel 8 – Floating outside of channel, leaking oil
Vessel 9 – Submerged, outside the channel, leaking oil

Additional delays were encountered when the primary agencies tried to get the Responsible Party (RP) to take the lead on the salvage. Finding the RP and then coordination with the RP to determine their intentions often took several weeks and further delayed the issuing of salvage tasking.

3.4. Tasking

The majority of SUPSALV tasking was from the USCG in the state of Louisiana under ESF-3 (Wreck Removal). SUPSALV also received tasking in Louisiana under USCG ESF-10 (Pollution Abatement) and USACE operating funds. Although SUPSALV did no exclusive work in Alabama or Mississippi, it was funded by USACE and USCG in those states to provide support to USN salvage forces under Task Force Katrina. Figure 3-4 provides a summary of SUPSALV tasks by state and funding type.

SOURCE & FUND	**STATE & TASK**
USCG ESF-3	Louisiana salvage and wreck removal
USCG ESF-10	Alabama – One 85-foot fishing vessel Louisiana – ESSM pollution response equipment
USACE – New Orleans District/ Mississippi Division (Operational Funds)	Louisiana – Lake Charles Turning Basin Louisiana – New Orleans City De-watering pump Louisiana – Levee vessel removal
USACE – Mobile Bay District/ South Atlantic Division (Operational Funds)	Mississippi – Approx. 6 vessels in Harrison County, Industrial Seaway
**No exclusive SUPSALV work was conducted in Alabama or Mississippi.* ***Funding for ex-Shadwell and State of Maine by the Naval Research Laboratory is addressed in a separate report.*	

Figure 3-4. Summary of SUPSALV Tasking by Funds by State.

In response to FEMA's Louisiana Mission Assignment, on September 14, Coast Guard District Eight issued implementation guidance for conducting Katrina recovery operations under FEMA ESF–3 and ESF–10 Mission

Assignments. The guidance clarified what should be considered marine debris and what could and should be done with it. On October 21, 2005, the USCG expanded its guidance regarding debris removal. This Mission Assignment guidance was applicable to Coast Guard Sector New Orleans and Coast Guard Sector Mobile. A summary of this guidance follows and a complete copy of the implementation messages and extended guidance message are found in Appendix B, Tasking and Funding Documents.

3.4.1. Emergency Support Function (ESF)–3 Authorization

The Coast Guard District Eight goal was to restore the maritime transportation system infrastructure as quickly as possible while preserving personal property, especially recreational and commercial vessels lost by private citizens during Hurricane Katrina. Debris removal under ESF-3 was authorized for the following public interest-related purposes:

1. Elimination of immediate threats to life, public health, and safety
2. Elimination of immediate threats of significant damage to improved public or private property
3. Economic recovery of the affected community to the benefit of the community-at-large.

For purposes of USCG activity under ESF-3, the definition of debris included, but was not limited to all manner of vegetation, building material, recreational and commercial vessels, and all manner of other items that threatened the environmental and navigation safety of the navigable waterways.

Coast Guard debris removal activity focused on the geographic area from the edge of a navigation channel to the shore of a navigable waterway and beyond onto the shoreline if the debris on the shoreline presented an environmental or navigation safety threat to the waterway. ESF-3 related work focused on debris removal requiring Coast Guard experience and expertise in protection of marine natural resources, national defense, and maritime safety, mobility and security.

Debris removal beyond the shoreline was authorized when:

1. The debris to be removed had a marine nexus
2. The debris removal activity could be staged entirely from the waterway
3. The debris removal activity could be staged both from the waterway and the land
4. If left in place, the debris to be removed posed a risk to marine natural resources, maritime safety, mobility or security.

3.4.2. Assignment for Removal Under USCG ESF–3

The Captain of the Port New Orleans and Captain of the Port Morgan City established a procedure for assigning a vessel to SUPSALV for removal that was regimented and time- and labor-intensive. After a survey of a harbor or channel

by the Captains of the Port, the USCG Salvage Emergency Response Team (SERT), who shared space in the SUPSALV Command Center, attempted to contact the owner of the vessel to determine if the vessel was insured. The owner or company managing the vessel was called the Responsible Party or RP. If the RP could not be contacted or there was no evidence that the vessel or property owner was engaged in private sector efforts to remove the vessel and where the vessel's removal was determined to be in the public interest, ESF-3 debris removal efforts were authorized.

If the Responsible Party was contacted and insurance was in place or the owner appeared to have the means and intent to perform the recovery, the following steps were followed:

1. Requested the Responsible Party to provide insurance information, including the name of company, policy number and Point of Contact (POC).
2. After the Coast Guard collected the insurance information, it was forwarded to the USCG SERT at the Incident Command Center (ICC).
3. The USCG SERT provided the insurance POC information to the Department of Justice (DOJ) for reimbursement purposes. (DOJ addressed the legal issues surrounding claims against cases that had federal interest). The DOJ issued a letter stating that the insurance company needed to contact the DOJ before disbursing payment to the claimant. If they paid the claimant without first contacting DOJ, the insurance company assumed the risk of losing that money. If the RP made a claim, received a check, and then disappeared, DOJ would bill the insurance company (not the owner) for the salvage costs.
4. The USCG SERT worked with the COTP to determine the exact action the COTP expected and a reasonable timeline for that action to be completed. This information was conveyed to the RP.
5. If the owner could not comply with the COTP order and the COTP wanted the vessel moved (if the COTP determined that the vessel posed a significant threat to a waterway, public safety, mobility, prevented economic recovery, impeded improved public/private property, or was a pollution threat, etc.), the Coast Guard Salvage Coordination Group would take action and issue a salvage task to SUPSALV to have the vessel removed with ESF-3 funding.

3.4.3. USCG ESF–3 Removal Execution

The Coast Guard Eighth District Marine Safety Division had the task of identifying wreckage that met the parameters of the Mission Assignment. This basically included all marine related debris, vessels or not, in the water, outside of federally maintained channels, on the banks or on shore. The U.S. Army Corps of Engineers had jurisdiction for marine debris inside of federal channels and on the levees.

When a case was federalized:

The first step was for the Coast Guard to issue a Statement of Work (SOW) authorizing SUPSALV to begin the salvage process. See Appendix B, Tasking and Funding Documents for an example of a typical SOW.

SUPSALV received the SOW and conducted a review of the vessel's particulars including discussion with the on-scene salvage team. They then prepared a formal cost estimate for performing the recovery. Simultaneously, Donjon would begin generation of the salvage plan for that case. There were many occasions when a single SOW tasked removal of multiple vessels.

SUPSALV's Business Manager approved the cost estimates and forwarded them, in batches, to the Coast Guard Maintenance and Logistics Command (MLC), Atlantic in Norfolk, Virginia.

SUPSALV reviewed Donjon's salvage plans, forwarded them to the Coast Guard SERT who reviewed and approved the plan.

SUPSALV's data technicians scanned all associated case documents into the Marine Debris Target database. Upon funding approval, Donjon assigned the case to one of their salvage teams for execution. This process is graphically summarized in Figure 3-5, Wreck Removal Process. A sample copy of a salvage plan is provided in Appendix B, Tasking and Funding Documents

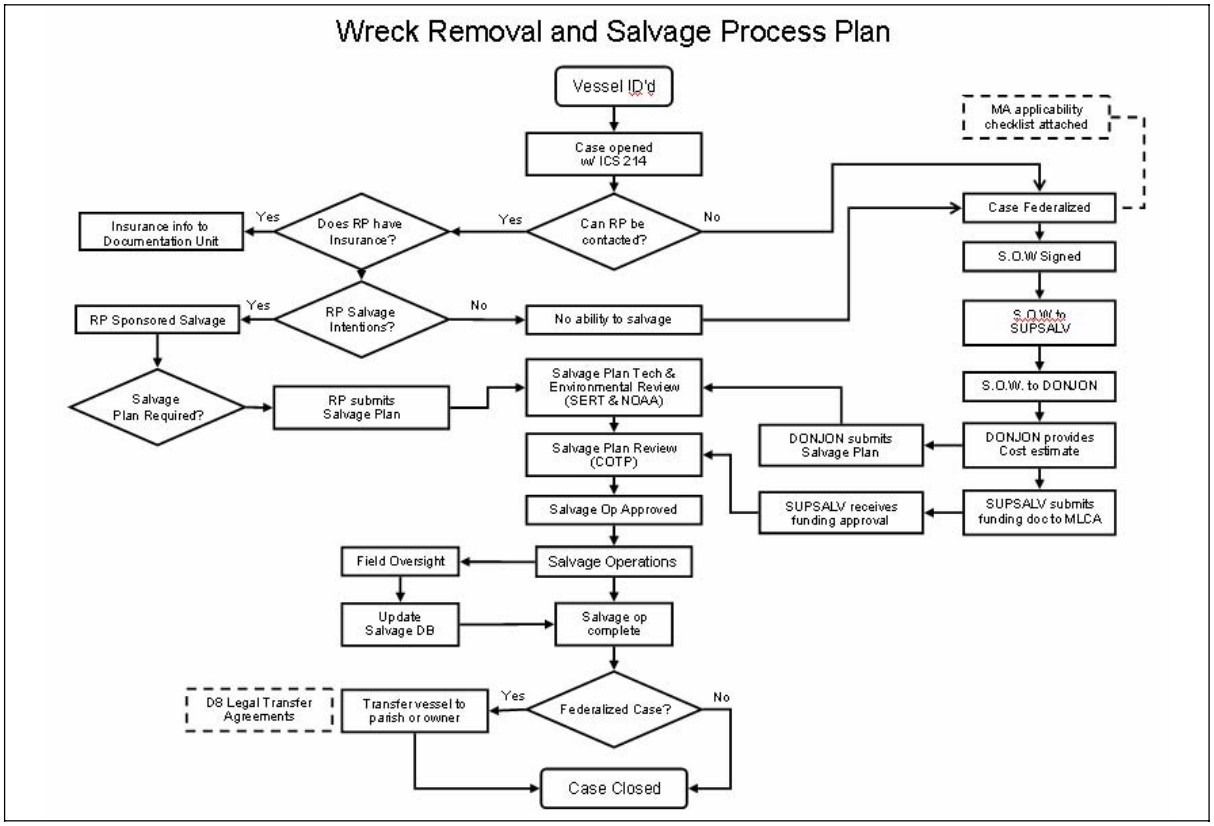


Figure 3-5. Wreck Removal Process.

3.4.4. USCG ESF-10 Tasking

SUPSALV's tasking under USCG ESF-10 (Oil and Hazardous Material Response) was minimal. SUPSALV was funded under ESF-10 tasking to provide pollution abatement equipment at the Coast Guard Baton Rouge Command Center, located just north of Baton Rouge at Clean Harbors, Environmental Services, Inc. On September 7, 2005 the Coast Guard requested and later issued a Funding Authorization to SUPSALV to support the ESF–10 function. The task requested SUPSALV spill response support and equipment mobilization. Reimbursement was authorized for all expenses associated with providing the SUPSALV equipment. Appendix F, ESSM Pollution Abatement Report, lists the details of the material and services provided under this task.

SUPSALV was also funded, via USCG ESF-10 to provide vessel lift support to the U.S. Navy MDSU TWO in Bayou La Batre, Alabama, where one 85-foot fishing vessel was lifted.

3.4.5. USACE – New Orleans District/Mississippi Valley Division Tasking

SUPSALV received three tasks from the U.S. Army Corps of Engineers, New Orleans District/Mississippi Valley Division, which were funded from their operating funds: (1) Diver support for clearing dewatering pumps in the City of New Orleans, (2) debris removal in Lake Charles, LA Turning Basin, and (3) removal of vessels from levees via USCG management.

On September 6, 2005, SUPSALV provided two emergency commercial HAZMAT-qualified dive teams at USACE request to deploy to downtown New Orleans within three hours after USACE tasking. Their purpose was to clear the city's pump intakes that were clogged during dewatering effort. A note of interest is that the team provided their own security personnel. Funding was direct from USACE to SUPSALV.

As a result of Hurricane Rita on September 24, 2005, USACE tasked SUPSALV to remove debris in the Lake Charles, Louisiana LNG Trunkline Terminal turning basin. Funding was direct from USACE to SUPSALV.

USACE identified numerous vessels along the Mississippi River, on the banks of the river, and on the levee systems that were obstructing levee repairs and required removal. USACE funded these tasks with operations funds, which they later expected to be reimbursed by FEMA. USACE could have directly tasked SUPSALV but because FEMA funding was expected to be ESF-3 funds and FEMA had assigned the Coast Guard to administer the ESF-3 funds, USACE decided to administer the funds through the Coast Guard. USACE entered into a MOA with the USCG to use the Coast Guard process for identifying work, tasking, and subsequent documentation for work accomplished on the levees.

3.4.6. USACE – Mobile Bay District/South Atlantic Division Tasking

USACE provided funding for cases related to seaway blockages during the weeks immediately following Hurricane Katrina. MDSU TWO was the only Navy activity working in Mississippi at the site of the Industrial Seaway. USACE directly funded SUPSALV to assist MDSU TWO with commercial lift equipment that worked in conjunction with the MDSU detachments. Six vessels in Harrison County were salvaged/removed.

3.5. Funding

When SUPSALV mobilizes, funds are required for travel expenses, labor of Navy civilian employees, and to task its contractors to provide specialized support. SUPSALV's initial Katrina response included deployment of its contractors who all began operations based on verbal tasking. It soon became apparent that SUPSALV's financial management of this operation would become a very complicated task. The Coast Guard, who was given the management task by FEMA, expected accounting on a daily, task-by-task, and in some cases, a boat-by-boat basis. This section discusses the sources of funds, the accounting methods employed, and the issues that required resolution.

3.5.1. Funding Sources

On September 9, 2005, the first overarching federal commitment for vessel salvage and wreck removal was received in the form of a FEMA Mission Assignment (MA) to the Coast Guard requiring USCG to develop and maintain an Incident Management Team (IMT) with a Unified Command, including USCG, USACE, FEMA, and any other agency with statutory authority responsibilities for navigable waterways and channels in the state of Louisiana. It further stated that the USCG would be reimbursed for the command and control of personnel and removal of wrecks by any agency involved in the waterways of the state of Louisiana. The MA committed $75 million and projected an end date of April 10, 2006. A copy of this Mission Assignment can be found in Appendix A, Command and Organization Documents.

The ESF–3 Mission Assignment directed Coast Guard Sector Commanders to establish a concept of operations for debris removal outside of federal navigation channels in support of Hurricane Katrina response. Debris in federal navigation channels was the responsibility of U.S. Army Corps of Engineers. USACE also directed vessel removal when the debris impacted levee fortifying efforts. Figure 3-6 depicts funding sources associated with the types of tasks assigned to SUPSALV.

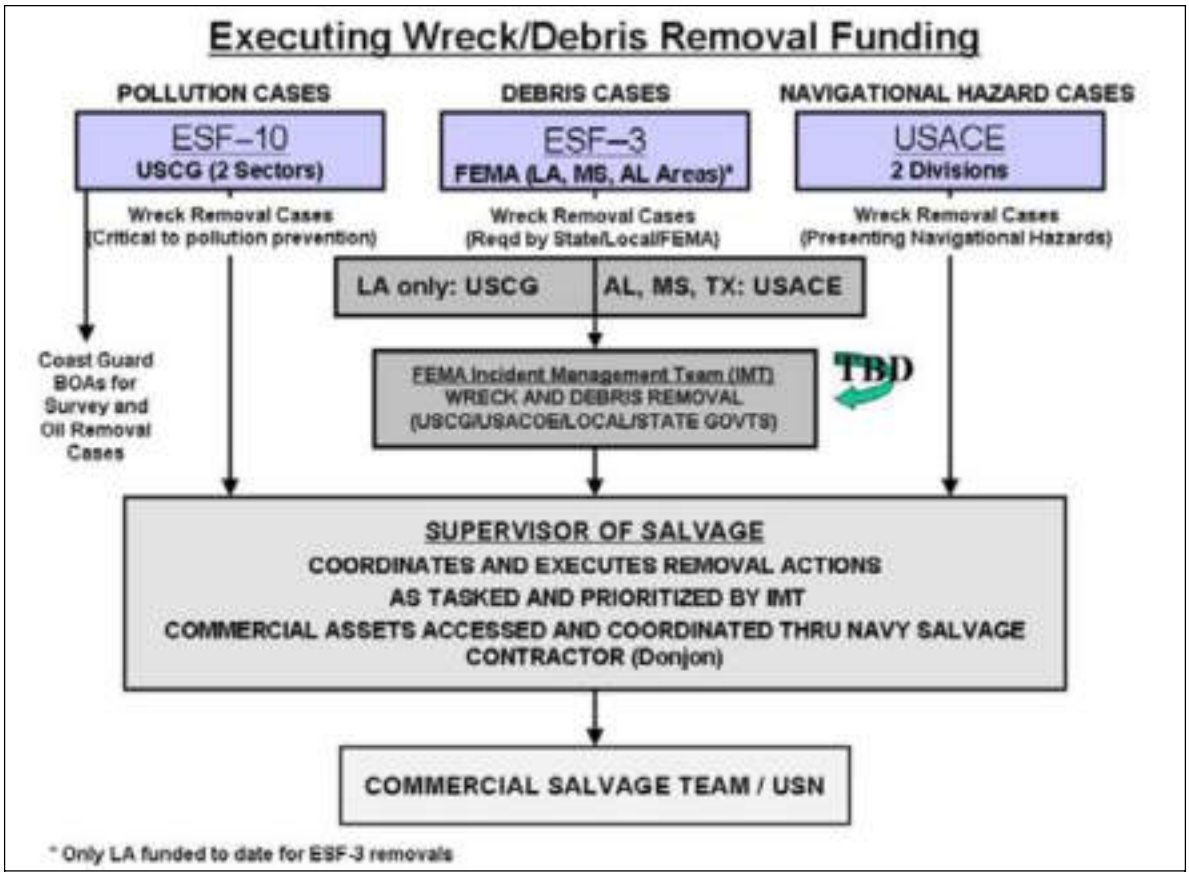


Figure 3-6. Funding Sources.

In November, FEMA issued a Mission Assignment for $17 million for debris removal (ESF-3) in support of Hurricane Rita recovery efforts. This second funding line complicated funding documentation associated with SUPSALV operations. Katrina cases had to billed and reported to the Katrina funding line and those vessels affected by Hurricane Rita had to be billed and reported to the Rita funding line. SUPSALV split Incident Command Structure administrative costs at an 80% Katrina, 20% Rita ratio from November 6 through November 18, 2005 when that account was closed and administrative costs returned to the Katrina account only. This split required each of the SUPSALV contractors to submit two sets of cost accounting paperwork for each day of operations.

SUPSALV set up the Marine Debris Target Database to track funding by funding source. The following funding sources were used:

- USACE-Barges
- USACE-Mobile Civil Works
- USACE-Mobile-ESF-3
- USCG-Lake Charles-ESF-3

- USCG-Lake Charles-ESF-10
- USCG-Mobile-ESF-3
- USCG-Morgan City-ESF-3
- USCG-New Orleans-ESF-3
- USCG-New Orleans-ESF-10

3.5.2. Funding Summary

SUPSALV executed work for the USCG and USACE at a total cost of approximately $37,000,000. The following table summarizes SUPSALV costs.

- Administrative Support - $264,187
- Database Management - $557,780
- Survey Team - $64,930
- Salvage Equipment - $32,510
- Pollution Equipment - $835,930
- Vessel and Debris Removal - $35,485,278

3.5.3. Funding Issues

The significant issue with funding was the incremental nature of the funding provided by USCG to SUPSALV. SUPSALV was tasked, in accordance with FEMA Mission Assignment, to support the Coast Guard with its Gulf Coast Region wreck removal efforts. SUPSALV in turn utilized its preexisting, competitively-bid East Coast Salvage Contract to quickly mobilize and tap into extensive salvage industry capabilities. Presumably to satisfy its own (or perhaps FEMA's) accounting needs, the USCG imposed an incremental, vessel-by-vessel, or later task-by-task, funding process. This process required that for each vessel, or group of vessels, to be removed there had to be: an estimate generated, an estimate approval by the USCG, and a subsequent wait of several days to receive funding for the job. As a result, funding dribbled in vessel-by-vessel and task-by-task. With literally hundreds of vessels to be removed, this process was inefficient and inconsistent with salvage industry practice and price-costing on a day rate basis. It resulted in substantially increased time and cost to conduct salvage and wreck removal operations.

To complicate the matter, no funding was actually provided by FEMA to USCG – just the promise of $75 million via a mission assignment. Subsequently, USCG funded SUPSALV out of USCG operational funds and then gave

SUPSALV only what was absolutely necessary. The Maintenance and Logistics Command, Atlantic (MLCA) located in Norfolk, VA was the activity that approved Coast Guard District Eight funding.

At the onset of the operation, SUPSALV had requested a $50 million Military Interdepartmental Procurement Request (MIPR) to manage funding of the cases. This was not approved. Instead SUPSALV had to go back to USCG on each individual case or small group of cases to request funding.

3.6. Cost Accounting

The USCG imposed a daily accounting of costs incurred on SUPSALV and its contractors. This varied from SUPSALV's normal cost accounting procedures of collecting costs on a monthly or periodic basis. The change in procedure significantly increased SUPSALV's administrative workload. In order to understand the process, SUPSALV issued a memorandum on September 20, 2005 that detailed the process for tracking costs in support of Hurricane Katrina tasking. A copy of this memorandum is included in Appendix B, Tasking and Funding Documents.

The basis of the daily cost accounting was the USCG Form CG-5136E-4, Pollution Incident Daily Response Report, included in Appendix B, Tasking and Funding Documents. The form was used for reporting the cost of personnel, equipment, subcontractors, material used and other expenses. CG-5136 forms were submitted for each case on a daily basis. The contractors, Donjon (Case 9100), Phoenix (Case 9200), and ROH (Case 9300) all complied with the requirement for daily submittals. SUPSALV (Case 9400) did not submit the CG-5136 forms on a daily basis. Instead an interim final report was submitted on March 24, 2006 summarizing the costs for the period September 10, 2005 through February 3, 2006. The contractors certified the form with a signature and then submitted it to a SUPSALV representative each day for review and signature.

Also required as part of the daily cost accounting submittals were a Contractor Management Report and a Current Estimate and Cost Input Form. The Contractor Management Report was a Word document that repeated information provided in the CG-5136 form and provided a narrative summary of work accomplished for the day. The Current Estimate and Cost Input Form was a spreadsheet documenting estimated cumulative cost, actual cumulative cost, and actual daily cost.

Once the SUPSALV representative signed the CG-5136 form, it was returned to the contractor who scanned the form and returned the original to the SUPSALV representative. The contractor then loaded all three documents into the Marine Debris Target database under the appropriate case number.

The initial explanation for the use of the CG-5136 was that they were estimates of work incurred, a valid requirement. After a period of time, it became apparent that the USCG expected the reported costs to be actual costs. The USCG needed actual costs in order to be reimbursed by FEMA. This posed a problem for the contractors because their actual costs were reported on monthly basis as cost accumulated. Other issues that posed challenges with reporting actual cost on a daily basis were contractor indirect rates and contractor award fee.

After many discussions on the subject, the USCG agreed to accept an interim final CG-5136. The interim report summarized actual costs for a period of time. The interim final CG-5136 report was labor intensive to put together. It included a summary of all daily CG 5136 forms previously submitted, actual costs incurred during the period, and an explanation of the discrepancy on an item-by-item basis.

Sub-cases were set up for work accomplished on behalf of the USCG, Morgan City and the U.S. Army Corp of Engineers. During periods when work was accomplished for these organizations, daily administrative costs were prorated (80%/20%) between USCG, New Orleans and the organization funding the sub-case. This reporting process doubled the cost accounting administrative effort as CG-5136, Contractor Management Report, and a Current Estimate and Cost Input Form were also submitted for the new case.

The use of the USCG 5136 process for tracking actual costs was considered inappropriate by SUPSALV. The process could work for initial cost estimating but it was a cumbersome practice for reporting actual costs on a case-by-case basis. In 50 prior USCG operations that SUPSALV supported, the use of 5136's had never been required as USCG always accepted the DoD approved system for cost reporting.

Section 4

Mobilization

Section 4
Mobilization

4.1. SUPSALV Mobilization

SUPSALV began mobilization on September 2, 2005 with the deployment of SUPSALV CAPT Jim Wilkins, Salvage Operations Director, Mike Herb, two SUPSALV salvage engineers, and a ROH support contractor to Alexandria, LA. Throughout the operation SUPSALV manned the command center and field operations stations with a Program Manager, a varying number of Salvage and Pollution Abatement Engineers and a Contracts Administrator.

4.1.1. American Salvage Association

The American Salvage Association (ASA) was on scene when SUPSALV arrived in Louisiana. With a number of large salvage firms based in the central Gulf of Mexico and many long-time clients affected by the storm, the ASA was a major player in the Gulf Coast salvage process. When SUPSALV indicated that they were interested in working with local salvors, the ASA expressed willingness to provide support to the SUPSALV team. An ASA representative was stationed in Alexandria, LA at the Incident Command Structure (ICS) and provided information on the assets of the ASA member salvage companies. Appendix C, Mobilization Documents, contains a copy of September 2, 2005 Waterway Recovery Task Force Contractor and Asset Report. This report shows the location and availability of the ASA's largest cranes and derricks and Salvage Masters available or on assignment. Other salvage equipment is listed as well. Figure 4-1 is an image from the inside the bridge of one of the key ASA assets, Donjon's ocean tug Atlantic Salvor, operating in Venice, Louisiana.

Figure 4-1. A view of the bridge of Donjon's Atlantic Salvor, Chesapeake 1000 ocean tending tug.

This report and the onsite ASA representative enabled the federal activities to identify activities and assets available to support emergent requirements. Donjon placed some of the local ASA contractors on subcontract to support the long term operations in Louisiana. Donjon also attempted to make the hiring of local lower Louisiana capable contractors a priority.

4.1.2. Donjon

Immediately after the hurricane, SUPSALV verbally tasked Donjon to support the operation. Donjon immediately took steps to deploy salvors and material to the affected region. Donjon's largest derrick barge, Chesapeake 1000, and the anchor handling tug, Atlantic Salvor, got underway on September 3, 2005 from their Newark, New Jersey homeport. Figure 4-2 shows Chesapeake 1000 operating in Venice, Louisiana. In early October, Donjon deployed the

derrick barge Columbia New York (a 400-ton fully rotating crane) and its ocean tug Powhatan to the Gulf Coast after they finished a task for another client in the Mid-Atlantic. Figure 4-3 shows Columbia utilizing its rotating crane capability to recover a shrimp fishing vessel in Venice, LA.

Figure 4-2. Donjon's Chesapeake 1000 tasked with several lifts at the southeast corner of Venice, LA.

Figure 4-3. Donjon's Columbia New York refloating a fishing vessel in Venice, LA

Upon seeing the extent of damage that Katrina inflicted, Donjon placed another team on contract to support the operation. T&T Marine Salvage, Inc. owned by Rudy Teichman of Galveston, TX, was already on scene having been mobilized by USCG BOA, was tasked to provide a heavy lift capability. T&T's derrick barge, Big-T and its attendant spud barge and crane George T were used extensively in the Venice and Empire areas. Figure 4-4 shows this team preparing to lift an overturned shrimp fishing vessel in Empire, LA on October 17, 2005.

Additional local support was identified and placed on sub-contract as the operation progressed. Donjon's ability to place additional teams under contract and manage their efforts was essentialto the success of the SUPSALV operation. Appendix C, Mobilization Documents, contains a sample Projected Tasking report listing the deployment of Donjon assets and subcontracted team's' assets.

Figure 4-4. T&T's Big T and George T preparing for a lift in Empire, Louisiana.

4.1.3. GPC Mobilization

SUPSALV directed Global Phillips Cartner (GPC) to mobilize Emergency Ship Salvage Material (ESSM) equipment along with attendant maintenance and operations crews. GPC provided salvage gear staged at the John C. Stennis Space Center in southern Mississippi during the period September 3 through October, 1 2005. They also provided standby oil pollution gear to Baton Rouge, LA during the period September 3 through October 26, 2005. Details of the gear that was deployed can be found in Tables 4-1 and 4-2. Additional details of the ESSM support can be found in Appendix F, ESSM Pollution Abatement Report.

Additional ESSM gear to support deployment of SUPSALV engineers to the Gulf Coast region included a heavy duty diesel pick-up truck and satellite phones. These items were picked up from Cheatham Annex, the ESSM site located adjacent to Williamsburg, Virginia as SUPSALV engineers began their trip south from Washington, DC. As the operation progressed. One of the ESSM command vans served as an on-scene command station for engineers working out of Empire, LA. The command van was equipped to provide electricity by portable generator and satellite internet access and phone system. A number of computers were set up and the Marine Debris Target database was loaded for ready reference. Figure 4-5 shows the command van, positioned alongside a damaged church (white building at left of image). Figure 4-6 shows that church early in the operation, before the grounds had dried out and the road was still closed.

Figure 4-5 and 4-6. ESSM's SUPSALV command van (on left) in Empire, LA. Image on right shows the same location during an early September flyover.

ESSM Salvage Equipment Deployed to John C. Stennis Space Center, MS	
• 12 Portable air compressor system, 175-CFM • 6 spare anchors • 6 21/4" shots of chain • 3 Single phase 5-KW diesel generators • 5 30kw diesel generators • 2 20kw diesel 1 phase/3 phase generators • 5 diesel light tower systems • 3 lighting kits • 10 model 6 hydraulic power units • 4 6" submersible pumping systems • 4 3" diesel submersible pumping systems • 20 3" diesel trash pumping systems • 6 1500-GPM 6" pumping systems • 2 3000-GPM 10" pumping systems	• 7 2-1/2" jetting pumping systems • 7 electric 4" submersible pumps • 8 hydraulic HPU 4" submersible pumps • 2 hydraulic HPU 6" submersible pumps • 1 45' command trailer • 1 40' command trailer • 1 20' command trailer • 1 8'x8' SATCOM container • 2 20' bunk vans • 1 SATCOM TCS-9700 in 45' command van • 1 Iridium SATCOM in 45' command trailer • 1 salvage support skimmer system • 1 SATCOM phone in 20' command van

Table 4-1. Salvage Equipment Deployed to Stennis Space Center, MS.

Oil response and pollution abatement equipment deployed to Clean Harbors in Baton Rouge, LA	
• 6 24' boom handling boats • 2 18' rigid boom tending boats • 3 rapid deployment skimmer system • 1 20kw generator system • 1 20kw generator system ancillaries • 1 sponson rack for SK0711 • 1 2' – 6" pumping van • 1 command van • 1 personnel bunk van • 2 solas berthing vans	• 1 rigging van • 1 shop van • 1 24' rigid hull inflatable boat • 1 cradle for rigid hull inflatable boat • 4 floating hose systems • 1 salvage support skimmer systems • 1 empty van • 3 5kw generators • 1 4.5 kw generator • 1 25kw generator

Table 4-2. Oil Pollution Abatement Equipment Deployed to Baton Rouge, LA.

4.1.4. Phoenix Mobilization

Phoenix International holds the SUPSALV's Undersea Operations contract. For this operation, Phoenix provided technicians to create and maintain a highly-detailed salvage target database and provide advanced GIS plotting support throughout the operation. As the operation progressed, the plotting team obtained National Geospatial Agency (NGA) imagery of the area dated from September 13 2005 and superimposed these images over electronic charts providing a level of detail down to individual salvage targets and their exact location in the water or on shore. Phoenix has a teaming arrangement with Zekiah Technologies that provided a GIS technician to assist in the plotting requirements. Zekiah also supported the requirement to stand up a GIS website under its Homeland Security contract. This allowed users in Washington, DC to monitor the mapping data generated at the command center in Louisiana.

4.1.5. Transportation Issues

The transportation infrastructure was significantly disrupted as a result of Hurricane Katrina. Movement between Alexandria, LA, where SUPSALV established its command post with the USCG ICS, and the harbors and river areas of Louisiana, Texas, Alabama, and Mississippi, where the salvage cases were located, was best facilitated by helicopter. Initially, the Coast Guard provided overflight support as the areas of destruction were being identified but because SUPSALV needed to operate independently and because it needed to put people on the ground to conduct detailed surveys, two helicopters were leased on a monthly basis from Alaska-based Evergreen Helicopters Incorporated. When operations began in Empire, one of the helicopters was pre-positioned at the Houma, LA airport. This craft, an AStar AS 350 B2 was used to make supply runs for the two salvage teams (Donjon's Chesapeake and T&T's Big T) operating in Empire and was assigned standby medical evacuation duties in the event of an accident as no medical facilities were operational south of New Orleans (45 - 55 miles).

The second helicopter was a larger 10 passenger Bell 212 and was used to make site visits and transport the salvage teams to meetings in New Orleans, LA (3 hours by car), Mobile, AL (5 hours by car), Lake Charles, LA, and other locations. Because of flooding, some of the lower gulf regions were not reachable by automobile. The helicopter was an ideal tool for moving people around the region. This craft typically cruised between 95 and 105 kts and required one refueling stop (typically at New Orleans International Airport) between its starting point, Alexandria, and the lower gulf locations such as Empire, Venice, Bayou La Fourche, and Intracoastal City. Figure 4-7 is an image of barges on the bank of one of the Intracoastal Waterways. It is taken from the Bell Model 212 helicopter during a joint October 2 SUPSALV/USCG overflight following Hurricane Rita.

Figure 4-7. Hurricane Rita damage as viewed from the Bell 212 chartered helicopter.

SUPSALV moved its command center to New Orleans on November 19, 2005. This move was planned for weeks and not executed earlier due to the unavailability of berthing space after the storm. Originally intending to move to Houma, LA, SUPSALV shifted its command center to one of the large hotels in downtown New Orleans when the Coast Guard Waterway Salvage and Documentation groups requested to continue co-locating with SUPSALV. The Coast Guard contingent was nearly 40 persons and the infrastructure in Houma could not support that large a group. On November 17, SUPSALV released the AStar from service retaining the Bell Model 212 helicopter to operate out of Houma airport. Later in November, as the roads became passable and FEMA contracted private ambulances to stand by in Plaquemines Parish, SUPSALV released the Bell from service.

Section 5

Operations

Section 5
Operations

5.1. First Response – Navy Participation in Task Force Katrina

The U.S. Navy responded to Hurricane Katrina as a part of Joint Task Force Katrina (JTF-Katrina) headed up by Lieutenant General Russell L. Honoré, Commanding General, First U.S. Army. The Navy's contribution to this task force was called Task Force 20 who was embarked in USS BATAAN (LHD 5). It consisted of seventeen U.S. Navy ships including amphibious assault ships, a hospital ship, supply ships and a salvage ship. TF 20 also included a number of dive teams that conducted hydrographic surveys, diving and channel clearance operations throughout the region. TE 20.7.7.1.3 was embarked on USS GRAPPLE (ARS 53). Although not assigned to TF 20, a representative from the office of the Navigator of the Navy was deployed to the region, significantly enhanced the coordination of the team's hydrographic survey efforts. The U.S. Navy's TF 20 effort was very effective and met a tremendous need in the first 4 weeks after Hurricane Katrina. Most TF 20 elements completed their mission and left the area by the end of September, 2005.

SUPSALV served to coordinate and act as liaison to Coast Guard, U.S. Army Corps of Engineers (USACE), and FEMA during this phase as they put commercial marine salvage assets in place for the long-term recovery effort. This chapter will describe both the Navy's short-term response and SUPSALV's short and long-term response to Hurricanes Katrina and Rita.

5.1.1. Navy Combined Task Force Katrina Operations

MDSU TWO, USS GRAPPLE (ARS 53), Navy Special Clearance Unit dive teams, supplemented by French and Canadian teams totaled approximately 22 officers and 225 enlisted personnel. They conducted operations between August 30 and October 1, 2005 in four states; Alabama, Mississippi, Louisiana, and Texas: conducting 229 dives and accumulated over 10,000 minutes of bottom time. They responded to USACE and Coast Guard requests for harbor and channel hydrographic surveys, provided salvage and clearance services, and as a result, salvaged or removed 2,300 tons of debris from key waterways. Because of the Navy diving and salvage efforts, over 95% of the waterways from Pensacola, FL to Galveston, TX were cleared for unrestricted traffic.

Table 5-1 is a list of Navy assets contributing to Hurricane Katrina recovery efforts and Table 5-2 portrays some of TF 20's operations and accomplishments.

Ships	IWO JIMA (LHD 7) BATAAN (LHD 5) SHREVEPORT (LPD 12) PATUXENT (T-AO 201) SWIFT (HSV 2) (leased) TORTUGA (LSD 46) ALTAIR (T-AKR 291) POLLUX (T-AKR 290) ALGOL (T-AKR 287) GRAPPLE (ARS 53) DEFENDER (MCM 2) GLADIATOR (MCM 11) SCOUT (MCM 8) PIONEER (MCM 9) COMFORT (T-AH 20) PILILAAU (T-AKR 304) BELLATRIX (T-AKR 288)	Dive Units	Naval Special Clearance Team 1 MDSU TWO Det Four MDSU TWO Det Two MDSU TWO Det 30 MDSU TWO Command and Control (C2) French Dive Team USS Grapple (ARS 53) Canadian Dive Team
		Aircraft and their bases	(5) MH-60S IWO JIMA (3) MH-53 IWO JIMA (5) MH-60S BATAAN (4) MH-53E BATAAN (11) SH-60F/H Pensacola (5) MH-60S Pensacola (14) SH-60B Pensacola (5) E-2C Pensacola (2) E-2C Atlanta

Table 5-1. Elements of TF-20.

Mobile Harbor, AL **Det Two, 30, and USS GRAPPLE** • Removed trees, damaged navigation aids and debris • Performed side scan sonar, surface supplied diving and SCUBA • Removed navigation hazards and cleared access to berths • Opened major southern port to unrestricted navigation.	
Port A La Heche, LA **Det Two** • Patched, plugged, pumped, raised and righted three ferry causeway sections • Restored ferry service to two cities saving rescue workers 2.5 hour detour one way to provide aid.	

Gas Oil Platforms (GOPLATS)– Louisiana Offshore Oil Port (LOOP) Port Fourchon, LA Det 30 • Conducted U/W survey of GOPLATS – LOOP • Survey extended to seven NM off shore • Utilized REMUS Autonomous Underwater Vehicle (AUV) • Verified debris fields and access to stations • Identified numerous hazards to navigation in areas which were inaccessible by MCMs • Prevented oil tankers from damage & fouling in anchorages.	
Harrison County Industrial Canal, MS Det Four • Five trawlers salvaged • Performed lifts up to 165 tons using contracted derrick • Investigated sunken vessels for possible drowning victims • Opened vital waterway for barges to deliver coal to power plant.	
Naval Support Activity, New Orleans, LA Det 30 • Refloated 30’ x 50’ causeway • Used AGA mask in SCUBA mode • Cleared running gear on three utility boats • Restored small boat service to NSA New Orleans base allowing base to support Coast Guard rescue vessels.	
Bayou Cadet and Bayou Portage, MS Dets Four and 30 • Worked in a number of inland waterways which were fouled with storm debris • Restored waterways for unrestricted service • Removed all manner of shore and marine debris including trucks, boats and general flotsam.	

Table 5-2. TF-20 diving and salvage operations.

5.1.2. Contaminated Water Diving

Hurricane damage in the Gulf region resulted in significant increases in the levels of toxins and pollutants found in the waters of Mississippi, Louisiana, and Alabama. In response to anticipated Navy diving operations, U.S. Navy Supervisor of Diving (SUPDIVE, SEA 00C3B) ordered preparation of guidance for conducting diving operations in the contaminated waters. On September 6, 2005, SUPSALV issued Diving Advisory 05-10: Guidance for Diving Operations in Contaminated Waters ISO JTF Katrina. The Advisory addressed preparation (vaccines), personal hygiene practices, protective measures while on site, minimum dive equipment requirements, decontamination procedures, and training reminders. A full copy of that Diving Advisory can be found in Appendix D, Operations Documents.

Mobile Diving and Salvage Unit Two requested SUPSALV to procure and emergency ship several Kirby Morgan 37 (KM 37) diving helmets and dry suits designed for diving in contaminated water. The suits were ordered and shipped to Emergency Ship Salvage Materials (ESSM) base, Cheatham Annex (CAX) where they were tested by Dr. Robert Whaley and BMCM/MDV Fred Orns (SUPSALV Diving Division) in the test pool CAX maintains. Once the test dive was completed, the suits were shipped to MDSU TWO in the field and MDV Orns was deployed to join them in Mobile, AL. The procedures and equipment proved a success in that they reduced the diver's exposure to the contaminants in the water. Figure 5-1 is a photo of a MDSU diver wearing a Kirby Morgan dive helmet during these operations.

Figure 5-1. Kirby Morgan 37 dive helmet used by MDSU TWO divers in contaminated water operations.

5.1.3. Hydrographic Survey

Hurricane Katrina winds, storm surge and strong currents impacted nearly all coastal and inland waterways, left marine and shore debris scattered in channels, and displaced sand and mud leaving the USACE uncertain of critical channel depths. The USACE placed high priority on surveying the channels for safe operation, coordinating surveys of the Mississippi River between Baton Rouge and the Southwest Passage. Surveys were also conducted for the USACE South Atlantic Division along the coastal areas of Mississippi and Alabama.

NOAA and Navy teams consisting of members of TF-20 conducted surveys. It was a combined effort between units of Navy first responders, NOAA, COMMINEWARCOM units, and SUPSALV contractors. Coordination was also a combined effort between TE 20.7.1.3 to the East (Alabama and Mississippi) and SUPSALV to the West (lower Mississippi River). The TF-20 units included:

- MCM 1 Class Mine Sweeper vessels
- Mine Countermeasure Helicopters
- MDSU TWO
- Special Clearance Team TWO
- Phoenix International

This team used towed sonars from small boats, the MCMs, helicopters, and MDSU TWO's REMUS Autonomous Underwater Vehicle (AUV). Results were reported to SUPSALV in Alexandria, LA who, with the help of LCDR Sean Memmen from the Navigator of the Navy office in Washington, DC, coordinated and collated the results and forwarded them to the USACE. By September 11, the Mississippi River survey had been completed and the river reopened to unrestricted daylight transits south of Mile Marker 104 (essentially from the North end of New Orleans) to the Southwest Pass (20 miles south of Mile Marker 0). Survey support continued until all the navigation channels were evaluated and reported safe for navigation. On September 19, NOAA NRT 6 demobilized and LCDR Memmen and both RN hydrographers demobilized. As of that date, all navigable waterways had been surveyed and contacts cataloged. Review of survey data by CG Sector Incident Command Post (ICP) Waterway Task Forces indicated that all contacts were identified for removal or below project depth. Areas requiring dredging had been identified. The Southwest Passage of the Mississippi River remained restricted for night travel pending restoration of critical Aids to Navigation (ATON). Figure 5-2 depicts a sample of the survey efforts associated with Mississippi River Gulf Outlet (MRGO) Canal region of Louisiana.

Following Hurricane Rita, Port Author, TX the Lake Charles channel, Trunkline LNG terminal, and turning basin depths required survey. A NOAA vessel, THOMAS JEFFERSON, conducted side scan and multibeam survey of the approach to the Sabine River and a Navy Fleet Survey team supported the survey of the Trunkline terminal. Figure 5-3 is a graphic of the basin's survey conducted September 30, 2005.

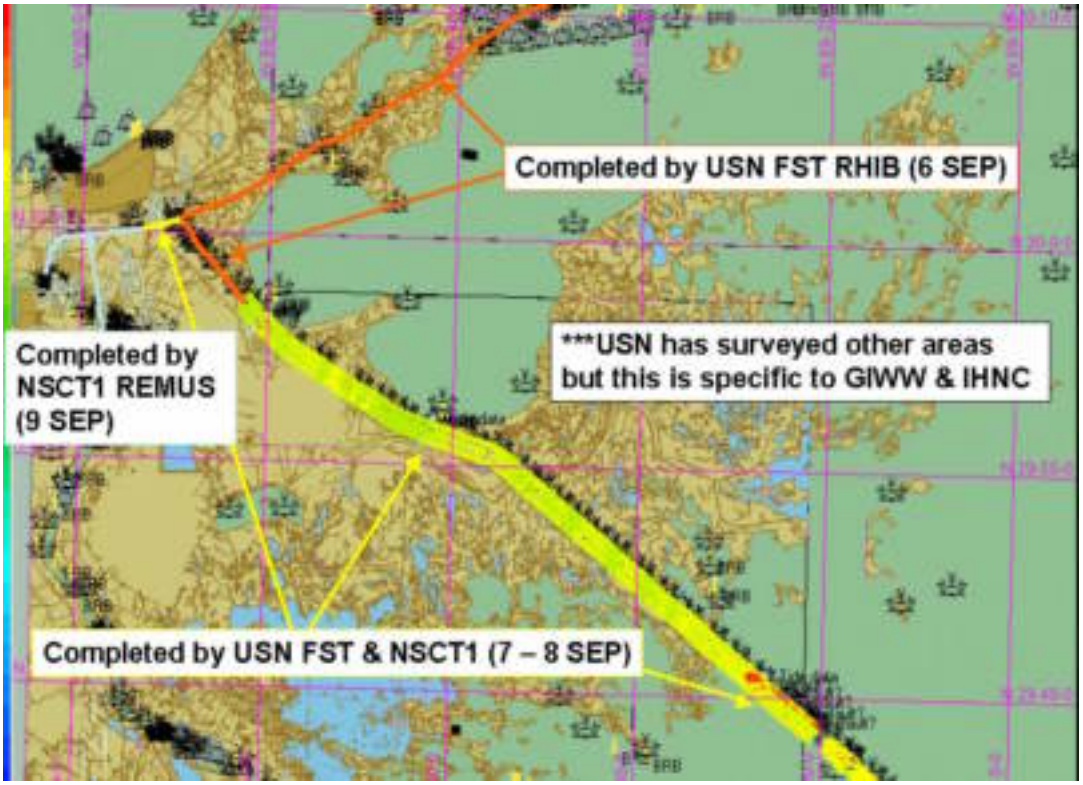


Figure 5-2. Status brief slide prepared September 19 reporting survey results along the Mississippi River Gulf Outlet Canal and a number of its feeder canals.

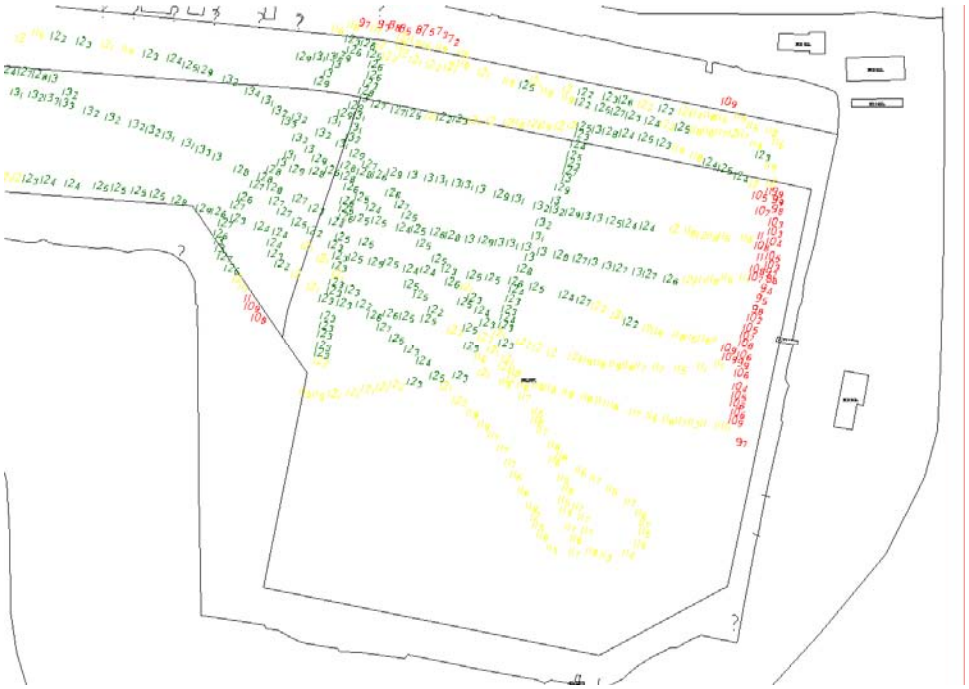


Figure 5-3. Results of Lake Charles turning basin LNG terminal survey of September 30.

5.2. Long Term Salvage Task

SUPSALV was not assigned to TF-20 but directed by CNO to provide coordinated strategic direction of national assets supporting hydrographic survey, salvage response, and oil pollution abatement. SUPSALV used its East Coast Salvage Contract to make commercial salvage teams available to support long-term requirements identified by state and federal government activities.

Over the first several weeks, SUPSALV, CAPT Jim Wilkins, and the Director of Salvage Operations, Mr. Mike Herb, met with federal and local government organizations across the coast, providing salvage insight and suggesting ways in which SUPSALV could assist in restoring the devastated waterways. The remainder of this chapter highlights SUPSALV's efforts in providing this long-term salvage support.

5.2.1. Louisiana

As identified in Chapter 3, Tasking and Funding, Louisiana was the state that received the majority of SUPSALV's long-term support. FEMA issued tasking to the USCG District Eight to perform debris removal (ESF-3) and pollution abatement (ESF-10) tasks. These next sections address the identification, classification, and removal process that was implemented working with the U.S. Coast Guard and USACE in the state of Louisiana.

5.2.2. Wreck Identification

Before salvage operations in the state of Louisiana could commence, wreck sites had to be surveyed and cases identified. Due to massive inland flooding and hurricane damage blocking most major roadways, most sites were not accessible by vehicle. USCG helicopters, drug interdiction jets, and contracted helicopters conducted overflight surveys. Small boats were used to deliver survey teams to locations and conduct local surveys. Phoenix GIS technicians were tasked to correlate reported vessels and debris by plotting their position and placing the case in the Marine Debris Target Database. The plotting team overlaid satellite imagery on the digital charts and printed sections of the waterways and harbors with the case numbers recorded onto the images. Figure 5-4 shows an example of the plotting support Phoenix provided. This section depicts part of Venice, LA harbor with case numbers assigned to the identified wreaks and debris.

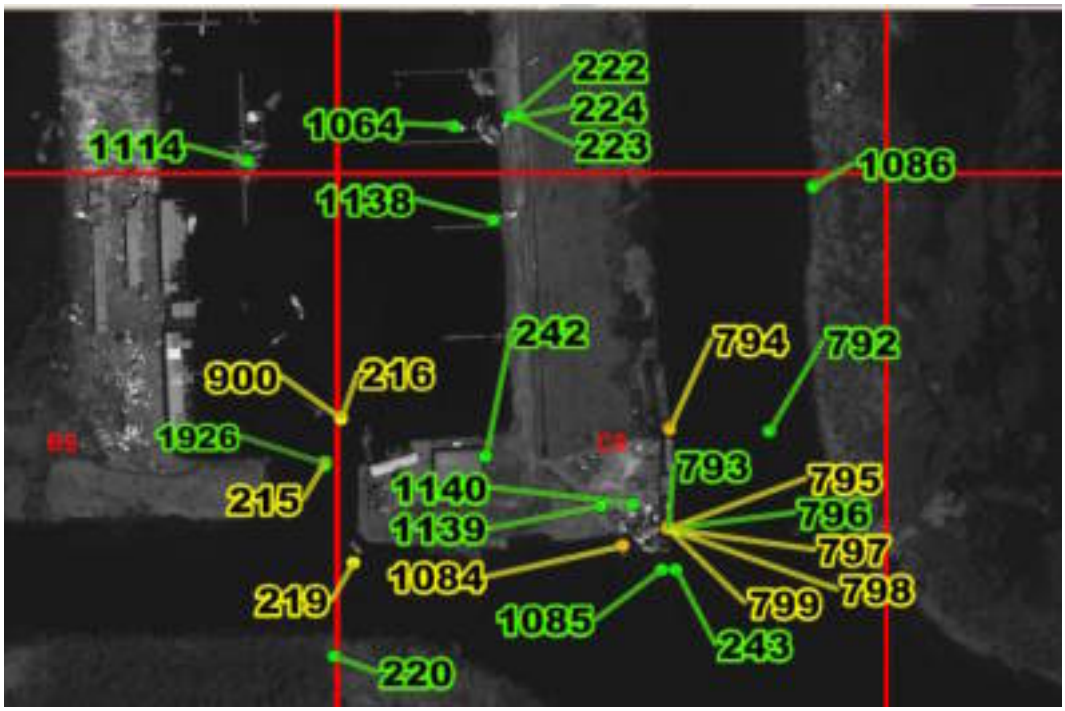


Figure 5-4. Satellite imagery used to chart salvage cases in Venice, Louisiana.

Routine case identification and database recording continued throughout the operation. The Coast Guard was primarily responsible for this task. It was managed by the Captains of the Port and performed by the Coast Guard field teams. The field team collected information daily and delivered it to the Coast Guard Salvage Emergency Response Team (SERT) in the Alexandria Command Center. The SERT group entered the information into the Marine Debris Target Database. The SERT group also attempted to determine ownership and responsibility for the vessel's removal. This determination, Responsible Party vs. Federalized Cases, became a critical path in assigning cases for removal and is addressed in Section 5.2.2.2.

5.2.2.1 Criteria for Removal

Thousands of boats and debris items were identified and recorded into the Marine Debris Target Database by Coast Guard Sector New Orleans staff. USCG Group Eight guidance, found in Appendix B, Tasking and Funding Documents, laid out the criteria for federal removal of the vessels. The three federal funding sources were FEMA's ESF-3 (general debris removal), ESF-10 (pollution response or prevention), and USACE (channel and levee clearance).

ESF-10 was rarely used for vessel removal as there were few vessels with active leaks. The third major funding source was managed by the USACE and was used to clear federal channels and anything on or adjacent to the levee system that impacted the USACE's ability to maintain or restore the levees. A number of USACE jobs were identified early on, but funding was delayed and in the meantime, owners salvaged many of the stranded vessels.

5.2.2.2 Federalized vs Responsible Party Cases

Almost all of the federalized cases assigned by the Coast Guard District Eight were determined to fall under ESF-3 tasking. One of the significant issues that required resolution before task assignment was whether the owner or "responsible party" was willing and able to remove the vessel on their own. Delays in this process were routine. Finding the owners, many of whom were displaced from their homes, was a challenging task and once located, the Coast Guard needed to ascertain whether the owners could manage the recovery on their own. If the boat was insured, the Coast Guard had to work with the commercial underwriters as well as the owners to determine if, how, and when the salvage was to be performed. Only when they determined the owner or responsible party was unable to perform the recovery was the vessel federalized and turned over to the SUPSALV team for action.

During the months of September, October, and early November, 2005 the number of cases in the database swelled to over 2,700 cases. Yet the number that had been federalized for SUPSALV action was less than 370. Only 530 of the remaining cases were assigned to the Responsible Party for action. This left about 1,800 cases unassigned. During mid-November, SUPSALV focused the command center teams on obtaining a disposition decision on those unassigned cases. In most of the cases, the Coast Guard indicated that they did not have sufficient information to make a federalization decision. Not knowing how those remaining cases were to be classified left SUPSALV unable to plan for completing its mission in Louisiana.

5.2.3. Follow-on Survey

In order to determine the disposition of the unassigned cases, it was necessary to put people on the ground who could make an assessment of each individual case. While the Coast Guard had initially identified the cases in the database, there was insufficient information on each case to make the federalization decision. When asked if those cases could be reviewed in more detail, the Coast Guard indicated that it was unable to provide enough experienced surveyors to resolve the status of the unassigned cases in a timely manner. To support this effort, SUPSALV identified, received approval for, and organized a team of experienced marine salvors who could survey the vessels, contact owners if possible, make an assessment as to the salvage/wreck removal priority, and report results to the command center on a daily basis. Appendix D, Operations Documents, provides a copy of the Proposal to Provide Potential Cases Survey Team. The criteria for how cases were categorized were drafted based on the Coast Guard Sector Eight message of September 14, that initially defined the Coast Guard debris removal task. This was adjusted throughout the mission as FEMA and USCG reassessed mission assignment requirements. These mission criteria changes complicated the tasking process and injected inefficiencies.

By mid-November SUPSALV had completed plans to deploy five Emergency Ship Salvage Material (ESSM) employees to serve as surveyors in Louisiana to conduct an assessment of each unassigned case. With approval from the Coast Guard on November 29, SUPSALV stood up teams to survey approximately 1,050 vessels that lacked sufficient information for the Coast Guard to make "federalization" determinations. The survey teams consisted of salvage experts from SUPSALV's ESSM facilities and Engineering Duty salvors from Mobile Diving and Salvage Unit ONE, Southwest Regional Maintenance Center (SWRMC), Pacific Fleet and Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility (PHNSY & IMF). The follow-on survey was conducted during the period November 29 through December 15. Prior to starting, the survey teams worked with the USCG SERT and established a process to reconcile information within the Marine Debris Target Database.

The team was directed to provide details on vessels meeting the following conditions:

(1) Case numbers meeting USCG ESF-3 requirements.
(2) Case numbers requiring waterborne heavy lift assets for removal.
(3) Case numbers requiring removal to facilitate repairs or modification to the levies.

The team filled out an ESF-3 Vessel Checklist for each case number located. A copy of this checklist can be found in Appendix D, Operations Documents. This form was developed jointly by SUPSALV/USCG and revised during the survey effort as part of a fine-tuning process. SUPSALV was concerned with targets requiring waterborne heavy lift. The USCG was concerned with targets that met ESF-3 definition. The forms were a useful tool in obtaining critical information and it is recommended that forms similar to these be used in future operations.

Pictures were taken of each case and attached to the checklist both physically and electronically to the USCG for entry into the salvage database. The survey team renamed the pictures with the individual case numbers prior to turning in the packages to the USCG for filing. The USCG linked the digital picture to the appropriate file in database.

On occasion, new vessels were identified which were not in the database. If these new contacts met ESF-3 criteria, the SUPSALV survey team provided USCG with a vessel checklist of the newly discovered vessel upon return to the Command Center. Because these targets had no case number, the USCG assigned a new case number for each vessel so the information could be electronically linked in the database.

Results. The following significant benefits were obtained from the survey teams:

1. Over forty cases determined to be offshore, no threat to navigation.

2. Over eighty cases verified as removed and could be closed with no further action.
3. Over 270 undetermined cases identified with incomplete or inaccurate geographic positions / information and were recommended for administrative closure.
4. Remaining cases were updated with new verified, relevant data.
5. Approximately 75 cases requiring heavy lift assets were validated.

As a result of the surveys, SUPSALV obtained a significantly better understanding of the scope of the remaining work and how to best execute that work.

Problems Encountered/Lessons Learned

The results of sending the survey teams into the field was very positive. In two weeks, nearly 1,000 cases were evaluated and federalization status determined. A team of experienced marine salvors/surveyors with the right tools and consistent business rules reduces the number of challenges the salvage team would faces during an operation. SUPSALV learned lessons in this operation that should be applied in the future. They are listed below:

- While the use of a survey team is dependent on operational and environmental conditions, it is possible that multiple surveys would be needed to survey an affected area.
- It is beneficial to have an administrative person as the single point of contact to submit information to the USCG. For a portion of this operation, three teams submitted information to the Coast Guard in different ways. This person could be in located in a field or central command center.
- There was difficulty in securing waterborne craft to use during the survey. Making small boats available to the survey teams would have allowed a more complete survey. Additionally, availability of 4-wheel drive vehicles would have simplified access to remote sites.
- Provide a standard “survey kit” to teams that include a backpack, camera, GPS locator, and clipboard. Paper copies of checklists were not useful in the rain and alternative methods need to be identified.
- The use of road mapping software using PDAs and GPS would assist in the location of cases.
- Teams relied on cell phones for communications. Without the reestablishment of commercial cell phone coverage, communication would have been a problem. The use of VHF radios for communications was of limited use due to line of site restriction even in the relatively flat Mississippi delta. The recommended solution would be the use of satellite telephones.
- One major problem experienced by salvage teams was data management. Each vessel checklist needed a picture attached to it with the associated GPS coordinates and date. If the survey teams

had a GPS-capable digital camera and laptop, the date and location coordinates would automatically be stamped on the image making data management much simpler. This could reduce field errors and increase accuracy.

- Assign a block of numbers in the database to facilitate data collection and submission on vessels found without case numbers. When the survey team identified a case not already in the database, one of the new case numbers could be assigned on the spot which would simplify the data entry task for the Coast Guard later that day.

5.2.4. Database – Marine Debris Targets

SUPSALV had to master tracking the identification, tasking, salvage, and costs associated with removal of each vessel in the three states affected by the hurricanes. This could only be accomplished by development of a complex database. The task was given to Phoenix because it had significant experience tracking search targets using an integrated database system. Phoenix developed and, based on USCG input, maintained the MS Access database that served as a tool to enter the cases, identify the vessel's location, owner, status of the vessel, and provided the ability to attach files to the case. The files typically attached included photos of the boats before salvage, copies of the salvage plan, tasking documents, and photos of the boats after their disposition.

5.2.4.1 Database Evolution

The database evolved during the operation and a number of considerations should be discussed to obtain a complete understanding of its development and use. Examples of records from the database are included in Appendix D, Operations Documents.

Initially, Phoenix developed a flat file type database to serve as a container to hold information on individual marine debris similar to the database used on the Space Shuttle Columbia job that they effectively managed 2 years earlier. This MS Access database was to contain fields for case number, location, type of debris, classification of the target, disposition, and other details. These fields were established over a number of meetings during the first week or two of the operation.

Figure 5-5. Phoenix database and charting team at work in the Louisiana Convention Centre, Alexandria, LA.

As the operation progressed, Phoenix brought their data vault on site and established a shared network environment providing access to two read-only workstations and two edit workstations. Full backup functionality and UPS power were provided. Data was entered into the system by the Coast Guard Salvage Group and the Coast Guard Documentation group. Those Coast Guard units used "Field Sticks" or USB hard drives to record case information on their own laptops using a copy of that morning's database that was loaded onto the field sticks. At the end of each day, the sticks were collected and any records that had been updated were reviewed by Phoenix staff and changes accepted. The database provided functionality that recorded the User ID and date stamp on all changes to the database's notes field.

Another modification to the database was its transition from a data container flat file to a database integrated with related documents. Phoenix programmers provided the capability to attach files and allow users to see and download files associated with the case. This capability was used to provide images of the case and eventually tasking, salvage plans, and funding documents were added to provide audit quality documentation.

There was a period where documentation was not keeping up with the process. During these weeks, Donjon's internal spreadsheet was used when accurate figures were sought on the number of wrecks salvaged or number of salvage jobs authorized. Because the Coast Guard needed accurate numbers

for their reports and SUPSALV needed independent recording of the process, steps were taken to reinforce the prescribed data collection and documentation process ensuring the Marine Debris Targets database remained the most accurate and complete recording of the each milestone in the salvage process. Then the salvage team embarked in an intense period to review the dataset and update the records to reflect the current status of each case. The major result of this phase was the following:

- Data accuracy was validated
- The database became the single complete source of
- Specific database elements were updated as a part of the salvage approval and completion process. With the database fully integrated into the process, the database transitioned from an integrated document and data container to a process control application.

A final series of documents that were incorporated into the database were financial tracking documents. These included estimates, tasking, and actual spending documents providing a means to verify that each task was staying within its budget.

In mid-November, the Coast Guard Sector New Orleans, which is comprised of Captain of the Port New Orleans and Captain of the Port Morgan City, who were initially after the storm co-located at the ICP in Alexandria LA, asked SUPSALV if the database could produce tailored reports for their area of responsibility. For this purpose, the case‘s “Parish” field was added and area-unique reports were produced. During this same period, SUPSALV expressed concern that the number of federalized cases and responsible party cases were dwarfed by the number of unassigned cases. A major effort was made to close the unassigned cases or assign them as Federalized or Responsible Party cases. This topic is addressed earlier in this chapter.

Two final evolutions took place with database. First, with the addition of all of the finance documents, many of which were scanned, the size of the database and its associated folders containing supporting documents grew to over 5 GB. When the database exceeded the size of the memory sticks the field operators were using, attachments were not downloaded and only the database fields were provided to the field teams. While this allowed continued sharing of data, it reduced the convenience of having case images attached that often helped clarify identification of cases in the field.

Lastly, when SUPSALV, completed heavy lifts which were the primary reason for staying in Louisiana, it made plans to turn over operations to the Coast Guard. The Coast Guard contracted with Shaw Environmental to serve as the lead salvage contractor. Shaw was planning to issue a subcontract to Phoenix to continue running the database and charting services but that never occured. In the end, the Coast Guard hired Phoenix directly. They stayed on after SUPSALV terminated salvage operations, providing data management and charting services in support of the Coast Guard.

5.2.4.2 Internet Access

Early in the operation, Phoenix was asked if it was possible to deploy the database on the web for sharing on information back in Washington. There were a number of reasons this was not undertaken:

- Create a web application would mean a total redesign of the current database which involved extensive development time and cost.
- Implementing changes to a web application is much more complicated than making changes to the simple MS Access program.
- Access by local users would have been slowed to the speed of the shared internet connection at the Alexandria Command Center reducing efficiency of the on-site operators who were the primary users of the system.

In the end, a terminal server solution was proposed but access to that service was not possible at the Navy Yard with the restrictions imposed by the Navy Marine Corps Internet. The individual images and plotted charts were made remotely available via Pheonix's (Zekiah's) GIS application.

5.2.5. Debris Removal Operation

5.2.5.1 Assets Supporting Debris Removal

As the Salvage and Wreck Removal Task Force was being formed, SUPSALV contacted Donjon Marine, Inc. to provide salvage support. Donjon leadership and staff deployed to assist in the initial site surveys and ordered their largest salvage platform, Chesapeake 1000, to make preparations to get underway. Chesapeake 1000, tended by the ocean tug Atlantic Salvor, transited the eastern seaboard, entered the Gulf of Mexico, and began lifting commercial vessels in Venice, LA on September 20, 2005. As the number of salvage jobs were defined, additional assets were ordered to the scene. Donjon hired the salvage branch of T&T Marine of Galveston, TX to support the operation. T&T was a significant contributor for the duration of the operation. The heavy lift marine assets provided by these two firms during this operation are listed below.

- Donjon Marine – 1000-ton capacity derrick barge "Chesapeake 1000", 200-ton spud/rigging barge, Pine Valley Marine, 7000-HP tending tug Atlantic Salvor. A picture of Chesapeake 1000 can be found in Figure 5-10.
- Donjon Marine – 400-ton capacity revolving crane derrick barge Columbia New York, 8000-HP tending tug Powhatan, 1200-HP tender tug Herbert Brake. A picture of Columbia can be found in Figure 5-9.
- T&T Marine Salvage – 575-ton derrick barge Big T, with tender spud barge George T with 150-Ton crane, three 1000-HP tending tugs. A picture of this equipment can be found in Figure 5-12.

There were also a number of American Salvage Association Salvors engaged in RP/private work in support of the region's recovery. The responsible

parties also contracted other salvage firms to recover boats. Some of the larger firms operating independently from the Navy/Coast Guard effort Bisso Marine Co. and Titan Maritime, LLC.

Because of the large number of wrecks in southern Louisiana which were stranded onshore, out of reach of waterborne lift craft, there was a need for more capability and diversity of assets. Responding to this requirement, Donjon solicited the commercial sector for suitable equipment and capabilities to support these salvage operations. By mid-November, a number of additional contractors had been hired. These contractors provided land assets (cranes) and waterborne assets (scrap, storage, and spud barges, and smaller floating cranes). Figure 5-6 shows one of the large land cranes performing a lift.

Figure 5-6. Gulf Marine 440-ton land crane preparing to lift a shrimp boat in Venice, LA.

Donjon tasked these contractors to handle vessels within their capability within a specific geographic area. Donjon continued to manage tasking and funding. The local contractors who supported this operation are listed in Table 5-3.

5.2.5.2. Barges on Banks and Levees of Mississippi River

Due to an unprecedented storm surge, a large number of barges washed up onto the banks of the Mississippi River during Hurricane Katrina. The storm

surge swept up the river in Plaquemines and Orleans Parishes and pushed the barges and marine vessels out of the river and waterways and onto the banks of the levees. During the weeks following Katrina, the responsible parties (RP) removed a significant number of those barges.

Kostmayer Construction, Inc.
B. J. Couvillion, Inc.
Patriot Holding
Clean Harbors Environmental Services
Gulf South Marine Salvage Team
Pine Island Towing/McCulley Marine Team
Bisso Marine Company, Inc.
Tom's Welding
Resolve Marine Group
McKinney Marine
Steighner's Crane
Dillon Environmental Services
Tidewater Docks, Inc

Table 5-3. Local subcontractors supporting the SUPSALV salvage operation.

On October 11, the U.S. Army Corps of Engineers made SUPSALV aware of the requirement to have approximately 50 vessels and barges removed from the levees. USACE developed a priority request to FEMA for removal of the barges. SUPSALV agreed to coordinate with FEMA and USCG to expedite assignment and removal. On October 20, FEMA concluded that vessels on the levees were the responsibility of USACE and outside the ESF-3 Mission Assignment. USACE would have to fund these vessels' removal but based on a MOA with the Coast Guard, USACE would provide funding to Coast Guard and used the existing Coast Guard process with SUPSALV for work tasking and management. Actual work on the USACE vessel list was delayed by many of the same legal and RP notification processes that delayed vessel removals with the Coast Guard ESF-3 Mission Assignment. Figure 5-7 provides examples of barges that were grounded as a result of Katrina's flooding.

The USACE list of vessels to be removed was finalized in late November and SUPSALV began work on that list in December.

Figure 5-7. Examples of barges grounded as a result of Katrina's storms surge.

5.2.5.3. Venice – Plaquemines Parish, LA

Venice, LA, in Plaquemines Parish, is the first major Mississippi River port north of the Gulf of Mexico. It is a major oil well re-supply port and serves as base for a large fishing fleet and many other sea-based businesses. Venice was hit with a tremendous storm surge, estimated between 20 and 30 feet. The port suffered massive damage to all shore based structures and most vessels in the port. Hundreds of boats were sunk or partially sunk at their slips, in the channels, or in the main channel that leads to the Mississippi River.

Many vessels were washed onto the surrounding beaches, marshland, and levees. As boats were identified, they were added to the Joint Salvage Database. By the second month following Hurricane Katrina, this database contained 168 cases in Venice, LA. Figure 5-8 is a chart of southern Louisiana highlighting the cases being tracked in Venice LA and Empire LA. A larger scale chart of the Venice cases can be found in Appendix D, Operations Documents.

The first significant number of approved salvage tasks by the Coast Guard wes in this area. SUPSALV assigned the Chesapeake 1000 and the Big T salvage teams to begin working in this area immediately after Hurricane Rita passed through the area. After transiting from their hurricane mooring site up the Mississippi, Big T arrived in Venice and started its first lift on September 27 and the Chesapeake 1000 began its first lift on September 30. This combination of assets was able to recover vessels at an average rate of 2 to 5 per day. On October 12, Donjon's crane barge Columbia New York arrived in Venice, having transited the Gulf shoreline past Mississippi.

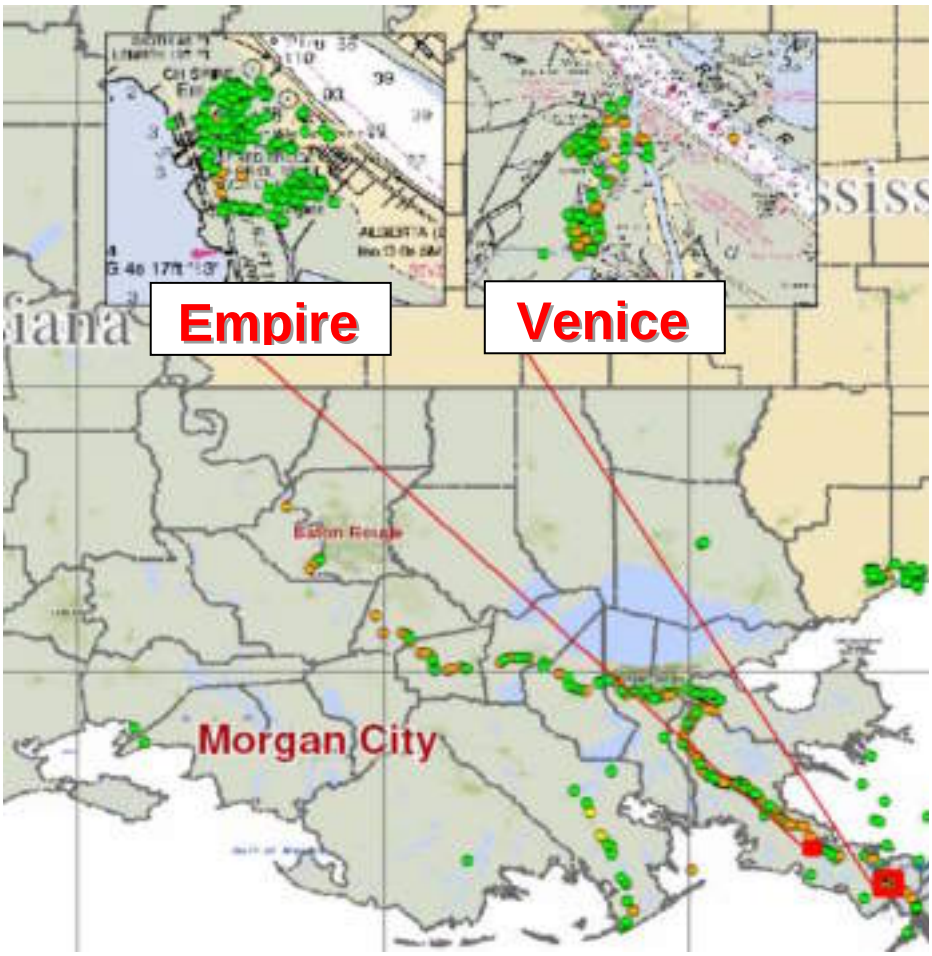


Figure 5-8. Marine debris in southern Louisiana dated October 18, 2005.

Columbia New York had been standing by in Alabama pending approval to work a number of Bayou LaBatre, AL cases. When that tasking was delayed, she was ordered west to Louisiana. With a fully revolving crane, she was better suited for working in smaller channels and marinas where Chesapeake 1000 or Big T, both shearlegs, had less maneuvering room. As Columbia NY began its transit to Venice, Big T and George T were reassigned up the river to begin salvage operations in Empire, LA. Figure 5-9 is Columbia NY working the marina in Venice and Figure 5-10 is a photograph of Chesapeake 1000 reaching over a building in Venice to lift a large shrimp boat.

One of the issues SUPSALV had to deal with at each salvage site was the disposition of the salvage vessels and debris. In general, boats with generally sound hulls were refloated and tied off to available piers. Many could not float and had to be staged ashore or on barges. In Venice, Donjon used barges for much of the non-recoverable debris. These barges, once loaded, had to be offloaded somewhere, subjecting the cases to double handling and additional incurred costs. Another unplanned cost was the subsequent sinking and pumping out of a number of refloated vessels. Once a vessel was tied to a piling,

it was expected that the owner would take responsibility for it. Unfortunately, many of the owners were not in a position to take responsibility. With their own homes destroyed, many were not even in the area. Additionally, the road to the southern tip of Venice was not open to vehicular traffic for quite some time. Even when it was passable, a checkpoint manned by local law enforcement prevented access to the southern parts of the parish.

Figure 5-9. Donjon's Columbia New York lifting fishing boats in the marina in Venice, LA.

Figure 5-10. Donjon's Chesapeake 1000 working a long-distance lift in Venice, LA.

5.2.5.4. Empire – Plaquemines Parish, LA

Empire, LA is a smaller port, located on the west side of the Mississippi River north of the junction known as Head of Passes at mile marker 29. Also in Plaquemines Parish, and like Venice, it has waterways to the west into the Gulf as well as access to the east into the Mississippi River. As in Venice, Katrina left numerous vessels stranded after the storm surge swept through. Many fishing boats were capsized or sunk in the waterways and many more were sunk or stranded in the surrounding area. The main highway was flooded after the storm and a section of road immediately south of the channel on Rt 23, Lee Bridge, was blocked by two 400-ton Menhaden fishing vessels, locally known as "Pogy" boats. Approximately 25 small fishing and pleasure boats were slammed into the side of the Lee Bridge. Some of these can be seen in Figure 5-11. The SUPSALV database held 302 cases in this area on October 17. SUSALV assigned the Big T and George T to begin working this area on October 12 and on October 18, Donjon assigned a second salvage team, Kostmayer Construction to supply land cranes to Empire. Figure 5-12 is a picture of T&T derricks preparing to lift a sunken fishing boat in the western entrance to Empire, LA. Figure 5-13 is an image of the “boatyard” where recovered boats were blocked up and made available for owners to work on restoring them. Empire was one of the few area where arrangements were made for locally storing damaged boats ashore. Appendix D, Operations Documents, contains a large scale chart of the Empire Cases.

Figure 5-11 Fishing vessels piled up against the south side of the Lee Bridge in Empire, LA.

Figure 5-12. T&T's Big and George T working on a lift on the westward approach to Empire, LA.

Figure 5-13. Recovered boats blocked and stored in the boatyard in Empire, LA.

5.2.5.5. Bayou La Fourche - Lafourche Parish, LA

Bayou La Fourche in Lafourche Parish is a small port about 60 miles west of the major Mississippi River outlets. It is the seaward end of a significant navigation route for the commercial fisheries market and offshore supply boats

that connects with the Intercoastal Waterway between Houma and New Orleans at Larose, LA. Bayou LaFourche is one of several ports managed by the Morgan City Captain of the Port. Over 130 cases were identified, both vessels and debris, throughout their district including Jefferson Parish (which included Grand Island), Terrebonne Parrish, St. Mary Parish, LaFourche Parish, Iberia Parish, and Cameron Parish. SUPSALV directed Donjon to hire a local contractor, Tidewater Docks, to accomplish the work, but agreement was never reached as to the disposition of the raised vessels. Without parish agreement about where the debris would be placed and who would pay for their disposition, the only task accomplished was the raising of F/V Ironman from the Fourchon Harbor. This vessel, pictured in Figure 5-14, was righted and re-floated on October 5 by Tidewater Docks as an ESF-3 task. With the exception of a number of priority vessels in Morgan City, this parish did not experience the extent of devastation as in Venice and Empire, LA and chose to hire local contractors to help with cleanup.

Figure 5-14. F/V Ironman capsized in Fourchon Harbor prior to removal by Tidewater Docks.

5.2.5.6. Intracoastal City – Vermilian Parrish, LA

Hurricane Rita inflicted strong winds and heavy storm surge to ports along Vermilian bay located in Vermilian Parish, LA. The Coast Guard conducted its survey in late October and 28 vessels were federalized by the Captain of the Port of Morgan City. These cases were tasked under the existing ESF-3 process and the work was accomplished by Donjon's Columbia NY between October 20 and November 12. Figure 5-15 is a photograph of F/V Captain Johnny II which was stranded on shore in Intracoastal City in Vermilian, LA. Figure 5-16 shows Donjon's derrick barge Columbia NY repositioning F/V Michele Rose along the shore of Intracoastal City.

Figure 5-15. F/V Captain Johnny II, stranded in Intracoastal City. Donjon's Columbia NY lifted and refloated the vessel on November 9.

5.2.5.7. Lake Charles – Calcasieu Parrish, LA

On the western border of Louisiana is Calcasieu Lake. At the north end of the lake is the Liquefied Natural Gas (LNG) Trunkline Terminal in Lake Charles, LA where nearly 35% of the nation's liquid natural gas comes ashore. The terminal, completed in July 1981, is the United States' most modern LNG importation terminal. It is located on a 382-acre site in the Lake Charles Harbor and Terminal District, about nine miles southwest of Lake Charles, LA.

Hurricane Rita impacted Lake Charles with high winds, strong surge, and thoroughly littered the turning basin with a thick mat of flotsam along with a number of small vessels. Because there was a concern that the channel depths may have changed due to sediment deposits, SUPSALV surveyed the channel

and harbor. Additionally, SUPSALV chaired a meeting at the Lake Charles LNG turning basin wherein consensus was achieved from the USCG Captain of the Port (COTP) of Morgan City, USACE, LNG Terminal, British Gas, and Lake Charles Pilots for surface debris corralling and removal.

Figure 5-16. Donjon's derrick barge Columbia NY repositions the wooden shrimp vessel Michele Rose from its stranded position ashore to the waterway in Intracoastal City, LA.

Under USACE funding, SUPSALV used oil booms to capture and contain the debris. The material was then pulled ashore with bucket-loaders and piled up in the parking lot adjacent to the basin. Permission was obtained to burn the debris (principally organic – grasses, etc.) and a portable incinerator was ordered. By the time the incinerator was brought to the site, the sodden debris had begun to decompose to the point that the incinerator was unable to effectively burn it. At this point, permission was obtained to transport the debris to a landfill. Figure 5-17 is a series of pictures documenting the debris accumulation and cleanup. Several sunken vessels were intermixed with the debris. Some of them were removed using the bucket loaders and others were removed by the vessel owners.

Figure 5-17. Debris removal in Lake Charles LNG turning basin.

5.2.6. Mississippi

Mississippi was severely impacted by Hurricane Katrina and the Navy tasked TF-20 to provide initial emergency response to conduct surveys, clear channels, and salvage debris in the waterways. These efforts were undertaken by primarily by MDSU TWO. Figure 5-18 shows a channel clearance task undertaken by MDSU TWO in the Harris County Industrial Seaway.

Figure 5-18. Fishing boat being raised out of the Harris County Industrial Canal by MDSU TWO and SUPSALV-leased derrick barges.

Another operation conducted by MDSU TWO was the September 6 survey of the Pascagoula River and clearance diving conducted around the Navy ships at the dock in Ingalls Shipbuilding facility in Pascagoula, MS. Figure 5-19 shows a MDSU TWO sailor preparing a Kline 3000 towed sonar to conduct a survey of the channel leading into Naval Station Pascagoula, MS.

After the initial emergency response, government activities in Mississippi did not ask for any follow-on, long-term support. After September 30, SUPSALV did not provide any further salvage assistance in the state of Mississippi.

Figure 5-19. Damage Controlman 1st Class Christopher Daly, assigned to Mobile Diving and Salvage Unit Two, prepares a towed sonar to survey the channel leading into Naval Station Pascagoula, MS, to search for large debris hidden beneath the waters as part of the Hurricane Katrina aftermath repairs.

5.2.7. Alabama

Alabama was to the east of Katrina's maximum winds but they received gusts over 100 mph and a substantial storm surge. Damage along the coast was significant and many of the fishing and pleasure vessels on the tidal waters were washed inland.

During the immediate weeks after Hurricane Katrina, elements of TF-20 responded to emergency requests for salvage and channel clearance as well as harbor and channel surveys. An example of this emergency support was provided in Mobile Harbor. It included removal of a large aid to navigation that became a hazard to navigation in this critical waterway. USS GRAPPLE (ARS 53) was tasked by CTE 20.7.1.3, CDR Glenn Alan, CO MDSU TWO, to inspect the object and if possible, remove it from the river. USS GRAPPLE divers determined that the object was a large aid to navigation. After the divers rigged the navigation aid for lift, it was successfully recovered using USS GRAPPLE's 40-ton boom. Figure 5-20 shows the channel marker coming up and over the starboard side of USS GRAPPLE.

Figure 5-20. USS GRAPPLE lifting a channel marker clear of the channel in Mobile, AL.

MDSU TWO also worked in Alabama and removed a 85-foot shrimp boat from Bayou LaBatre. This vessel was obstructing the channel and needed to be removed to facilitate navigation in the channel.

Beyond these two emergency tasks, additional work in Alabama was identified in Bayou LaBatre and off Little Sand Island near Mobile. The USACE

reported up to 70 additional vessels that were stranded or sunk in Bayou LaBatre. SUPSALV ordered Donjon's Columbia New York tended by POWHATAN to the area on October 2 with the understanding that tasking was imminent. By October 4 USACE formally assigned 19 of 31 anticipated vessels for SUPSALV recovery from Bayou LaBatre, AL. The remainder of the 70 vessels were to be recovered by their owners/underwriters. On October 5, SUPSALV was advised by USACE in Mobile District that FEMA and USACE lawyers had not agreed upon the language for "rights of entry" documents. Approval to proceed on the first 19 vessels was placed on hold for an estimated two weeks. On October 8, SUPSALV ordered Columbia NY to Venice, LA to begin lifting vessels where tasking issued. That move also allowed transfer of Big T derrick to Empire. Over the next few weeks, the USACE Mobile District could not resolve various legal issues and determined that they would plan the recovery in Bayou LaBatre with local assets. SUPSALV did not return to Alabama for any of the follow-on USACE work.

5.7.4.1. Little Sand Island (northwest corner of Mobile Bay)

The Navy and the Coast Guard each maintain a firefighting and materials test ship in a cove on Little Sand Island near Mobile, Alabama. The Navy's Ex-USS SHADWELL is a decommissioned LSD, 3,500 Tons as loaded and the Coast Guard's STATE OF MAINE is a former passenger ship and is 15,000 Tons as loaded. During Katrina, the storm surge shifted these two vessels from their permanent moor and grounded them in the cove. SHADWELL was shifted to port and driven hard aground. STATE OF MAINE was driven to port and seaward. Figures 5-21 show the position of the two ships before and after the storm.

Figure 5-21. Ex-SHADWELL (LSD 15) (to port) and STATE OF MAINE (to starboard) before (left image) and after (right image) Hurricane Katrina.

SUPSALV engineers, Mr. Rick Thiel and LCDR Joshua Price and Navy Salvage Engineer, LCDR Chuck Ehnes, conducted a site survey in Mobile Bay and worked with USCG for development of tentative salvage plans, event milestones, and cost estimates for retraction of both vessels.

Ex-SHADWELL moored to the port of STATE OF MAINE, was well grounded, listing 7 degrees to starboard. She was reported to be structurally sound. Her bottom plating is .75 inch. Some small cracks were noted on the starboard chine that would need to be monitored and/or patched.

On October 11, CNO message 112358Z OCT 05 ordered NAVSEA SEA 00C to provide salvage assistance to Naval Research Laboratory (for Ex-SHADWELL) and U.S. Coast Guard (for STATE OF MAINE). Additionally, CNO authorized liaison with COMFLTFORCOM regarding use of Fleet assets (MDSU and ARS). Liaison with NRL and Coast Guard authorized to prepare funding estimates and identify sources.

Donjon Marine was tasked to sub-contract the dredging of the cove and beneath the two vessels. Once dredging refloated the vessels, they were moved to their permanent mooring location and remored. This task was accomplished during the period of 1 March – 26 June 2006. Details of this salvage effort are available in the Ex-SHADWELL / STATE OF MAINE Salvage Report.

5.2.8. Texas

Texas is the only state that was impacted more by Hurricane Rita than by Hurricane Katrina. Rita passed over the Gulf Coast on September 23-24 2005 and an initial assessment showed significant flooding along the Intracoastal Waterway between the lakes. No obvious large ships or vessels were identified in distress or blocking channels or waterways. A more detailed survey following an improvement in the weather in the Houston/Galveston area indicated high water but no evidence of significant salvage requirements. With no major salvage work to perform, channel surveys were the next near term requirement. On September 27, SUPSALV requested support from LCDR Sean Memmen, from the Navigator of the Navy Office, and deployed him to the Houston Incident Command Center. USCG and began coordinating survey assets between NOAA, USACE, USN, and Contracted vessels. NOAA ship THOMAS JEFFERSON began surveying the Houston/Galveston ship channel. Upon finishing that survey began the survey from the Sabine Pass sea buoy to channel jetty and then further up the Sabine river. NOAA contracted Furgo to survey the Calcasieu Pass from the jetties to the bar cut channel.

Once the surveys were complete, the only Hurricane Rita tasking SUPSALV received was in Louisiana. No government activities in Texas required long-term salvage support.

Section 6

Conclusion

Section 6
Conclusion

SUPSALV provided FEMA, U.S. Coast Guard, and USACE hurricane recovery support from the first days of September 2005 through January 13, 2006. During this period, the staff and contractor teams identified heavy lift tasks, prepared recovery plans, and salvaged vessels, and recovered marine debris from the lower Louisiana coastline. During this period, they conducted 475 heavy lift tasks and recovered over two thousand tons of debris from the Lower Louisiana and Mississippi River waterways to help the Gulf Coast's marine industry toward recovery. Figure 6-1 is an image of the marina in Empire, LA where salvaged vessels were stored and made available to owners for repair. By January, 2006, even though electricity had not been restored to the area, the "shipyard" had a working travel lift on site supporting the launching of repaired vessels.

Figure 6-1. The shipyard in Empire, LA where salvaged boats were stored for owners to begin the repair process.

6.1. Wrapping Things Up

While committed to supporting the U.S. Gulf Coast regions affected by Hurricanes Katrina and Rita, SUPSALV was compelled to define their mission with a clear end point and complete that mission as soon as possible in order to turn recovery of the region over to local industry and reduce the cost burden to federal taxpayers. In early November, it became apparent that the bulk of tasking that made sense for SUPSALV to accomplish was completed and additional potential tasks were not materializing. For a historical perspective,

SUPSALV's mission at the direction of the Chief of Naval Operations and the Deputy Secretary of Defense was:

> *"Under the direction of FEMA, provide coordinated strategic direction of national assets for KATRINA * - related hydrographic survey and marine salvage response in selected off-shore areas, channels, waterways, ports and harbors, with an ultimate goal of critical maritime reconstitution consistent with FEMA priorities.*
>
> *National assets include the major capabilities of industry, DOD and other Federal agencies for hydrographic survey, marine salvage, and oil pollution abatement incident marine salvage."*

*On Friday September 23, 2005 as Hurricane RITA (then Category 5) approached Houston/Galveston, USCG District 8 requested the SUPSALV mission be expanded to include Hurricane RITA affected areas as well as Hurricane KATRINA.

Given this mission assignment, SUPSALV had reason to believe that its role should be concluded concurrent with FEMA's emergency response.

6.2. Exit Strategy

U.S. Coast Guard, in support of FEMA marine, wreck, and debris removal and USACE levee work, continued to assign marine salvage and wreck removal work to SUPSALV to execute through SUPSALV's commercial salvage contract. Due to broad and sometimes unclear interpretation of the FEMA mission assignment for marine wreck debris removal, USCG tasked SUPSALV (with full SUPSALV endorsement) to undertake both (1) conventional marine salvage missions (vessel removal in waterways and on shorelines) and (2) less conventional marine salvage missions (non-vessel marine debris removal incident to clearance of waterways and immediate surrounding shoreline areas). For the conventional marine salvage missions, specialized heavy lift equipment and experienced marine salvors were provided through the SUPSALV contract. Additionally, land-based heavy lift assets were provided through subcontractors to recover vessels that could not be reached from afloat assets. In execution of unconventional marine salvage missions (non-vessel debris recovery on land), SUPSALV used its salvage contract to engage local subcontractors capable of land-based, non-vessel debris removal.

As it became apparent that recovery operations best suited for SUPSALV were coming to an end, SUPSALV developed an exit and transition strategy for disengagement from coordinating site operations. This strategy consisted of several phases with an overall goal of completing cases that could be completed most effectively accomplished by the large marine lift craft mobilized to the area. This transition strategy consisted of:

- Survey: SUPSALV survey teams deployed and gathered data on known remaining but unclassified cases.

- Classification: USCG used survey data to classify remaining federalized work for SUPSALV.
- Assignment: Federalized work was assigned to either SUPSALV (only those requiring specialized heavy lift and salvage expertise) or non-SUPSALV (within capability of local contractors and locally administered contracts).

SUPSALV launched survey teams just after Thanksgiving and the heavy lift list was developed in early December. An issue that continued to make work definition a challenge was that the definitions for USCG ESF-3 mission applicability were in regular flux as the USCG interacted with local parish officials and USCG District Eight legal.

The exit strategy developed was for SUPSALV to complete existing tasks and limit new tasking to that which specifically requires heavy lift assets and specialized salvage expertise. Any new tasking, which was either non-vessel or vessel debris that required no specialized salvage expertise, whether afloat or on land, was to be undertaken by local salvage firms or contractors through USCG administered Basic Ordering Agreement (BOA) contracts. The amount of time that had passed since Hurricanes Katrina and Rita no longer required the expense of immediate response capability. Instead, the lengthy work identification, assignment, and funding process that was currently in place, argued for hiring local capability for as much of the remaining work as possible. USCG concurred with the SUPSALV exit strategy but, recognizing the large amount of work remaining to clear secondary waterways, began to look at various management options for continuing project execution.

6.3. Execution

SUPSALV exit strategy was undertaken as follows: (taken from the SUPSALV Hurricane Katrina/Rita Exit Strategy memo from mid-November which is included in Appendix E, Conclusion Documents).

a. Current tasking: SUPSALV team would complete existing work assignments as expeditiously as possible, with a target date to demobilize afloat heavy lift assets no later than January 31, 2006. Originally, SUPSALV planned to complete its current tasking by December 22, 2005 but in mid-November the USACE identified a large number of tasks that potentially required SUPSALV's heavy lift assets.

b. New tasking: USCG and USACE would expedite assignment of any new cases that required specialized heavy lift assets and skills to SUPSALV. This new, heavy lift, federalized work was targeted for completion by January 31, 2006. Non-SUPSALV work which was more economically executed by locally administered contracts would continue but would be picked up by the Coast Guard's local lead contractor beginning February 1, 2006.

c. SUPSALV Joint Database support: SUPSALV's role for managing the Joint Database would cease after January 31, 2006 and the USCG would be solely responsible for its maintenance. The USCG subsequently placed Phoenix International under contract to stay on to provide database support functions.

During the second half of November and into December 2005, SUPSALV worked to identify all open cases that required heavy lifts assets. The Coast Guard and the U.S. Army Corps of Engineers expedited assignment of new cases that required the large derricks supplied by SUPSALV's lead contractor. By the third week of December, these two lists were refined and a finite number of remaining heavy lifts was documented. An initial copy of a chart plotting the December Heavy Lift Tasks dated December 20, 2005 is included here as Figure 6-2. In this graphic, the dark green tags were applied to USACE tasks. The light green tags represent the USCG heavy lift cases that had existing tasks issued. The red tags represent those USCG cases that had not yet been tasked but were heavy lift candidates for SUPSALV response.

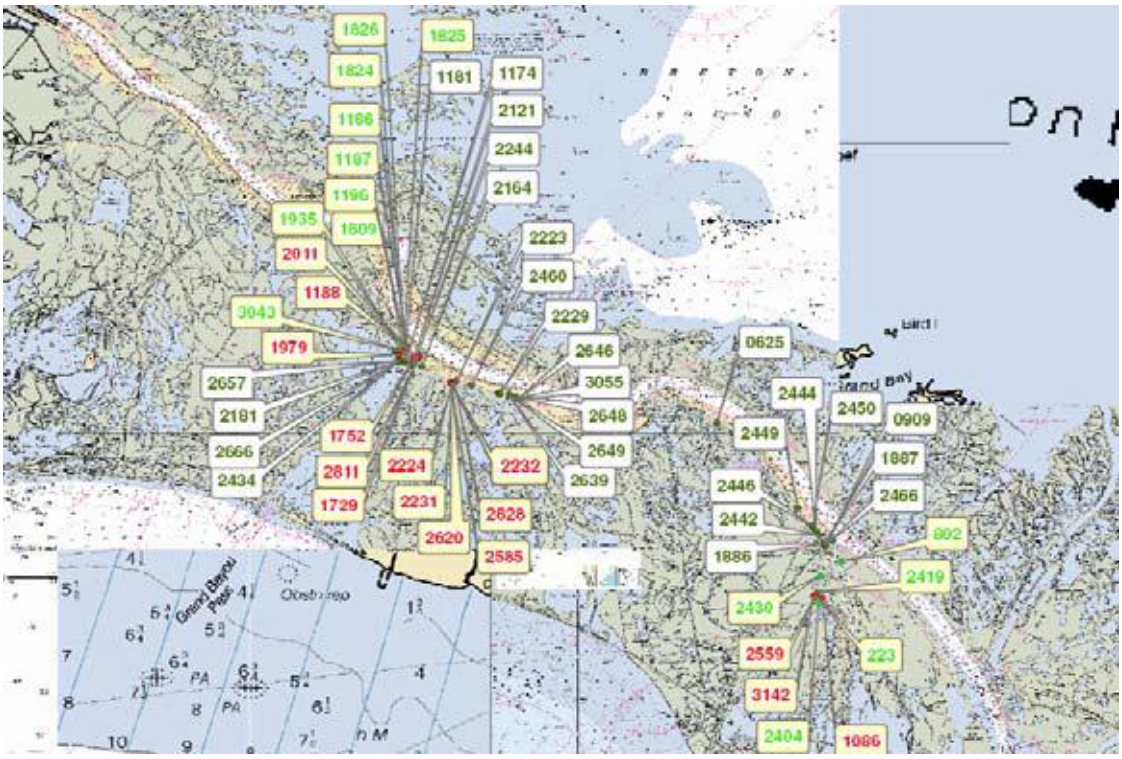


Figure 6-2. December 20, 2006 Heavy lift tasks.

This agreement left SUPSALV free to secure operations at the command center in New Orleans, leaving the Coast Guard to manage the new lead contractor, Shaw Environmental, and the subcontractors who were assigned the smaller lifts. Phoenix International, under contract with the Coast Guard, still managed the Marine Debris Targets database continued supporting operations in New Orleans.

6.4. Demobilization

SUPSALV, Donjon and all subcontractor and equipment under Donjon contract demobilized on January 31, 2006. Many local contractors that were under Donjon contract were offered contracts with the Coast Guard's new lead contractor, Shaw Environmental.

In the days prior to SUPSALV demobilization, the Coast Guard requested that Donjon keep the Columbia NY in the area as a contingency for heavy lift. When a Coast Guard contract with Donjon was not finalized, Coast Guard asked SUPSALV to extend Columbia NY under the SUPSALV contract. Columbia NY remained in the lower Mississippi region under SUPSALV contract until March 24, 2006.

Most of SUPSALV ESSM equipment was returned over the course of the operation and the only assets remaining in Louisiana after Christmas were the command van in Empire and the Boston Whaler. These items departed Louisiana on February 2, 2006. SUPSALV worked on financial closure and documentation from the Washington Navy Yard in Washington, DC.

6.5. Accomplishments

SUPSALV responded quickly to the maritime disaster caused by Hurricane Katrina, forward-deploying Navy and contractor personnel four days after the storm's landfall when little was known about the local environment. SUPSALV established an effective command and control structure, withstood and reacted to a second hurricane, and brought maritime salvage equipment and expertise for the people to the Gulf Coast region for the four-month period. Specific accomplishments include the following:

- Provided emergency response salvage material, including command and control facilities, to a devastated area with little or no remaining infrastructure.
- SUPSALV with lead contractor Donjon Marine and its team of subcontractors removed 475 vessels and over two thousand tons of debris from the lower Louisiana and Mississippi River waterways over a five-month period.
- As of January 31,2006, SUPSALV managed a Katrina/Rita area-wide Joint Database that contained over 3000 cases. Figure 6-3 is a summary of the cases contained in the Joint Database as of 2 February, 2006.
- As a result of the coordinated Navy, NOAA, and USACE hydrographic efforts, the Mississippi River was cleared for daytime navigation by September 11, 2005 and the Mississippi River hydrographic survey was completed by September 19, 2005 leaving only the restoration of the aids to navigation before unlimited operation was restored.

Current Status by Funding Source

Funding Source	Total Cases	Open (Prelim ID)	Approved to Proceed	In Progress	Work Complete	Closed Wk Complt	Closed Archived	Total Cases Completed	Closed Admin Pur	Closed Duplicate
Federal										
Not Mission Applicable	0	0	0	0	0	0	0	0	110	1
NRL	1	0	1	0	0	0	0	0	0	0
USACE-Barges	56	33	6	0	10	7	0	17	0	1
USACE-Mobile Civil Works	1	0	0	0	1	0	0	1	0	0
USACE-Mobile-ESF03	5	0	1	0	3	0	1	4	0	0
USCG-Groton-OMN	1	1	0	0	0	0	0	0	0	0
USCG-Lake Charles-ESF03	0	0	0	0	0	0	0	0	2	0
USCG-Lake Charles-ESF10	5	0	4	0	1	0	0	1	0	0
USCG-Mobile-ESF03	1	0	0	0	0	0	1	1	0	0
USCG-Morgan City-ESF03	31	0	11	0	15	5	0	20	0	1
USCG-New Orleans-ESF03	552	52	16	3	455	23	3	481	17	12
USCG-New Orleans-ESF10	1	0	0	0	0	1	0	1	0	0
Total	654	86	39	3	485	36	5	526	129	15
Responsible Party										
Total	666	60	0	1	71	92	442	605	50	35
Undetermined										
Total	1294	1206	0	3	11	5	69	85	440	202
Total	**2614**	**1352**	**39**	**7**	**567**	**133**	**516**	**1216**	**619**	**252**

Key	Federal	Responsible Party (RP)	Undetermined
Open (Preliminary ID)	Salvage to be conducted with Federal funds	RP has been contacted and salvage to be conducted by	Federal/RP decision pending
Approved to Proceed	Salvage operations have been approved to proceed	RP	Not Applicable
In Progress	Salvage operations are in Progress and not yet completed	Not Applicable	Not Applicable
Work Complete	Salvage Operation is complete	Not Applicable	Not Applicable
Closed Work Complete	Salvage Package (USCG tech docs) is complete	RP indicated Salvage Operation is complete	Not Applicable
Closed Archived	Final/hard reconciliation (fiscal invoicing) is complete	USCG tech docs are complete USCG Document Unit folder assembled and archived	Not Applicable

Total Cases	Open (Preliminary ID) + Approved to Proceed + In Progress + Work Complete + Closed Work Complete + Closed Archived
Total Cases Completed	Work Complete + Closed Work Complete + Closed Archived
Closed Administrative Purposes	Cases closed for administrative purposes due to insufficient data
Closed Duplicate	Cases that are a duplicate of another defined case

Figure 6-3. Current Status by Funding Source from the Joint Database as of February 2, 2006.

- Ports of entry valuable to energy production were cleared and opened after the storms. Specifically, the Lake Charles LNG terminal and Turning Basin required clearance of acres of vegetable matter washed in by Hurricane Rita. Two LNG tankers were waiting offshore to unload at Lake Charles and another was due on October 5. SUPSALV contractors mobilized in response and corralled approximately thirty-five acres of floating debris the next day. The basin was cleared 24 hours prior to the channel being opened.
- For the first time, SUPSALV worked in a formal role with the American Salvage Association (ASA).
- Provided a contractor side scan search team to survey the area known as the Louisiana offshore oil platform (LOOP) to verify it was free of obstructions.
- While the city of New Orleans was still flooded, SUPSALV provided a dive team (Onyz Industrial Services) through its diving operations contract with Phoenix International to clear strainers for the city of New Orleans dewatering pumps thus helping expedite the recovery.
- Issued Diving Advisory for Diving in Contaminated Waters. This was the first time such guidance was issued to Navy divers.

- Provided continuity of operation and personnel amongst the frequent turnover of USCG personnel. SUPSALV's continuity provided a source of expertise and operational knowledge that was imparted to newly arriving personnel.
- Performed the extraction of Ex-USS SHADWELL and State of Maine by a contractor/U.S. Navy MDSU ONE team provided a rare training opportunity for Navy's salvage forces.

Section 7

Lessons Learned

Section 7
Lessons Learned

During SUPSALV's four-month long hurricane recovery operation in the U.S. Gulf Coast region, a number of unique challenges were presented to SUPSALV, and its contractors, who all worked to help the coastal states recover operationally, economically, and environmentally. Key lessons learned were:

a. **Issue:** SUPSALV's role in the salvage process was not formally recognized across the various agencies and jurisdictions.
Discussion: SUPSALV deployed nearly immediately and tasked its East Coast salvage contractor within days of the hurricane. SUPSALV received direction from U.S. Department of Homeland Security and the Chief of Naval Operations to work outside of the Combined Task Force to provide long-term salvage and debris removal support, oil spill response support, and help conduct hydrographic surveys of the affected waters. When SUPSALV arrived on the scene, local FEMA officials were completely absorbed with personnel rescue tasks and did not have time to consider how to use SUPSALV most effectively. Because SUPSALV operated outside JTF Katrina, SUPSALV had to find its own means to insert itself into the recovery process.
Resolution: Prepare a Support Annex to the National Response Plan (NRP) in order to define SUPSALV's role in a federalized salvage process. NRP should define chain of command and operational authority. NRP should define the circumstances and timing under which SUPSALV should respond.

b. **Issue:** The position/role of "National Marine Salvage Response Coordinator" should be established/recognized within the NRP framework.
Discussion: Katrina/Rita impacted Gulf Coast areas across four different states. Each of these states established separate FEMA response organizations, individually undertaking waterway clearance, salvage and wreck-removal differently. Furthermore, the three different affected divisions of the U.S. Army Corps of Engineers (statutorily tasked with maintaining navigable channels of the U.S. inland waterways) separately undertook policy and execution of surveying and clearing waterways with fundamentally different approaches for salvage/wreck/marine debris removal in each division. Within the Eighth Coast Guard District (USCG District 8), two different USCG Sectors and one USCG Group each separately undertook execution of opening local waterways based on survey assets from NOAA, USACE, USN, and commercially contracted systems. In many cases, the FEMA/USACE/USCG efforts were quite effective. In other cases, the efforts were encumbered by the absence of early development of clear overarching policy, lack of communication/coordination of assets, ad-hoc assembly of teleconferencing to effect some degree of local and regional coordination, and the absence of clear guidance for development of national or regional prioritization of efforts. SUPSALV was informally and ad-hoc assigned by

DoD to assist FEMA in coordinating overall national strategic salvage response. Although SUPSALV personnel were successful in a number of areas, they did not achieve that same level of success across all geographic regions.

A similar scenario was anticipated by the Marine Board of the National Academy of Science (Transportation Research Board) in its 2004 report "Marine Salvage Capabilities: Responding to Terrorist Attacks in U.S. Ports – Actions to Improve Readiness." Among other things, the Marine Board made several key recommendations: (1) the membership of the Secretary of Homeland Security's National Maritime Security Advisory Committee should be modified to include a marine salvage expert; (2) the Coast Guard should develop a liaison position with the Navy's Supervisor of Salvage (SUPSALV); and (3) the structure of the National Response Plan should explicitly provide for the inclusion of salvage expertise. The Office of the U.S. Navy Supervisor of Salvage is uniquely positioned and qualified to provide a "National Salvage Response Coordinator" role for both advance planning and execution of recovery and reconstitution of critical coastal areas, waterways, channels, harbors and ports in the immediate aftermath of catastrophic maritime disasters (whether natural or man-made). Responsibilities should include prioritized coordination of hydrographic survey assets, salvage and wreck removal assets, and oil pollution abatement assets incident to salvage and wreck removal. Advance establishment/recognition of that role, and the opportunity (including adequate resources) to plan and conduct realistic interagency exercises prior to catastrophic maritime disasters would allow for development of fundamental policy, and command and control procedures to support prioritized and rational hydrographic survey, salvage and wreck removal (and abatement of related oil pollution) – accelerating recovery of the Nation's critical waterway infra-structure.

Resolution: In a major coastal response such as Hurricanes Katrina and Rita, several federal agencies will always have overlapping authority/responsibility for marine debris removal, e.g., DHS/FEMA, DHS/USCG, USACE, USN. Somebody has to take the lead and establish national priorities/procedures. In the absence of responsibility for federal leadership being clearly outlined in the NRP, the marine debris removal effort will tend to balkanize along agency, regional and local jurisdiction lines. Creation of a new Support Annex entitled "Marine Salvage/Wreck/Debris Removal" within the NRP, which Annex would, among other things, recognize SUPSALV as the National Salvage Response Coordinator. Drafting of this new Annex would be coordinated between DHS/FEMA, DHS/USCG, USACE, and USN. This issue was incorporated into the National Response Team/Regional Response Teams Observations and Lessons Learned from Response to Hurricanes Katrina and Rita document generated after the storms.

c. **Issue:** For a large response effort, especially one that encompasses several jurisdictions, there is a need for clear policies as to which Emergency Support Functions (ESF) apply for various forms of debris removal.
Discussion: During the Katrina/Rita response, debris removal was addressed under ESF-3 (Debris Removal), ESF-10 (Pollution Abatement), and ESF-11 (Food) and a somewhat ill-defined category entitled "Other." Debris removal task forces were set up at Louisiana and Mississippi JFOs to coordinate, but this took time; and even when established, these task forces did not eliminate confusion and delay. Depending on the region and states involved, there was confusion as to what authorities and agencies would carry out debris removal. This problem was exacerbated when the debris in question was contaminated with hazardous substances. In such cases, existing funding mechanisms resulted in duplicate survey teams evaluating the same debris multiple times which wasted time, effort and resources. Furthermore, lack of consistent policies across states and regions contributed to inconsistent response activities.
Resolution: Clear policies, as well as improved cooperation and coordination among ESFs, would allow for more efficient and cost-effective removal of debris presenting a unified "single government" to affected populations. During the one-year review of the NRP, the relationship between debris removal responsibilities under ESF-3, -10, -11, and "Other" should be clarified. Relationships should be detailed in the ESF Annexes or in the SOP for each ESF. Also the "Other" category should be eliminated or its proper use clearly explained. DHS/FEMA should take the lead, with other agencies responsible for their respective Annexes/SOPs: ESF-3 (USACE), ESF-10 (EPA/USCG), and ESF-11 (USDA). This issue was incorporated into the National Response Team/Regional Response Teams Observations and Lessons Learned from Response to Hurricanes Katrina and Rita document generated after the storms.

d. **Issue:** Incremental funding on a task-by-task basis for large-scale marine debris removal does not allow for operationally efficient salvage.
Discussion: SUPSALV was sub-tasked under a mission assignment to the USCG to coordinate the execution of Gulf Coast Region salvage efforts. SUPSALV in turn utilized its preexisting, competitively-bid East Coast salvage contract to quickly mobilize and tap into extensive salvage industry capabilities. Presumably to satisfy its own (or perhaps FEMA's) accounting needs, the USCG imposed an incremental, vessel-by-vessel funding process whereby for each vessel to be removed there would have to be an estimate, an estimate approval by the USCG, and a subsequent wait of several days to receive any funding for the job. As a result, funding dribbled in vessel-by-vessel and task-by-task. With literally hundreds of vessels to be removed, this process was inefficient and inconsistent with salvage industry practice and price-costing on a day rate basis resulting in substantially increased time and cost of operations.

Resolution: For future major disasters involving hundreds of vessels that need to be removed where SUPSALV uses its standing contracts to coordinate regional efforts, a system should be developed whereby blocks of funds are provided to SUPSALV up front – based on a "rough order magnitude" (ROM) estimate of geographical areas or large groups of vessels – with SUPSALV then being required to properly account to the USCG or appropriate federal organization for funds expended. This issue was incorporated into the National Response Team/Regional Response Teams Observations and Lessons Learned from Response to Hurricanes Katrina and Rita document generated after the storms.

e. **Issue:** Additional planning is needed to develop a federal strategy to address funding gaps.
Discussion: Quick and effective actions are needed to protect human health, safety, and property during disasters and emergencies. Clear and reliable funding is a requisite for quick and effective response actions. During Katrina response activities, some NRT member agencies were informed by DHS/FEMA that the Stafford Act could not be used to fund certain federal response activities. Instead, the federal agency was informed that if the activities were to be carried out, that federal activity would have to be funded out of appropriations related to a given agency function and ask Congress for a supplemental. Federal agency appropriations for given statutory functions, however, can be inadequate to address catastrophic situations. In addition, use of those funds may be limited by statutory provisions that were enacted to address situations different from the emergencies encountered under the Stafford Act. Many federal agency authorities were designed by Congress to address problems/situations that did not include Stafford Act-type emergencies and catastrophes, and the procedures and limitations governing use of those funds are not suited for Stafford Act-type incidents. Thus, an expectation that individual agencies would seek supplemental appropriations under their own authorities may not address these limitations and may not be the most effective and efficient mechanism for ensuring a coordinated, timely federal response.

During Katrina, a number of funding issues arose, including: 1) DHS/FEMA expected USCG to fund replacement of navigational aids out of its own appropriations, but the USCG budget is developed to support navigation aid maintenance, not wholesale replacement of navigational aid systems; 2) DHS/FEMA declined to fund cleanup of hazardous materials on national wildlife refuges under ESF-10, expecting the Department of Interior (DOI) to fund it because it was on federal property, delaying cleanup and eliminating efficiencies that could have been realized in coordinating response on federal and non-federal lands; 3) inconsistent use of ESF-3 and ESF-10 funds for marine debris removal became a major issue and 4) Stafford Act funding availability for long-term environmental cleanup and recovery activities, including support for worker health and safety assistance,

continues to be unclear. Negotiating such issues during emergencies needlessly delays federal response.

Resolution: DHS, in conjunction with the Homeland Security Council, should complete the review of legal authorities, which was initiated during development of the NRP, and include a comprehensive review of potential funding gaps. DHS should host an interagency workgroup on response funding. The scope of the current Stafford Act should be closely evaluated to identify whether current funding determinations have been based on actual statutory limitations (which would require legislative action to address) or on policy decisions (which could be revised more easily). This issue was incorporated into the National Response Team/Regional Response Teams Observations and Lessons Learned from Response to Hurricanes Katrina and Rita document generated after the storms.

f. **Issue:** The Gulf Coast infrastructure collapsed as a result of the hurricane damage and the number of displaced refugees.
Discussion: Ground transportation was difficult because coastal roads were damaged or flooded preventing or slowing access to the areas requiring response. Major routes along the Gulf Coast were impassable during the early phases of the operation. Fuel was unavailable in areas without electrical power and stations that did have electrical power were not getting fuel delivered. With this in mind, SUPSALV initial team deployed with reserve diesel tanks in the back of its truck.

Air transportation (leased helicopters) became the main mode of getting from the command center in Alexandria, LA to New Orleans and points south and east for site survey, planning, crew change, and field observations. During the early stages, as a precaution in the event of salvage crew injury, another helicopter was kept on standby in Houma, LA for emergency evacuation.

Katrina displaced residents filled available hotel accommodations making finding space for salvage personnel within 200 miles of the coast very difficult. As a result, the Command Center was setup in Alexandria and hotel rooms for staff was retained indefinitely once obtained. Salvage teams were berthed on the tugs or barges and re-provisioned by air or trucks from outside the damage zone.

Sattelite phones and VHF radios were used in the field to facilitate communications between the ship-based salvage crews, the Coast Guard field operations staff and the command center in Alexandria, LA.

Once the roads became passable, the Coast Guard contracted for Emergency Medical Services which included private ambulances and medical technicians placed on standby in both Venice and Empire Louisiana.
Resolution: First responders need to be self-sustaining (lodging, food, fuel, etc.) in order to operate on the front lines. Having an ESSM command van forward-deployed was useful as it provided a number of services that may not

be available otherwise on site, such as electrical power, satellite phone, satellite high speed Internet connection, drinking water, etc.

g. **Issue:** Hydrographic surveying greatly benefited from the expertise provided by the Navy Oceanographic Office.
Discussion: SUPSALV's coordination role was facilitated by addition of a Navy a hydrographer.
Resolution: In future, similar operations, request a certified hydrographer included in the initial response team.

h. **Issue:** Marine Debris Target Database.
Discussion: Because requirements changed constantly and the database evolved a number of times in response to these requirements, it was difficult to continue to meet the initial objectives of the database in its evolved form. Specifically, merging the cost accounting and documentation functions with the field operations functions increased database size and prevented deployment on field sticks and reduced flexibility in supporting field operations. Data entered into the database was often suspect. Untrained or new staff often added cases without checking to see if a case was already entered. The second entry resulted in duplicate cases. Plotted positions were inaccurately or inconsistently recorded. Latitude and longitude was recorded in degrees, minutes, and seconds; degrees, minutes, and decimal minutes; or degrees, and decimal degrees.
Resolution: Investigate preparing a web-enabled operations-oriented database that can be configured to meet the needs of a variety of operations in the field. This operations database should be able to be merged with documentation / financial tables but should be deployed independently. Establish standards and protocol for designating latitude and longitude. Train all involved to use the correct standard.

i. **Issue:** Local interaction was needed to keep favorable relations with government and local contractors.
Discussion: Local fishermen, parish political leaders, and municipal officials were getting conflicting stories on what the Navy and the Coast Guard were doing to the boats and marinas. There was a requirement to meet with residents and officials in order to keep the public informed. This can be accomplished through direct communications with local law enforcement, politicians and town hall type meetings.

There was a perception that the federal government wanted to exclude local business from getting jobs during the clean up of the Gulf Coast and this sparked political and public concern. As soon as local contractors were identified who could provide effective services, Donjon placed them under contract. In the end, there were more than 10 local firms providing needed services supporting the debris removal tasks.
Resolution: Any time there is a major federal effort; early and regular interaction with the local community is required.

j. **Issue:** NMCI infrastructure dramatically restricted sharing of information in a multi-agency environment.

Discussion: Computer connectivity was extremely poor because the Navy Marine Corps Intranet (NMCI) -issued laptops only connected to MS Outlook mail via dial up Remote Access Service (RAS). The computer's USB ports were unable to accept USB peripherals preventing sharing of data using portable hard drives. Without administrative privileges, a user could not add a printer or any other hardware preventing printing or scanning documents. SUPSALV could not connect to the USCG maintained wireless network. When initially asked, the NMCI Helpdesk was unwilling to support SUPSALV's field operations. It took direct involvement at the Navy flag level to get on-site NMCI computer assistance.

Resolution: Use commercial computer equipment. Prepare requirements list for commercial equipment to support field operations, include Common Access Card (CAC) readers. Ensure commercial Internet Service Provider (ISP) and email accounts are considered when needed.

Appendix A

COMMAND AND ORGANIZATION DOCUMENTS

Appendix A
Command and Organization Documents

FEDERAL EMERGENCY MANAGEMENT AGENCY **MISSION ASSIGNMENT (MA)**	See reverse side for Paperwork Burden Disclosure Notice	O.M.B. NO. 3067-0278 Expires November 30, 2007

I. TRACKING INFORMATION (FEMA Use Only)

State: LA (Louisiana) Incident:2005082401-Hurricane Katrina Evacuation	Action Request #: 1509-34039
Program Code/Event #: 1603DR-LA: HURRICANE KATRINA	Date/Time Rec'd: 09/09/2005 22:57

II. ASSISTANCE REQUESTED ☐ See Attached

Assistance Requested:
Removal of wrecks and debris from the waterways and navigable channels. Identified 1107 known sites at this time. Coordinated with USACE, FEMA and state of Louisiana. USACE could not perform tasks due to lack of staff. Coordination will continue with USACE.

Quantity: 1 (Each)	Date/Time Required: 09/10/2005	Internal Control #: ARF # EOCDR-393
Delivery Location: LAOHSEP, 7667 Independence, Baton Rouge, LA 00000		
Initiator/Requestor Name: Jacqueline Gladish	24-hour Ph #s:	Date: 09/09/2005
POC Name: Connolly, John E	24-hour Ph #s:(215) 931-5640	Date: 09/09/2005
* State Approving Official (Required for DFA and TA):		Date:

III. INITIAL FEDERAL COORDINATION (Operations Section)

Action to:		Date/Time:	Priority:		
	☐ ESF #: ☒ Other:	09/09/2005 22:53	☐ 1 Lifesaving ☐ 2 Life sustaining	☒ 3 High ☐ 4 Medium	☐ 5 Normal

IV. DESCRIPTION (Assigned Agency Action Officer) ☒ See Attached

Mission Statement: *Your agency is responsible for submitting a Mission Assignment Monthly Progress Report to FEMA to include cost data when Mission Assignments take more than 60 days to complete, including billing. The Mission Assignment Monthly Progress Report can be accessed and submitted on-line at www.fema.gov/ofm/ofed_agencies.shtm. The new ALC number can also be accessed at the web address.*

USCG develop and maintain an IMT with a Unified Command, including USCG, USACE, FEMA and any other agency with statutory authority responsibilities for navigable waterways and channels in the state of Louisiana. Each agency will operate within their statutory authority and areas of responsibility. The USCG will be reimbursed for the Command and Control personnel (including overtime, travel and perdiem) and removal of wrecks and debris outside fo the statutory authority of any agency involved in the waterways of the state of Louisiana. All wrecks and debris removed will be

Assigned Agency: USCG (U.S. COAST GUARD)	Projected Start Date: 09/10/2005	Projected End Date: 04/10/2006
☒ New or ☐ Amendment to MA #:	Total Cost Estimate: $75,000,000.00	
Assigned Agency POC Name: CDR SEAN MOON	Phone and fax #s: (313) 475-5382	

V. COORDINATION (FEMA Use Only)

Type of MA: ☐ Direct Federal Assistance State Cost Share (0%, 10%, 25%) ☐ Technical Assistance State Cost Share (0%) ☒ Federal Operations Support State Cost Share (0%)

State Cost Share Percent: 0.0%	State Cost Share Amount: $0.00
Fund Citation: 2005-06-1603DR-9064-XXXX-2501-D	Appropriation code: 70X0702

Mission Assignment Coordinator (Preparer): LUCY BROOKE	Date: 09/10/2005
** FEMA Project Officer/Branch Chief (Program Approval): JOHN CONNOLLY	Date: 09/10/2005
** Comptroller/Funds Control (Funds Review): STRASSER, MARY ANNE	Date: 09/10/2005

VI. APPROVAL

* State Approving Official (Required for DFA and TA):	Date:
** Federal Approving Official (Required for all): GEORGE ROBINSON	Date: 09/10/2005

VII. OBLIGATION (FEMA Use Only)

Mission Assignment #:1603DR-LA-USCG-07	Amt. This Action: $75,000,000.00	Date/Time Obligated: 09/10/2005
Amendment #: 00	Cumulative Amt. $75,000,000.00	Initials: IFMIS

* Signature required for Direct Federal Assistance and Technical Assistance Mission Assignments.
** Signature required for all Mission Assignments.

FEMA Form 90-129, Oct 02

REPLACES ALL PREVIOUS EDITIONS

Additional Mission Statement

documented with digital photography and GPS location points. All work by agencies or contractors will be coordinated between FEMA, USCG and USACE. Estimated time for completion of the mission is 8 months. This time estimate will be re-evaluated after 30 days.

Sample SUPSALV SITREPS

Subject: SUPSALV SITREP (6 Sep)
From CAPT Wilkins
Admirals, SITREP for 06 SEP follows:

HYDROGRAPHIC SURVEY: Expect an assigned MCM LNO from MINRON 1 to arrive here at ICC this evening and help coordinate MCMs and MHC for most effective employment to complete survey of areas identified by ACOE, USCG and offshore stakeholders.

On-Shore/Inland Waterways Surveys: Today's conference call identified that the on-shore regions of the Army Corps' South Atlantic Division (SAD) which includes Mobile Bay, Biloxi, Gulfport and Pascagoula expected to have their federal waterways surveyed with potential salvage targets identified by week's end. The Corps' Mississippi Valley Division (MVD) which includes the greater New Orleans region expects their federal waterways to be surveyed with potential salvage targets identified over the course of the next 5 - 7 days. We've offered USN survey resources to both Corps districts to accelerate the effort. SAD declined; MVD is still considering.

Offshore Surveys: Today's conference call assembled for the first time the key stakeholders in the off-shore industry and Federal agencies. Although not all the data is in, Minerals Management Services (MMS) indicated that 37 off-shore oil platforms are known to have been severely damaged by KATRINA. USCG District 8 is assembling a Task Force to address the Nation's off-shore survey and platform recovery priorities. Phonecon participants expressed expectations that survey resources that are now being used in inland waterways but are also critical to off-shore surveys will be available by the time the off-shore survey priorities are established. We again identified that if additional survey systems are determined to be required by the off-shore Task Force, more USN resources may be available.

SALVAGE: To date 127 salvage cases are identified in the Mississippi River Valley Sector and many of these involve several vessels, mostly barges. Total potential number of salvage events in the hundreds. The salvage cases will addressed by:

(1) Responsible Party (RP) Action: RPs are either owners or insurers. Approximately 1/2 of the total anticipated salvage action is expected to be undertaken by RPs. It will be monitored by the USCG, and will require no federal monies or direct federal agency supervision.

(2) USN Salvage Forces Action: As directed by competent authority (either USCG or Corps of Engineers), USN salvors will undertake mission within their capabilities. MDSU 2 continues to perform superbly, with plenty of work (see below) remaining. GRAPPLE engaging tomorrow.

(3) Salvage Industry Action: As directed by competent authority (either USCG or Corps of Engineers), SUPSALV will use existing "SUPSALV East Coast Contract" to engage commercial salvors to undertake salvage using funding provided by either the

USCG or Corps of Engineers. Dialogue with Corps of Engineers and FEMA to position funding continues (SUPSALV high priority).

OIL POLLUTION ABATEMENT: There are three contractor facilities in lower Mississippi River that show oil pollution sites that USCG is beginning to work but none as yet related to maritime salvage. There is discussion of potential requests for SUPSALV OPA systems and we are postured to deploy. We do have some salvage cases that have contained oil/fuel onboard that we are prepared to deal with it when we begin salvage work on them.

SIGNIFICANT DIVING & SALVAGE:

SUPSALV provided two emergency commercial hazmat qualified dive teams at Corps' request to deploy to downtown New Orleans within 3-hours after tasking to dive and clear the city's pump intakes that were clogged during dewatering effort. Superb response by contractor teams. Of interest, dive team deployed with own security team, and topside team wore bullet-proof vests.

GRAPPLE underway from Pascagoula and proceeding to first obstructions in Mobile Channel. Removal to be started on 08 Sep. Second obstruction to be removed is located just outside of Pascagoula Channel.

GRAPPLE inport Pascagoula offloading MDSU det and then will proceed to first of two obstructions, one in Mobile Channel and one just outside of Pascagoula Channel

MDSU TWO:

MAJOR EVENTS LAST 24-HRS

1. In support of ACOE, USCG, and local Port Authority requirements for reopening of waterways vital for access and economic recovery:
   - Continued SIDE SCAN sonar surveys of multiple sites in Pascagoula Harbor/River, Mobile Bay, and Pensacola Harbor.
   - Continued DTON identification, marking and removal in Pascagoula Harbor/River/Sound, and Mobile Bay.

2. Conducted fly over of Harris County Industrial Canal in Biloxi Back Bay Region and Bayou La Batre in support of salvage planning effort by joint Salvage Task Group (MDSU and ASA). Estimate to be prepared for funding by ACOE.

Surveys In Progress:
- Biloxi Back Bay from Pops Ferry Bridge to Harrison County Industrial Canal
- Pascagoula Harbor quay walls and piers
- Mobile Bar for obstruction that impede free navigation

Salvage Operations in Progress:
- Pascagoula Bay: remove dangers to navigation from river and lower sound.
- Biloxi: remove dangers to navigation from Back Bay and Eastern Approaches
- Bayou La Batre: barge removal from channel.

Discussion:
- Survey and Salvage Operation in Biloxi Back Bay to Industrial Canal to clear access for coal barges to supply area power generation plant. Petroleum refinery in region unable to restart ops until power is restored.

- Contact identified by MDSU dive team in Mobile River as a pier section which is restricting barge traffic, including power generation plant fuel barges. MDSU developing salvage plan for obstruction removal.

- Over flight scheduled for salvage planning team (MDSU and Comercial Salvage Team) to plan resources needed for Salvage Ops in Harris Industrial Canal and Bayou La Batre.

Very respectfully,

SUPSALV

Subject: SUPSALV SITREP (30 SEP 2005)
Admirals,

SALVAGE:

BRAVO ZULU to MDSU 2 and USS GRAPPLE for outstanding diving and salvage services in survey and clearance of Gulf Coast waterways. Your initiative early-on to develop close coordination with the local interagencies and to identify and propose tasking, and then to aggressively execute that tasking was pivotal to the rapid restoration of the KATRINA affected channels and ports. It is again an honor to have served with you. We wish you a safe transit home. Hoo Yah Deep Sea!

Joint Database of KATRINA and RITA area-wide salvage cases today holds 1,727 cases with 350 closed. This significant increase in cases since yesterday is attributable to merging USCG Mobile Sector data from Alabama and Mississippi with our SUPSALV database. We expect to find some duplication which we'll sort out over the next few days. Of note, the majority of these 1700+ casualties are expected to be recovered by "Responsible Parties" (i.e., owners/underwriters). We are currently working to sort the total cases into those which we expect RPs to recover and those which will be the responsibility of USCG/USACE/FEMA (through SUPSALV) so we can better project future workload and resource requirements.

Hurricane RITA

Lake Charles LNG Terminal: Operations to simultaneously capture and remove the debris continue. Removal of the debris onto the surrounding pavement underway, but the area of the boomed debris remains stubbornly difficult to reduce. Attempting brute force method tomorrow morning by use of the broadside of a barge propelled by tugs on the opposite side as a means to better compact the debris mat, with end objective to open up as much of the turning basin as soon as possible. Yesterday's containment of the debris allowed the USN Fleet Survey Team today to conduct both side scan survey and single beam fathometer survey of the turning basin – verbal report is that no bottom obstructions found, and no significant deviations from channel depths noted. Formal report forthcoming. SUPSALV and Donjon representative will visit the site tomorrow in order to evaluate progress, refine cost estimates, and continue to manage the path forward.

Morgan City: Coordination with COTP continues. SUPSALV and Donjon rep will conduct overflight of Vermilion Parish areas on Sunday 2 Oct to assist COTP reps in quantifying scope of potential FEMA ESF3 wreck removal requirements. Results to be used in support of local and state requests for assistance.

Hurricane KATRINA:

New Orleans Sector:

Venice, LA: Crane Barges Big T and George T completed removal to the Venice Marina of F/V Mrs. Tracy and commenced removal of F/V Anh Thy in Venice. CHESAPEAKE

(1000-ton heavy lift barge) attempted to commence work in Tiger Pass (Venice), but twice found that both 12,000 lb anchors dragged in soft-mud bottom/high river currents. Spud-barge will be brought in from upper Mississippi to provide quick and reliable anchoring mechanism for CHESAPEAKE; anticipate approximately 2.5 days mobilization time.

Empire, LA: Nothing new to report since last SITREP.

Mobile Sector: USACE is providing $1M to SUPSALV to initiate ALABAMA ESF3 wreck removal effort in Bayou LaBatre, AL. SUPSALV Dir of Ops (Mike Herb) and Donjon reps will conduct survey of priority casualties Monday 3 Oct. Meeting with State of Mississippi regarding pending ESF-3 Mission Assignment from FEMA still planned for Tues 4 Oct.

OIL POLLUTION ABATEMENT:

As requested by USCG, SUPSALV equipment and personnel on standby for off-shore contingency oil pollution abatement support.

Happy New (Fiscal) Year, and very respectfully,

Subject: SUPSALV SITREP (13 NOV 2005)

Admirals,

SALVAGE:

Data Base & Work Scoping: A detailed case-by-case review of the KATRINA/RITA area-wide Joint Database continues. Currently the database contains 2441 cases reflecting a recent administrative closing of over 340 cases due to insufficient or unreliable data. Of the 2441 cases, SUPSALV has been assigned a total of 367 "Federalized" salvage cases with work complete on 156. The remaining 2074 are being removed by owners/underwriters ("responsible parties") or remain unassigned. We are working closely with USCG & FEMA to clarify final work assignments and exit strategy.

Command Center: Salvage Command Center will be relocated from Alexandria, LA to New Orleans, LA by the end of this week.

Safety Stand-down: Release of suspected hazardous gas from an unknown source (and unrelated to salvage/wreck removal operations) occurred in the vicinity of shoreside industrial debris in Empire on Friday. Several personnel experienced burning symptoms in eyes, nose and throat. One Coast Guard member was emergency evacuated and then treated and released from a medical facility. The entire local area was immediately evacuated (all salvage personnel and many local civilians) evacuated the area while EPA and USCG Strike Force personnel investigated. Operations at all sites (including Venice and Morgan City areas) were subsequently secured and we used this event as opportunity for a general "Safety Stand-down" through the weekend. Additional efforts to identify known HAZMAT through parish authorities are being undertaken, capabilities for monitoring air and site safety through Government/private agencies are being investigated, and site safety plans have been reviewed to strengthen evacuation procedures and response to known risk elements. All sites will conduct an extensive safety briefing prior to beginning work Monday and will conduct emergency response drills during the course of the week.

DBL-152 Incident: K-SEA Corporation double hull oil barge DBL 152 struck an unknown obstruction in the Gulf of Mexico approximately 40 miles South of Cameron, LA. Initial damage included number one starboard cargo tank (#6 fuel oil API 1.04), forward machinery space including diesel oil tank, and forepeak tank. Unexplained progressive flooding is evident and barge has been moved to shallower water and has been lightly grounded to prevent sinking. Resolve Marine Services (salvage contractor) and Ocean Motion (naval architects) have been contracted by K-SEA (responsible party) to address the situation. Two SUPSALV engineers (equipped with Program of Ship Salvage Engineering (POSSE)) and a MDSU 1 representative deployed from Morgan City, LA to Port Arthur, TX to provide salvage technical assist to Captain of the Port. NOAA vessel reportedly enroute to survey and identify suspected underwater obstruction site.

Hurricane RITA:

Morgan City, LA: No further vessels recovered by heavy lift barge COLUMBIA due to Safety Stand-down. SUPSALV investigating disposition of F/V delayed pending determination to refloat/wreck/leave in place for possible lift Monday.

Hurricane KATRINA:

New Orleans Sector:

Levee Restoration Obstructions: Tasking on hold pending Coast Guard approval. Anticipate direction from USACE and USCG in the next few days.

Venice, LA: No further vessels recovered by heavy lift barge CHESAPEAKE due to Safety Stand-down.

Empire, LA: Four additional vessels removed in Empire Friday prior to Safety Stand-down.

St Bernard Parish: Assessing additional work and contracting local firms to perform vessel and debris removal.

Ex-SHADWELL and STATE of MAINE: NTR

Very respectfully,

Jim

Subject: SUPSALV SITREP (18 DEC 05)

Admirals,

SALVAGE:

The KATRINA/RITA area-wide Joint Database contains 2740 cases with 1689 currently open. Coast Guard has "Federalized" 526 cases of which 269 are complete. Of the federalized cases approximately 40 can most effectively be removed by heavy-lift under SUPSALV and our efforts will focus on these. This number of remaining heavy-lift cases may vary slightly as CG continues its federalization process but in any case SUPSALV expects to complete its role in Katrina/Rita related wreck removal NLT 31 JAN 06.

Hurricane RITA:

Morgan City, LA: COTP is validating that no additional heavy-lift and/or SUPSALV support and expect confirmation Monday 19 DEC.

Hurricane KATRINA:

New Orleans Sector:

Levee Obstructions: CHESAPEAKE completed removal of seven USACE interest vessels from levees in the Empire area and is repositioned in Venice and beginning removals along Tiger Pass in the Venice area.

Venice, LA: COLUMBIA removed two large vessels and is rigging a houseboat in Venice Marina. CHESAPEAKE began vessel and removal along the banks of Tiger Pass.

Empire, LA: Four vessels removed by BIG T and GEORGE T. Local contractor Steighner and Kostmayer continue small vessel and land debris removal in vicinity of Doullut Canal and Shipyard.

St Bernard Parish: Have identified a contractor who can work vessel and non-vessel debris removal operation in Violet Canal. Work is approved but on hold pending resolution of dredging, disposition and staging location determination.

Ex-SHADWELL and STATE of MAINE: NRL has reviewed formal estimate and salvage proposal and is ready to move forward as soon as they negotiate funding alignment with CG, responsible for S of M.

Very Respectfully,

Mike Herb

List of Subcontractors supporting SUPSALV in Hurricane Recovery Operations on the Gulf Coast

T&T Marine Salvage, Inc.
9723 Teichman Rd.
Galveston, Texas 77554

Kostmayer Construction, Inc.
Post Office Box 74194
2112 Veterans Blvd Metairie
Louisiana 70033

B.J. Couvillion, Inc
11711 Sunbelt Court
Baton Rouge, Louisiana, 70809

C&H Patriot Security LLC
1661 Tice Valley Boulevard, Suite 200,
Walnut Creek, CA 94595

Clean Harbors Environmental Services
1501 Washington Street
P.O. Box 859048
Braintree, MA 02185-9048

Gulf Marine Salvage
P O Box 59
Belle Chase, LA 70037

Pine Island Towing Co
2309 N. Old Dixie Hwy.
Fort Pierce, FL 34946

Bisso Marine Company, Inc.
P.O. Box 4113
New Orleans, La. 70178

Tom's Welding Service
135 Tom Lane, Buras, LA 70041

The American Salvage Association
801 North Quincy Street, Suite 200
Arlington, VA 22203

Resolve Marine Group
PO Box 165485
Port Everglades, Fl 33316

McKinney Salvage & Heavy Lift
P O Box 3869
Baton Rouge, LA 70821

Steighner Crane Service
P O Box 1878, 251 Simon Road,
Butler, PA 16003

Dillon Environmental Services
1823 Stanley St SW,
Ardmore, OK

Tidewater Dock, Inc.
PO Box 580
Galliano LA 70354

Appendix B

TASKING AND FUNDING DOCUMENTS

Appendix B
Tasking and Funding Documents

UNCLASSIFIED//
DTG 301600Z AUG 05
FM HQ USNORTHCOM PETERSON AFB CO//J3//
TO JOINT STAFF WASHINGTON DC//J3/J4/DDATHD/JDOMS// INFO SECDEF WASHINGTON DC
ASD(HD) WASHINGTON DC
ASD(PA) WASHINGTON DC
CJCS WASHINGTON DC
CSA WASHINGTON DC//G3/G5/G7//
CNO WASHINGTON DC//N3/N5//
CMC WASHINGTON DC//PP&O//
CSAF WASHINGTON DC//XO//
HQ USJFCOM NORFOLK VA//J33/J34/J35/J4/J5/J8/J9// CDRUSTRANSCOM SCOTT AFB IL//TCJ3/TCJ5/TCJ8// CDRUSSTRATCOM SCOTT AFB IS//J3-J4/J3-OD//
HQUSNORTHCOM//J1/J2/J3/J4/J5/J6/J7/J8/NG/IC/PA/JA/HC/IG/AN/RF//
SJ/FHQ-N//
HQ NORAD PETERSON AFB CO//J3/J5//
HQ USAF WASHINGTON DC//AFOC/XOH/XOHC//
DA WASHINGTON DC//DAMO-ODS//
NGB WASHINGTON DC//J3/J4//
CDRARNORTH FT MCPHERSON GA
CDRFORSCOM FT MCPHERSON GA//G3/AFOP-OC/HS// CDRNORTHAF LANGLEY AFB VA// ACC LANGLEY AFB//CC/DO// CDRNAVNORTH NORFOLK VA CFFC NORFOLK VA COMMARFORNORTH NEW ORLEANS LA//G3/G3/G5/G7// COMMARFORRES NEW ORLEANS LA//G3/G4/G5/G7// JFHQ-NCR WASHINGTON DC CJTF-CS FT MONROE VA CMOC CHEYENNE MOUNTAIN CO//CC/J3// COMLANTAREA COGARD PORTSMOUTH VA//A/ACS/AO/AM// COMDT COGARD WASHINGTON DC//G-OPD// WHITE HOUSE SITUATION ROOM WASHINGTON DC// CSAF WASHINGTON DC FIRST ARMY FT GILLEM GA CDRUSAONE FT GILLEM GA// FIFTH ARMY FT SAM HOUSTON TX CDR 5 ARMY EOC FT SAM HOUSTON TX//AFKB-OP/HSOP-SP//

REF A/EXORD/JOINT STAFF/CJCS/DTG 192300ZAUG2005 REF B/EXORD/USNORTHCOM/HURRICANE KATRINA/DTG 261930AUG2005 NARR/REF A IS A JCS EXORD FOR SEVERE WEATHER OPERATIONS FOR 2005/2006.
REF B IS A USNORTHCOM EXORD FOR HURRICANE KATRINA.
UNCLASSIFIED
OPER/**DOD SUPPORT FOR DISASTER RELIEF OPERATIONS FOR HURRICANE KATRINA**//
MSGID/GENADMIN/HQ USNORTHCOM/J3//

1. REQUEST APPROVAL TO ESTABLISH A JOINT OPERATIONAL AREA (JOA) IN THE STATES OF LOUISIANA, MISSISSIPPI, ALABAMA, FLORIDA, KENTUCKY, TENNESSEE, AND GEORGIA AFFECTED BY HURRICANE KATRINA IN ORDER TO COORDINATE DOD SEVERE WEATHER RECOVERY OPERATIONS IN SUPPORT OF THE FEDERAL COORDINATING AGENCY, FEMA. THE JOINT TASK FORCE (JTF) FOR THE JOA WILL BE COMMANDED BY FIRST US ARMY FROM A COMMAND POST ESTABLISHED IN CAMP SHELBY, MS.

2. O/O, 1ST US ARMY IS THE SUPPORTED COMMANDER.
O/O ORDER 5TH US ARMY IS THE SUPPORTING COMMANDER.

3. ANTICIPATE REQUEST FOR FORCES FOR MARITIME CAPABILITIES TO INCLUDE BIG DECK LILLY PAD, HEAVY LIFT, MEDICAL STAGING AREA, DEWATERING AND SALVAGE CAPABILITIES (I.E., USS BATAAN AND ASSOCIATED ARG SUPPORT VESSELS, AND USN C2 SUPSALV/FLT SALVAGE

ASSETS) TO REPORT OPCON TO USNORTHCOM AND TACON TO JTF KATRINA FOR DSCA OPERATIONS. DEVELOPING COAS TO DETERMINE C2 RELATIONSHIPS BETWEEN NAVAL ASSETS AND JTF-KATRINA.

4. REQUEST VOICE CONFIRMATION OF RECEIPT.
JOINT OPERATIONS CENTER (NC JOC) POCS ARE THE NC JOC OPERATIONS CHIEF, DSN: 692-2361, COMM (719) 554-2361, UNCLASSIFIED EMAIL: NC.JOC.CHIEF.OMB@NORTHCOM.MIL AND THE LAND EAST OFFICER, DSN: 834-0435, COMM (719) 556-0435, UNCLASSIFIED EMAIL: NC.JOCLANDEAST.OMB@NORTHCOM.MIL.//

GENTEXT/AUTHENICATION/USNORTHCOM OFFICIAL: J3/MG ROWE.// AKNLDG/YES//

UNCLASSIFIED FOUO//
OP301745Z AUG 05

FM HQ USNORTHCOM//J3//
TO JOINT STAFF WASHINGTON DC//J3/J4/DDATHD/JDOMS// INFO SECDEF WASHINGTON DC
ASD(HD) WASHINGTON DC
ASD(PA) WASHINGTON DC
CJCS WASHINGTON DC
CSA WASHINGTON DC//G/3/5/7//
CNO WASHINGTON DC//N3/N5//
CMC WASHINGTON DC//PP&O//
CSAF WASHINGTON DC//XO//
CMC WASHINGTON DC//POC/POS/RAM/PP&O//
CDRUSJFCOM NORFOLK VA//J1/J2/J3/J4/J5/J6/J7/J8/J9// CDRUSTRANSCOM SCOTT AFB IL//J3-J4/J3-OD// CDRUSSTRATCOM OFFUTT AFB NE//J1/J2/J3/J4/J5/J6/J7/J8// HQ USNORTHCOM//J1/J2/J3/J4/J5/J6/J7/J8/IC/JA/PA//
HQ NORAD PETERSON AFB CO//J3/J5//
HQ USAF WASHINGTON DC//AFOC/XOH/ILX//
DA WASHINGTON DC//DAMO-ODS//
NGB WASHINGTON DC//J3/J4//
CDRARNORTH FT MCPHERSON GA
CDR FORSCOM FT MCPHERSON GA//G3/AFOP-OC/HS// CDRNORTHAF LANGLEY AFB VA ACC LANGLEY AFB VA//CC/DO// CDRNAVNORTH NORFOLK VA CFFC NORFOLK VA COMMARFORNORTH NEW ORLEANS LA//G3/G4/G5/G7// COMMARFORRES NEW ORLEANS LA//G3/G4/G5/G7// JFHQ-NCR WASHINGTON DC CJTF-CS FT MONROE VA CMOC CHEYENNE MOUNTAIN AS CO//CC/J3// COMLANTAREA COGARD PORTSMOUTH VA//A/ACS/AO/AM// CMDT COGARD WASHINGTON DC//G-OPF// WHITE HOUSE SITUATION ROOM WASHINGTON DC CSAF WASHINGTON DC FIRST ARMY FT GILLEM GA FIFTH ARMY FT SAM HOUSTON TX//

OPER/DOD SUPPORT TO FEMA FOR HURRICANE KATRINA//
MSGID/GENADMIN/CDRUSNORTHCOM// SUBJ/REQUEST FOR FORCES//
REF/A/GENTEXT/USNORTHCOM/301600ZAUG05/-/-/-//
NARR/
REF A IS USNORTHCOM REQUEST TO JOINT STAFF TO ESTABLISH A JOINT OPERATIONS AREA FOR HURRICANE KATRINA RELIEF OPERATIONS.//

POC/QUEEN/MR./J35/USNORTHCOM/DSN 692-7160/ JACK.QUEEN@NORTHCOM.MIL//
NARR/THIS IS A HQ USNORTHCOM REQUEST FOR FORCES (RFF) TO AUGMENT JOINT

TASK FORCE KATRINA IN SUPPORT OF USNORTHCOM'S MISSION TO SUPPORT DISASTER RELIEF OPERATIONS FOLLOWING DEVASTATION BY HURRICANE KATRINA.//

GENTEXT/SITUATION//
1. (U) SITUATION//
1.A. (U) DOD IS PROVIDING SUPPORT TO FEMA FOR DISASTER RELIEF OPERATIONS FOLLOWING HURRICANE KATRINA'S DEVASTATION ALONG THE GULF COAST.
1.B. (U) THE REQUESTED FORCES REFLECT INITIAL USNORTHCOM MISSION ANALYSIS.//

GENTEXT/MISSION//
2. (FOUO) MISSION.
2.A. (FOUO) USNORTHCOM MISSION. ON 29 AUG 05, DOD SUPPORTS FEMA IN THE CONDUCT OF DISASTER (WHEN DECLARED) AND EMERGENCY RESPONSE OPERATIONS IN AFFECTED AREAS TO AUGMENT LOCAL, STATE, AND FEDERAL DISASTER (WHEN DECLARED) RESPONSE CAPABILITY AS THE RESULT OF HURRICANE KATRINA.

2.B. (FOUO) CONOPS. CDRUSNORTHCOM REQUESTED THE ESTABLISHMENT OF A JOINT OPERATIONS AREA IN THE AFFECTED STATES OF LA, MS, AL, FL, GA, TN, AND KY. CDRUSNORTHCOM PLANS TO HAVE FIRST ARMY ESTABLISH TASK FORCE EAST AS JOINT TASK FORCE KATRINA (JTF-KATRINA) TO PROVIDE COMMAND AND CONTROL OF DOD FORCES SUPPORTING HURRICANE KATRINA RELIEF OPERATIONS.

GENTEXT/FORCE REQUIREMENT//
3. (FOUO) FORCE REQUIREMENT. CDRUSNORTHCOM REQUESTS THE FOLLOWING FORCES/CAPABILITIES OPCON TO PROVIDE SUPPORT TO FEMA:

3.A. (U) ARMY FORCES:

3.A.1. (FOUO) FORCE/CAPABILITY. COMMAND AND CONTROL ELEMENT TO CONTROL JOINT OPERATIONS AREA (JOA) CONSISTING OF MULTIPLE STATES FOR DOD SUPPORT TO FEDERAL COORDINATING AGENCY. RECOMMENDED UNIT IS FIRST ARMY.
3.A.1.A. (FOUO) DESTINATION: CAMP SHELBY MS.
3.A.1.B. (FOUO) REQUIRED DATE: REQUIRED DATE IS NLT 30 AUG 05.
3.A.1.C. (FOUO) DURATION: FROM 30 AUG 05 UNTIL RELIEVED BY CDR USNORTHCOM.
3.A.1.D (FOUO) JUSTIFICATION: TO PROVIDE A COHERENT CENTRALIZED COMMAND AND CONTROL STRUCTURE WITHIN THE JOA TO INTEGRATE MULTIPLE SERVICES FOR RELIEF OPERATIONS. UNIT WILL BE DESIGNED JTF-KATRINA.

3.B. (U) NAVY FORCES:

3.B.1. (FOUO) FORCE/CAPABILITY. USN SURFACE AMPHIBIOUS COMBATANT VESSEL WITH EMBARKED AVIATION ASSETS AND MEDICAL TEAMS.
RECOMMENDED SOURCE IS USS BATAAN.
3.B.1.A. (FOUO) DESTINATION: IN VICINITY OF (IVO) NEW ORLEANS LA.
3.B.1.B. (FOUO) REQUIRED DATE: REQUIRED DATE IS 30 AUG 05.
3.B.1.C. (FOUO) DURATION: FROM 301800ZAUG05 UNTIL RELIEVED BY CDRUSNORTHCOM OR CDR JTF-KATRINA.
3.B.1.D (FOUO) JUSTIFICATION: VESSEL AND EMBARKED ASSETS/ PERSONNEL REQUIRED TO CONDUCT DEFENSE SUPPORT TO CIVIL AUTHORITIES (DSCA)/HUMANITARIAN ASSISTANCE (HA) IN RESPONSE TO HURRICANE KATRINA.

3.B.2. (FOUO) FORCE/CAPABILITY. USNS LOGISTICS SERVICE SUPPORT SHIP.
RECOMMENDED SOURCE IS USNS ARCTIC.

3.B.2.A. (FOUO) DESTINATION: IN VICINITY OF (IVO) NEW ORLEANS LA/GULFPORT MS., OR DETERMINED BY CDR JTF-KATRINA.
3.B.2.B. (FOUO) REQUIRED DATE. REQUIRED DATE IS 1 SEP 05.
3.B.2.C. (FOUO) DURATION: FROM 01 SEP 05 UNTIL RELIEVED BY CDRUSNORTHCOM OR CDR JTF-KATRINA.
3.B.2.D (FOUO) JUSTIFICATION: DSCA SHUTTLE SUPPORT SHIP TO PROVIDE LOGISTICS SERVICE (LOGSVC) SUPPORT FOR USS BATAAN AND ANY OTHER VESSELS ASSIGNED TO ASSIST IN THE DISASTER RELIEF MISSION.
VESSEL AND EMBARKED ASSETS/PERSONNEL REQUIRED TO CONDUCT DEFENSE SUPPORT TO CIVIL AUTHORITIES (DSCA)/HUMANITARIAN ASSISTANCE (HA) IN RESPONSE TO HURRICANE KATRINA.

3.B.3. (FOUO) FORCE/CAPABILITY. HIGH SPEED SUPPLY VESSEL.
RECOMMENDED SOURCE IS HSV SWIFT PRESENTLY INPORT INGLESIDE TX.
3.B.3.A. (FOUO) DESTINATION: IVO NEW ORLEANS LA.
3.B.3.B. (FOUO) REQUIRED DATE: 30 AUG 05.
3.B.3.C. (FOUO) DURATION: FROM 30 AUG 05 UNTIL RELIEVED BY CDRUSNORTHCOM OR CDR JTF-KATRINA.
3.B.3.D. (FOUO) JUSTIFICATION: RE-SUPPLY USS BATAAN AND DSCA SUPPORT VESSELS AS DIRECTED OR IN SUPPORT OF FEMA AS NECESSARY.

3.B.4. (FOUO) FORCE/CAPABILITY. THREE VESSEL AMPHIBIOUS READY GROUP (ARG) WITH SIX (6) EMBARKED DISASTER RELIEF TEAMS (DRT) AND EMBARKED AVIATION AND STAFF ASSETS INCLUDING COMPHIBRON FOUR STAFF. RECOMMENDED SOURCE USS IWO JIMA, USS TORTUGA, USS SHREVEPORT WITH EMBARKED ASSETS PRESENTLY INPORT NORFOLK VA.
3.B.4.A (FOUO) DESTINATION: IVO NEW ORLEANS LA/GULFPORT MS OR AS DETERMINED BY CDR JTF-KATRINA WHEN DIRECTED.
3.B.4.B. (FOUO) DURATION: UPON ARRIVAL UNTIL RELIEVED BY CDR USNORTHCOM OR CDR JTF-KATRINA.
3.B.4.C. (FOUO) JUSTIFICATION: BPT DEPLOY WITHIN 24 HRS TO TRANSIT TO VIC NEW ORLEANS LA AND TO PROVIDE ADDITIONAL DSCA/HA ASSISTANCE AS DIRECTED. FIVE DAY TRANSIT TIME ANTICIPATED.

3.B.5. (FOUO) FORCE/CAPABILITY. USN SALVAGE AND DEWATERING CAPABILITY. RECOMMEND SOURCE IS USN SUPSALV EMERGENCY SHIP SALVAGE MATERIAL (ESSM) AND COMLANTFLT SALVAGE VESSELS/ASSETS (DIVING CAPABILITY).
3.B.5.A. (FOUO) DESTINATION: IVO NEW ORLEANS LA.
3.B.5.B. (FOUO) DURATION: UPON ARRIVAL UNTIL RELIEVED BY CDRUSNORTHCOM OR JTF-KATRINA.
3.B.5.C. (FOUO) JUSTIFICATION: BPT DEPLOY SALVAGE AND DEWATERING CAPABILITY TO VICINITY OF NEW ORLEANS LA OR SOUTHERN MISSISSIPPI TO PROVIDE ADDITIONAL DSCA CAPABILITY AS DIRECTED. CAPABILITY REQUIRED TO AUGMENT US ARMY CORPS OF ENGINEERS SALVAGE AND EMERGENCY RESPONSE FUNCTIONS UNDER NATIONAL RESPONSE PLAN EMERGENCY SUPPORT FUNCTION THREE (3) ON LAND AS WELL AS TO POSITION TO PROVIDE POTENTIAL MARINE SALVAGE MITIGATION FOR DISABLED, STRANDED OR GROUNDED VESSELS AS DIRECTED.

3.B.6. (FOUO) FORCE/CAPABILITY. DOD UNDERWATER SURVEY CAPABILITY. RECOMMENDED SOURCE IS USN FLEET SURVEY TEAMS OR MILITARY OCEANOGRAPHIC SURVEY (MOS) SHIPS WITH EMBARKED SURVEY LAUNCHES.
3.B.6.A. (FOUO) DESTINATION: IVO NAVSTA PASCAGOULA MS AND NEW ORLEANS LA.
3.B.6.B. (FOUO) DURATION: UPON ARRIVAL UNTIL RELIEVED BY CDRUSNORTHCOM OR CDR JTF-KATRINA.
3.B.6.C. (FOUO) JUSTIFICATION: PROVIDE NAVIGATION SURVEYS FOR PORT OF NEW ORLEANS LA AND NAVAL STATION PASCAGOULA TO ENSURE SAFETY OF NAVIGATION

AND CONFIRM ANY UNDERWATER OBSTRUCTIONS FOLLOWING HURRICANE KATRINA. SURVEY ASSETS SHOULD BPT DEPLOY WHEN DIRECTED BY CDR USNORTHCOM TO ENSURE SAFETY OF NAVIGATION IN DOD PORTS AND TO AUGMENT US ARMY CORPS OF ENGINEERS AND NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION (NOAA) SURVEY TEAMS AS REQUIRED.

3.B.7. (FOUO) FORCE/CAPABILITY. CONSTRUCTION BATTALION CAPABILITIES. RECOMMENDED FORCE IS FROM PORT HEUNEME CA. PAX 125 3.B.7.A. (FOUO) DESTINATION: GULFPORT MS 3.B.7.B. (FOUO) DURATION: UPON ARRIVAL UNTIL RELIEVED BY THE CDRUSNORTHCOM OR CDR JTF-KATRINA.
3.B.7.C. (FOUO) JUSTIFICATION: GULFPORT/BILOXI AIRPORT SUSTAINED SIGNIFICANT DAMAGE AND UNIT IS REQUIRED TO RESTORE OPERATIONAL CAPABILITY.

GENTEXT/ADMIN AND LOG//
4. (FOUO) DESTINATION. IVO NEW ORLEANS LA AND IVO NAVSTA PASCAGOULA MS.
5. (FOUO) REQUIRED DATE IS O/A 30 AUG 05.
6. (FOUO) DURATION. FROM ARRIVAL O/A 30 AUG05 UNTIL RELIEVED BY CDRUSNORTHCOM OR CDR JTF-KATRINA, OR AS OTHERWISE SPECIFIED ABOVE.
7. (U) FUNDING. USNORTHCOM WILL NOT PROVIDE FUNDING.
8. (U) COORDINATING INSTRUCTIONS. DIRECTING THAT ALL NAVAL ASSETS UTILIZE THE DESIGNATED JOPES ADP TPFDD FOR ASSET VISIBILITY AND FORCE TRACKING REGARDLESS OF MODE AND SOURCE OF TRANSPORTATION.
9. (U) POINTS OF CONTACT. MR. JACK QUEEN, NC J35, DSN 692-7160, JACK.QUEEN@NORTHCOM.MIL.
GENTEX/AUTHENTICATION/MG ROWE/J3/.
OFFICIAL: MR. QUEEN, USNORTHCOM J35//
AKNLDG/NO//

SUPSALV Initial Tasking Development

The following documents SUPSALV actions to establish tasking and working relationships during initial weeks of operation.

2 September, 2005

- SUPSALV called Richard Fredricks of the American Salvage Association to obtain recommendations on where best to forward deploy, namely where salvage resources would be available. Mr. Fredricks indicated that the USCG Incident Command Center (ICC) in Alexandria, LA was the best location.
- Deputy Secretary of Defense and Deputy Secretary of Homeland Security approved the plan to deploy SUPSALV for area-wide coordination of three specific areas: (1) hydrographic surveys, (2) salvage, and (3) oil pollution abatement incident to salvage, across the entire Gulf Coast area affected by Hurricane Katrina.
- SUPSALV and his Director of Salvage Operations, Mr. Michael Herb, immediately forward deployed, reporting in at midnight to the USCG ICC in Alexandria, Louisiana to initiate SECDEF/SECHS tasking. Three other SUPSALV personnel (Richard Thiel, LT Carl Parks, and SUPSALV contractor, Geoff White) deployed via truck, along with Emergency Ship Salvage Material (ESSM) equipment.
- Prior to his departure, CAPT Wilkins called Jeff Hill at NORTHCOM and told him what SUPSALV was doing.

3 September 2005

- ADM Harris, Deputy Secretary of Defense, approved the SUPSALV incident response plan and forwarded to Mr. Jackson at the Department of Homeland Security. However, no official paper was available.

4 September 2005

- SUPSALV advised VADM Sullivan that he was forward deploying equipment and personnel without money or tasking in violation of the Anti-Deficiency Act. Once advised, VADM Sullivan authorized CAPT Wilkins to proceed but to call back Monday with dollar amounts. Subsequently VADM Sullivan called the Navy Comptroller's office to have $10M advanced to NAVSEA to back SUPSALV obligations.
- SUPSALV traveled to FEMA Emergency Operations Center in Baton Rouge, LA to meet with senior FEMA leadership and establish organizational structure and chain of command. Although CAPT Wilkins drove to Baton Rouge, LA to meet with FEMA Director Michael Brown and advise him of SUPSALV's presence and capability, Mr. Brown was unavailable. Thus, CAPT Wilkins met with Bill Lokey of the FEMA Federal Coordination Office. Mr. Lokey referred CAPT Wilkins to the USACE. A plan was implemented to coordinate funding between

SUPSALV and other interagency groups including FEMA, USCG, and USACE.

- SUPSALV oil pollution abatement experts Bill Walker (SUPSALV) and Ron Worthington (ESSM) deployed to Gulf Region to assist in coordination with oil spill response.
- CAPT Wilkins encountered Michelle Degal (FEMA), whom he recalled from a previous salvage mission. She was able to arrange a meeting with Gerald Crivy, FEMA Mississippi Division, and Major General Riley, Task Force Commander. They were searching for pumps to remove floodwater from New Orleans.
- CAPT Wilkins returned to Alexandria, LA where he coordinated with the Coast Guard to get funding from FEMA. Because no one understood how funding for salvage would flow for this operation, such a process needed to be developed
- CAPT Wilkins traveled twice to the Joint Field Office in Baton Rouge to inquire as to what FEMA could do to expedite Salvage funding. There, he met with Dave Moore and others. SUPSALV wanted a mission assignment (MA). However, as of two days later, no mission assignment had been generated. Jackie Ladysh later wrote a MA that was signed by Ron Moore on 9 September for $75M to initiate Salvage work in Louisiana only.
- Personnel from Mobile Diving and Salvage Unit TWO Det Four and Det Thirty arrived at the Pascagoula Naval Base and began diving and salvage operations. SUPSALV deployed Master Divers to work with MDSU and help coordinate their efforts with the USACE and the Coast Guard. The SUPSALV Master Diver also coordinated with the SUPSALV medical staff at NAVSEA Headquarters to obtain guidance on diving in the contaminated waters along the Gulf Coast. MDSU TWO began conducting channel surveys, dives and salvage operations in order to open federal channels. Detachment Thirty subsequently recovered two submerged dangers to navigation restricting Gulfport channel resulting in immediate opening of that shipping lane and Detachment Four worked channel clearance and USN ship running gear inspections in the port of Pascagoula.

7 September 2005

- LCDR Sean Memmen from the USN Hydrographic office arrived to support SUPSALV coordination of hydrographic surveys of principal waterways impacted by Hurricane Katrina, including critical off-shore infrastructure (oil rigs, etc.).
- SUPSALV initiated a master Joint Navy/Coast Guard/Army Corps of Engineers/FEMA Database to track all technical and accounting data for each of the hundreds of identified and anticipated salvage and wreck removal cases identified across Louisiana, Mississippi, and Alabama.

8 September 2005

- USS GRAPPLE (ARS 53) arrived on station and began conducting survey and channel clearance operations along the Mississippi and Alabama coasts.

9 September 2005

- SUPSALV met with FEMA, USCG and USACE at Baton Rouge Joint Field Office and received FEMA's wreck removal "Mission Assignment" to USCG for Louisiana waterways (NOTE: this was previously indicated as taking place around 4 SEP). On 10 September, SUPSALV called JFO, encouraging both Alabama and Mississippi start on mission assignments. Later, AL and then MS would set up MAs.

14 September 2005

- SUPSALV convened the first meeting of the USCG's Incident Management Team (IMT), comprised of representatives from USCG/USACE/FEMA to initiate all parties with the capabilities SUPSALV brought to the table.

23 September 2005

- USCG District 8 tasked SUPSALV to develop parallel organization to support salvage and wreck removal anticipated to be required by the approach of Hurricane RITA toward the Texas Gulf Coast.

24 September 2005

- Hurricane RITA achieved landfall vicinity Port Arthur, LA and passed through the Alexandria, LA area, disrupting the Incident Command Center and SUPSALV's salvage, and wreck and debris identification and removal efforts. New damage was caused to areas in southwest Louisiana and southeast Texas.

26 September 2005

- SUPSALV conducted overflight of RITA impact areas and deployed to USCG Incident Command Post (ICP) in Houston, TX; met with Incident Commanders and Captains of the Port to coordinate salvage and wreck removal identification and response.

P 140054Z SEP 05 ZUI ASN-A08257000009
> FM CCGDEIGHT NEW ORLEANS LA//D/O/DL/OLE/CC//
> TO COMCOGARD SECTOR NEW ORLEANS LA
> COMCOGARD SECTOR MOBILE AL
> INFO COMDT COGARD WASHINGTON
> DC//G-O/G-L/G-M/G-MOR/G-MOC/G-LCL/G-LGL/G-LEL/G-LMI//
> COMLANTAREA COGARD PORTSMOUTH VA//A/AO/AOF/AOO/ACC//
> COMCOGARD MLC LANT NORFOLK VA//MD/P/F/ML/S/V//
> CCGDSEVEN MIAMI FL//CC//
> DEPT OF JUSTICE WASHINGTON DC//DAG//
> DEPT OF HOMELAND SECURITY WASHINGTON DC//BTS/BCIS//
> COGARD ENGLOGCEN BALTIMORE MD//CODE 022//
> USS BATAAN//JJJ//
> CTU 20.9.1
> COGARD NSFCC ELIZABETH CITY NC
> COMCOGARD NPFC WASHINGTON DC
> BT
> UNCLAS FOUO //N16472//
> **SUBJ: IMPLEMENTATION OF COAST GUARD HURRICANE KATRINA OPERATIONS**
> UNDER ESF-3 AND ESF-10 MISSION ASSIGNMENTS.
> 1. MISSION ASSIGNMENT. A MISSION ASSIGNMENT (MA) IS A WORK ORDER
> ISSUED TO A FEDERAL AGENCY BY A FEMA OFFICIAL. THE COAST GUARD HAS
> RECENTLY RECEIVED A MA FROM FEMA UNDER EMERGENCY SUPPORT FUNCTION
> -3 (ESF-3, RELATED TO PUBLIC WORKS AND ENGINEERING) IN THE AMOUNT
> OF $75 MILLION FOR DEBRIS REMOVAL IN THE STATE OF LOUISIANA. THE
> COAST GUARD ALREADY HAS RECEIVED A MA FROM FEMA UNDER ESF-10
> (RELATED TO HAZARDOUS MATERIALS) COVERING FEMA REGIONS IV AND VI
> AND HAS ALREADY BEGUN CONDUCTING RESPONSE OPERATIONS UNDER THOSE
> MAS.
> 2. ACTION.
> 2.A. SECTOR COMMANDERS SHOULD ESTABLISH CONOPS FOR DEBRIS REMOVAL
> UNDER ESF-3 OUTSIDE OF NAVIGATION CHANNELS (AKA "FEDERAL CHANNEL")
> OF THE STATE OF LOUISIANA IN SUPPORT OF HURRICANE KATRINA RESPONSE.
> THE U.S. ARMY CORPS OF ENGINEERS (USACOE) WILL CONDUCT DEBRIS
> REMOVAL IN THE NAVIGATION CHANNELS IN LOUISIANA. THE COAST GUARD
> HAS NO RESPONSIBILITY OR TASKING UNDER THE MA FOR DEBRIS REMOVAL IN
> A NAVIGATION CHANNEL.
> 2.A.1. THE DISTRICT COMMANDER'S GOAL IS TO RESTORE THE MARITIME
> TRANSPORTATION SYSTEM INFRASTRUCTURE AS QUICKLY AS POSSIBLE, WHILE
> PRESERVING PERSONAL PROPERTY, ESPECIALLY RECREATIONAL AND
> COMMERCIAL VESSELS LOST BY PRIVATE CITIZENS DURING HURRICANE
> KATRINA, AND TO FACILITATE SPEEDY RECOVERY OF THAT PROPERTY BY ITS
> OWNER.
> 2.B. DEBRIS REMOVAL UNDER ESF-3 IS AUTHORIZED FOR THE FOLLOWING
> PUBLIC INTEREST-RELATED PURPOSES:
> (1) ELIMINATION OF IMMEDIATE THREATS TO LIFE, PUBLIC HEALTH, AND
> SAFETY;
> (2) ELIMINATION OF IMMEDIATE THREATS OF SIGNIFICANT DAMAGE TO
> IMPROVED PUBLIC OR PRIVATE PROPERTY; OR
> (3) ECONOMIC RECOVERY OF THE AFFECTED COMMUNITY TO THE BENEFIT OF
> THE COMMUNITY-AT-LARGE.
> 2.C. WE ANTICPATE THAT MOST COAST GUARD RELATED DEBRIS REMOVAL WILL
> BE FOR THE PURPOSE OF ACCOMPLISHING ECONOMIC RECOVERY AND SAFETY.
> 2.D. DEFINITION OF DEBRIS: FOR PURPOSES OF COAST GUARD ACTIVITY
> UNDER ESF-3, DEBRIS INCLUDES, BUT IS NOT LIMITED TO, ALL MANNER OF
> VEGETATION, BUILDING MATERIAL, RECREATIONAL AND COMMERCIAL VESSELS,

> AND ALL MANNER OF OTHER ITEMS THAT THREATEN OR MAY THREATEN THE
> ENVIRONMENTAL AND NAVIGATION SAFETY OF THE NAVIGABLE WATERWAYS.
> 2.E. COAST GUARD DEBRIS REMOVAL ACTIVITY SHOULD FOCUS ON THE
> GEOGRAPHIC AREA FROM THE EDGE OF A NAVIGATION CHANNEL TO THE SHORE
> OF A NAVIGABLE WATERWAY AND BEYOND ONTO THE SHORELINE IF THE DEBRIS
> ON THE SHORELINE PRESENTS, OR MAY PRESENT AN ENVIRONMENTAL OR
> NAVIGATION SAFETY THREAT TO THE WATERWAY. CONOPS FOR ESF-3 RELATED
> WORK SHOULD FOCUS ON DEBRIS REMOVAL REQUIRING COAST GUARD
> EXPERIENCE AND EXPERTISE IN PROTECTION OF MARINE NATURAL RESOURCES,
> NATIONAL DEFENSE, AND MARITIME SAFETY, MOBILITY AND SECURITY.
> 2.F. DEBRIS REMOVAL BEYOND THE SHORELINE IS AUTHORIZED WHEN:
> (1) THE DEBRIS TO BE REMOVED HAS A MARINE NEXUS.
> (2) THE DEBRIS REMOVAL ACTIVITY WOULD BE STAGED ENTIRELY FROM THE
> WATERWAY.
> (3) THE DEBRIS REMOVAL ACTIVITY WOULD BE STAGED BOTH FROM THE
> WATERWAY AND THE LAND.
> (4) IF LEFT IN PLACE, THE DEBRIS TO BE REMOVED COULD POSE A RISK TO
> MARINE NATURAL RESOURCES, MARITIME SAFETY, MOBILITY OR SECURITY.
> 3. GUIDANCE.
> 3 A. DEBRIS REMOVAL FROM PRIVATE PROPERTY. UNITS SHOULD SEEK
> PERMISSION FROM TACON BEFORE ENTERING PRIVATE PROPERTY TO CONDUCT
> DEBRIS REMOVAL.
> 3.B. ASSISTANCE UNDER ESF-3 DEBRIS REMOVAL EFFORTS SHOULD ONLY BE
> PROVIDED WHERE THERE IS NO EVIDENCE THAT THE VESSEL OR PROPERTY
> OWNER IS ENGAGED IN PRIVATE EFFORTS TO REMOVE DEBRIS AND WHERE
> REMOVAL IS DETERMINED TO BE IN THE PUBLIC INTEREST IAW PARAGRAPH
> 2.B ABOVE. OWNERS OF RECREATIONAL OR COMMERCIAL VESSELS OR
> WATERCRAFT WHO CONTACT THE SECTOR COMMANDER AND ANNOUNCE THEIR
> INTENT TO RECOVER THEIR VESSELS SHOULD BE ALLOWED TO REMOVE THEIR
> VESSEL IF THEY CAN DO SO SAFELY, WITHOUT PRESENTING A HAZARD TO
> NAVIGATION, AND IN A TIMELY MANNER CONSIDERING LOCATION AND DEGREE
> OF THREAT THE VESSEL POSES TO THE WATERWAY.
> 3.C. A COAST GUARD MEMBER SHOULD PROVIDE ONSCENE PRESENCE DURING
> ESF-3 AND ESF-10 ACTIVITY, OPS PERMITTING.
> 4. DEBRIS REMOVAL PRIORITIZATION. CONOPS FOR DEBRIS REMOVAL UNDER
> ESF-3 SHOULD INCLUDE THE FOLLOWING FACTORS WHEN DETERMINING WHETHER
> DEBRIS SHOULD BE REMOVED:
> (1) IS THE DEBRIS IN AN AREA OF COAST GUARD RESPONSIBILITY UNDER
> THE ESF-3 MA AS DESCRIBED 2.E.?
> (2) DOES THE DEBRIS POSE A THREAT TO THE WATERWAY?
> (3) IF IT POSES A THREAT, HOW IMMEDIATE (URGENT, SOON, REMOTE)?
> (4) CAN AN OWNER BE IDENTIFIED TO REMOVE THE DEBRIS?
> (5) SECTOR COMMANDERS NEED NOT DELAY TO FIND AN OWNER IF THE DEBRIS
> POSES AN URGENT THREAT TO THE WATERWAY. SECTOR COMMANDERS SHOULD
> ATTEMPT TO LOCATE OWNERS OF VESSELS, IF POSSIBLE, FOR VESSELS
> CATEGORIZED IN THE SOON OR REMOTE CATEGORIES.
> (7) DOES THIS DEBRIS REMOVAL RELATE TO THE COAST GUARD'S EXPERIENCE
> AND EXPERTISE IN PROTECTION OF MARINE NATURAL RESOURCES, NATIONAL
> DEFENSE, AND MARITIME SAFETY, MOBILITY AND SECURITY?
> (8)IS IT A GOOD IDEA TO REMOVE THE DEBRIS?
> 5. VESSELS.
> 5.A. VESSEL DESTRUCTION AS PART OF DEBRIS REMOVAL IS NOT AUTHORIZED
> WITHOUT PRIOR APPROVAL OF THE EIGHTH DISTRICT COMMANDER OR HIS
> DESIGNEE. REQUEST FOR VESSEL DESTRUCTION APPROVAL SHOULD BE MADE
> VIA D8 IMT TO D8(M). MINOR DAMAGE RELATED TO REMOVING A VESSEL IN
> ACCORDANCE WITH 5.B. IS NOT CONSIDERED VESSEL DESTRUCTION. IF

> REMOVAL OPS ARE LIKELY TO RESULT IN SUBSTANTIAL DAMAGE TO A VESSEL
> (TO THE POINT WHERE IT IS SUBSTANTIALLY DESTROYED) SECTOR
> COMMANDERS SHOULD CONSULT WITH D8(M) PRIOR TO INITIATION.
> 5.B. DEBRIS REMOVAL CONOPS SHOULD INCLUDE THE FOLLOWING PROTOCOL
> FOR MANAGEMENT OF VESSELS DISCOVERED DURING DEBRIS REMOVAL.
> (1) ATTEMPT TO IDENTIFY VESSEL OWNER.
> (2) SECTOR COMMANDERS NEED NOT DELAY TO FIND AN OWNER IF THE VESSEL
> POSES AN URGENT THREAT TO THE WATERWAY (FOR EXAMPLE, LOOSELY MOORED
> TO UPROOTED TREE AND THREATENING TO DRIFT INTO A NAVIGABLE
> CHANNEL).
> (3) IF PRACTICAL, AND LEVEL OF THREAT POSED BY THE VESSEL PERMITS,
> CONTACT OWNER TO DISCOVER PLANS AND ABILITY TO RECOVER THE VESSEL.
> (4) IF OWNER DEMONSTRATES INTEREST AND ABILITY (IN THE JUDGEMENT OF
> THE SECTOR COMMANDER) TO RECOVER THE VESSEL, ESTABLISH A REASONABLE
> TIMELINE FOR OWNER REMOVAL.
> (5) IF THE OWNER CANNOT BE IDENTIFIED, OR DOES NOT DEMONSTRATE THE
> ABILITY TO RECOVER THE VESSEL IN A TIMELY FASHION, THE SECTOR
> COMMANDER SHOULD DOCUMENT THE VESSEL ID, DATE AND TIME OF RECOVERY,
> LOCATION OF RECOVERY, BRIEF DESCRIPTION, CONDITION, AND DISPOSITION
> OF THE VESSEL.
> (6) IF THE PROTOCOL DESCRIBED ABOVE IS FOLLOWED, AND THE SECTOR
> COMMANDER DETERMINES THAT THE VESSEL MUST BE REMOVED, THE VESSEL
> MAY BE REMOVED.
> 5.C. SECTOR COMMANDERS MAY CONTRACT TO FLEET OR DRYDOCK RECOVERED
> VESSELS FOR WHICH THE OWNER CANNOT BE IDENTIFIED OR DOES NOT HAVE
> THE ABILITY TO RECOVER THE VESSEL IN A TIMELY FASHION. SECTOR
> COMMANDERS SHOULD ENSURE SECURITY AND PROTECTION OF VESSELS
> DRYDOCKED OR FLEETED.
> 6. COST DOCUMENTATION AND CONTRACTING. FOR ESF-3 DEBRIS REMOVAL
> AND ESF-10 POLLUTION RESPONSE, SECTOR COMMANDERS SHALL FOLLOW THE
> FOLLOWING COST DOCUMENTATION AND CONTRACTING GUIDANCE:
> (1) ALL ESF-10 CONTRACTS IN LOUISIANA SHALL BE COORDINATED WITH
> MS. SHARON PALUSTRE. MS. PALUSTRE MAY BE CONTACTED AT 757-628-4114
> (OFFICE) OR 757-615-2141 (CELL).
> (2) ALL ESF-10 CONTRACTS IN MISSISSIPPI AND ALABAMA SHALL BE
> COORDINATED WITH MS MICHELLE BLAKE. MS BLAKE CAN BE CONTACTED AT
> 757-628-4110 (OFFICE) OR 757-615-2138 (CELL).
> (3) FOR BOTH ESF-3 AND ESF-10 PROJECTS, THE COAST WILL REPORT ONLY
> INCREMENTAL COSTS. THE CG-5136 DOCUMENTATION SUITE SHOULD BE USED
> FOR THIS PURPOSE.
> (4) FINAL COST DOCUMENTATION PACKAGES FOR ESF-10 ONLY SHOULD BE
> FORWARDED TO NPFC FOR FORWARDING TO EPA/FEMA REIMBURSEMENT, AND TO
> THE KATRINA RESPONSE DOCUMENTATION SECTION FOR ARCHIVING. MORE
> INFORMATION WILL FOLLOW REGARDING THE LOCATION OF THE RESPONSE
> DOCUMENTATION UNIT.
> (5) FOR BOTH ESF-3 AND ESF-10 PROJECTS, DAILY COST CEILING DATA FOR
> EACH PROJECT SHOULD BE REPORTED TO MS BLAKE AND MS PALUSTRE
> RESPECTIVELY.
> (6) U.S.NAVY SUPERVISOR OF SALVAGE (SUPSALV) WILL BE MANAGING ALL
> ESF-3 CONTRACTS. HOWEVER, DAILY ESF-3 COSTS SHOULD STILL BE
> TRACKED USING THE CG-5136 DOCUMENTATION SUITE.
> (7) ALL WRECKS AND DEBRIS REMOVED SHOULD BE DOCUMENTED WITH DIGITAL
> PHOTOGRAPHY AND GPS LOCATION POINTS.
> 7. LOCATION OF REMOVED DEBRIS AND VESSELS. REMOVED DEBRIS AND
> VESSELS MAY BE CONTAMINATED. IF CONOPS INCLUDE PLANS FOR SHORT
> TERM STOCKPILING OR STAGING OF DEBRIS PRIOR TO FINAL DISPOSAL IAW

> STANDARD BOA REQUIREMENTS, THE SECTOR COMMANDER SHALL COORDINATE A
> WRITTEN AGREEMENT WITH LOCAL AUTHORITIES PRIOR TO IMPLEMENTATION.
> DISTRICT LEGAL IS AVAILABLE TO WORK WITH SECTOR STAFF IF THIS ISSUE
> ARISES.
> (8) SECTOR COMMANDERS SHOULD WORK WITH COST DOCUMENTATION
> SPECIALISTS TO ENSURE PROPER CATEGORIZATION OF RESPONSE ACTIVITY
> BETWEEN ESF-3 AND ESF-10 TO ENSURE PROPER ACCOUNTING AND AVOID
> DEPLETING FUNDS. WE ANTICIPATE THAT ALL RESPONSES INVOLVING HAZMAT
> OR OILED VESSELS WILL FALL INTO THE ESF-10 CATEGORY.
> 8. SPILL RESPONSE OPERATIONS USING ESF-10 FUNDING ARE ON-GOING IN
> FEMA REGIONS IV AND VI. AS PART OF THIS RESPONSE, SECTOR COMMANDERS
> SHOULD NOT DELAY RESPONSES IN AN ATTEMPT TO IDENTIFY RESPONSIBLE
> PARTIES, ISSUE NOTICE OF FEDERAL INTEREST, ACTIVATE FEDERAL PROJECT
> NUMBERS.
> 9. D8 IMT POC IS CDR T. BEISTLE, 314-539-3900 X2265.
> 10. RELEASED BY: CAPT CLOSE, DISTRICT EIGHT MARINE SAFETY OFFICER.
> BT

ESF - 3
Sub-Task Statement of Work

22 January 2006

From: Captain of the Port New Orleans (COTP)

To: Navy SUPSALV

Subj: ESF - 3 Tasking # 222 –To include but not limited to case 2588.

During Hurricane Katrina, the following vessels were involved in a Marine Casualty in Empire, Louisiana: vessel 2588 is aground in the vicinity of a navigable waterway, Doullut Canal.

IAW the D8 Wreck and Debris Removal IMT Protocol for Louisiana, the risk posed by these vessels shall be mitigated using ESF-3 funding from the Hurricane Katrina Mission Assignment #1603DR-LA-USCG-09.

I direct you to mitigate the risk posed by these vessels using methods, agreed upon by the COTP, to prevent pollution and minimize further damage to these vessels. You shall make every reasonable effort to prevent further damage and maintain the vessels IAW current COTP guidance on vessel collection and holding.

It is expected that this operation will involve multiple heavy lift assets, appropriate crew, support vessels, and other special salvage equipment. Additional vessels must be approved by the Coast Guard representative on-scene. Funding will be apportioned upon approval of your cost estimates and submission of other documentation required by the assigned CG Contracting Officer.

Reviewed by FEMA representative: _____

C. E. RAWSON
Commander, USCG
By Direction

ESF - 3
Sub-Task Statement of Work

17 January 2006

From: Captain of the Port New Orleans (COTP)

To: Navy SUPSALV

Subj: ESF - 3 Tasking #223 – Case 3238 (MISS PAM)

During Hurricane Katrina, the following vessel was involved in a Marine Casualty in Empire, Louisiana; Case 3238 (MISS PAM), will use the previously approved salvage plan for case #2720. The Responsible Party (RP) could not be identified or is not reasonably able to conduct the removal operation.

IAW the D8 Wreck and Debris Removal IMT Protocol for Louisiana, the risk posed by this vessel shall be mitigated using ESF-3 funding from the Hurricane Katrina Mission Assignment #1603DR-LA-USCG-09. This Vessel has been determined by USCG representatives to fall within mission objectives.

I direct you to mitigate the risk posed by this vessel using methods, agreed upon by the COTP, to prevent pollution and minimize further damage to the vessel. You shall make every reasonable effort to prevent further damage and maintain the vessel IAW current COTP guidance on vessel collection and holding.

It is expected that this operation will involve multiple heavy lift assets, appropriate crew, support vessels, and other special salvage equipment. Additional vessels must be approved by the Coast Guard representative on-scene. Funding will be apportioned upon approval of your cost estimates and submission of other documentation required by the assigned CG Contracting Officer.

Reviewed by FEMA representative: _____.

C. E. RAWSON
Commander, USCG
By Direction

ESF - 3
Sub-Task Statement of Work

13 December 2005

From: Captain of the Port New Orleans (COTP)

To: Navy SUPSALV

Subj: ESF - 3 Tasking #224 – Case 2346 (LA-3501-BN), 3185 (MALONE)

During Hurricane Katrina, the following vessel was involved in a Marine Casualty in Venice, Louisiana; Case 2346 (LA-3501-BN), 3185 (MALONE). These cases will use the approved salvage plan for case # 2559. The Responsible Party (RP) could not be identified or is not reasonably able to conduct the removal operation.

IAW the D8 Wreck and Debris Removal IMT Protocol for Louisiana, the risk posed by this vessel shall be mitigated using ESF-3 funding from the Hurricane Katrina Mission Assignment #1603DR-LA-USCG-09. This Vessel has been determined by USCG representatives to fall within mission objectives.

I direct you to mitigate the risk posed by this vessel using methods, agreed upon by the COTP, to prevent pollution and minimize further damage to the vessel. You shall make every reasonable effort to prevent further damage and maintain the vessel IAW current COTP guidance on vessel collection and holding.

It is expected that this operation will involve multiple heavy lift assets, appropriate crew, support vessels, and other special salvage equipment. Additional vessels must be approved by the Coast Guard representative on-scene. Funding will be apportioned upon approval of your cost estimates and submission of other documentation required by the assigned CG Contracting Officer.

Reviewed by FEMA representative: _____

C. E. RAWSON
Commander, USCG
By Direction

ESF - 3
Sub-Task Statement of Work

01 December 2005

From: Captain of the Port New Orleans (COTP)

To: Navy SUPSALV

Subj: ESF - 3 Tasking #225 – Case 2776 (LA-1745-CA)

During Hurricane Katrina, the following vessel was involved in a Marine Casualty in Empire, Louisiana; Case 2776 (LA-1745-CA). These cases will use the approved salvage plan for case # 2092. The Responsible Party (RP) could not be identified or is not reasonably able to conduct the removal operation.

IAW the D8 Wreck and Debris Removal IMT Protocol for Louisiana, the risk posed by this vessel shall be mitigated using ESF-3 funding from the Hurricane Katrina Mission Assignment #1603DR-LA-USCG-09. This Vessel has been determined by USCG representatives to fall within mission objectives.

I direct you to mitigate the risk posed by this vessel using methods, agreed upon by the COTP, to prevent pollution and minimize further damage to the vessel. You shall make every reasonable effort to prevent further damage and maintain the vessel IAW current COTP guidance on vessel collection and holding.

It is expected that this operation will involve multiple heavy lift assets, appropriate crew, support vessels, and other special salvage equipment. Additional vessels must be approved by the Coast Guard representative on-scene. Funding will be apportioned upon approval of your cost estimates and submission of other documentation required by the assigned CG Contracting Officer.

Reviewed by FEMA representative: _____

C. E. RAWSON
Commander, USCG
By Direction

ESF - 3
Sub-Task Statement of Work

25 January 2006

From: Captain of the Port New Orleans (COTP)

To: Navy SUPSALV

Subj: ESF - 3 Tasking #226 – Case 3354, 3355

During Hurricane Katrina, the following vessel was involved in a Marine Casualty in Venice, Louisiana; Case 3354, 3355. These cases will use the approved salvage plan for case # 3142. The Responsible Party (RP) could not be identified or is not reasonably able to conduct the removal operation.

IAW the D8 Wreck and Debris Removal IMT Protocol for Louisiana, the risk posed by this vessel shall be mitigated using ESF-3 funding from the Hurricane Katrina Mission Assignment #1603DR-LA-USCG-09. This Vessel has been determined by USCG representatives to fall within mission objectives.

I direct you to mitigate the risk posed by this vessel using methods, agreed upon by the COTP, to prevent pollution and minimize further damage to the vessel. You shall make every reasonable effort to prevent further damage and maintain the vessel IAW current COTP guidance on vessel collection and holding.

It is expected that this operation will involve multiple heavy lift assets, appropriate crew, support vessels, and other special salvage equipment. Additional vessels must be approved by the Coast Guard representative on-scene. Funding will be apportioned upon approval of your cost estimates and submission of other documentation required by the assigned CG Contracting Officer.

Reviewed by FEMA representative: _____

C. E. RAWSON
Commander, USCG
By Direction

Wreck Removal and Salvage Coordination Group

Salvage Plan Approval List

Case Number: 2813

Technical and Safety Review

☑ Approved ☐ Disapproved

Signature: Sophia M. Hillegass, LT, USCG Date: 12/1/05

per SERT Response dtd 12/1/05

Environment Impact Review

☑ Approved ☐ Disapproved

Signature: Sophia M. Hillegass, LT, USCG Date: 12/1/05

Captain of the Port Approval

☑ Approved ☐ Disapproved

Signature: [signature] Date: 12/1/05

December 1, 2005

SERT Response to salvage plans submitted 12/01/05
For a federalized case in Venice, LA

Provided: Donjon Marine Co. salvage plan dated December 1, 2005 for salvage of the following vessel:

Case#	Name
2813	Master Darby

Assumptions (to be resolved with WRS group):

- Vessels in moderate to good condition, pollutants removed (or secured against release to satisfaction of CG on-site representative). **No photos submitted with this salvage plan.**
- Site safety and dive plans approved locally (WRS).
- Environmental impact assessments filled out locally (WRS).

Recommend: Approval of salvage plans

Comments:

- The lifting straps and crane are sufficiently sized.
- Recommend utilizing spreader bars wherever possible to prevent damage to the hull and topside structures.
- Patching may be required to the satisfaction of the attending inspector / CG rep.

If you want to discuss or have questions, please call SERT duty officer at (202) 327-0165

Environmental Salvage Form

For any environmental questions contact:

CDR Jim Morris
NOAA SSC
Cell: 206/390-9488
24 Hr: 206/
Fax: 206/526-6329
Email: jim.morris@noaa.gov

Case #: 2813

Vessel Name#: Master Darby

Are Photographs Available?

Lat/Lon (If not already recorded in the Database): Venice Marina

Lat (degrees, minutes and tenths): 09° 14.394 N

Lon(degrees, minutes and tenths): 089° 21.725 W

What type of environment will be impacted (e.g. marsh, river bed, grassland, woodland):

sunk at pier in marina

Approximate Length and Width of area to be disturbed:

N/A → this will be a waterside recovery

What type of equipment will be deployed?

See salvage plan

Briefly describe the action to be taken or attach salvage plan.

see salvage plan

Environmental Salvage Questionnaire

1. Does vessel or debris pose a pollution threat that could potentially damage a sensitive environment? NO

- If 'yes' has the salvor secured the potential source(s) of pollution or submitted a contingency plan that meets the requirements of the Coast Guard. If 'yes' then proceed to the next question. If salvor has not done this, then this requirement should be met before a plan can be approved.

- If the vessel or debris does not pose a pollution threat, then skip to the next question.

2. Is vessel or debris close enough to a waterway or roadway or other established surface such that salvage equipment can be effectively deployed to conduct a successful removal operation without disturbing the immediate environment? If 'no' continue to next question. If 'yes', proceed to question 4. Yes

3. Does the salvage operation require that equipment will have to be moved off of a waterway or roadway or other established surface? If 'yes' please contact the NOAA Scientific Support Coordinator (SSC) with the information contained on the Environmental Salvage Form. If 'no' then proceed to question 4.

4. Are there any other environmental issues related to this operation that in your opinion should be brought to the attention of the NOAA SSC? If 'no' then from an environmental and NHPA perspective the salvage plan or wreck removal is approved. NO

SALVAGE PLAN

Salvage Company: Donjon Marine Co., Inc.

Telephone: 908-353-2600

Address: 1240 Liberty Ave. Hillside, NJ 07205

TASK: 3-158

Case	Name	VIN	L	B	D	Est. Lt shp	Vessel Type/Material	capsized	aground	stranded	Orientation
2813	Master Darby	289577	53	15	7	40	Aluminum F/V				Sunk upright

Location: **Venice, LA** Mile Marker_____

( ) lat/long_____

(X) geographic location: Venice Marina ( ) on land ( ) on bank (X) in Marina

Fuel Oil: Type: **Unknown** quantity _____ ☐gals ☐bbls

Cargo: Type **Unknown** quantity _____ ☐gals ☐bbls

Pollution threat: Vessels currently leaking or spilling cargo/bunkers ( ) Yes (X) No

Potential for cargo loss: **NO**, Potential for loss of fuel; **YES**

Vessels Restricting Waterway: ( ) Yes (X) No

( ) Safety Zone Requested

If Safety Zone requested, describe area and time_____

Reported Damage:*

Description of Damage to Vessel Tanks (holed, hull intact etc.):

Unknown.

Drafts or Freeboards: N/A

Water Depth Around Vessels: Varies 0-10'

Salvage Methods and Operations *

Detailed description of operation, including order of operation.

Case Number: 2813

The vessel will be lifted using the DB Columbia with two 2 1/2" wire ropes which will be placed around the vessel in a rolling if needed, configuration, then re-rigged for lifting using the Columbia's 400T crane, in a two Sling "basket" lift arrangement. The vessel will then be confirmed free of entrained water. If any water is found, it will be removed via portable pump. Previous to any lifting operation, all deck equipment/fittings will be lashed to the side of the vessel to prevent any safety or related Hazards. From a pollution prevention perspective, the vessels will be surveyed and any possible source of pollution will be secured. Methods to perform this activity include but are not limited to bagging the fuel vents, re-securing any open or damaged covers and, with the use of absorbents, cleaning up any loose or spilled oil. Any damage to the hull or other area's where, once placed in the adjacent waterway, water can enter uncontrolled into the hull will also be secured. Once this work is completed, the vessel will be made ready for placement into the water (re-floated). Once the vessel is lifted clear of its present position on the bank, and placed into the water, a hull survey will be performed to confirm watertight integrity. Once this condition is confirmed, the vessels will be released from slings and with the use of the onsite attendant tug, delivered to the local disposal facility. From the perspective of safety, each 2 1/2" wire sling has a breaking strength of approximately 800,000 lbs (400 short tons). In a basket sling arrangement, the breaking strength essentially doubles to 800 short tons. With a two sling lifting arrangement, the theoretical breaking strength for this arrangement is 800 tons. The maximum weight of these vessels is approximately 40 tons. Therefore, with the use of 4-125 ton SWL Shackles (5 to1 safety factor) the overall lift is deemed safe to proceed.

Note: This plan may be modified or amended as information becomes available or conditions warrant during salvage operations.

Additional Salvage Information Available*

Check all that apply

☐ Loading Plan/ Information
☐ Structural Plans
☐ Stability Plans (tank data, lines, stability book/calcs)
☐ Cargo MSDS (s)
☐ Arrangement Plans
☐ Request SERT assistance in locating vessel plans/documentation

Additional Plans –Submitted Previously

(X) Site Safety Plan
( ) Dive Safety Plan
( ) Environmental Impact Plan
(X) Pollution Plan.

Lightering/Internal Transfer- Not Applicable

Grounding

(X) *Location of ground contact with hull –100% along keel
☐ Visibly bending ☐ Yes ( ) No
( ) *Visibly damaged or deformed structure-

☐ Tears _____
☐ Cracks _____
☐ Buckled plate _____
☐ Deformities of hull
☐ Hog _____
☐ Sag _____
☐ Estimated time of grounding: _____
☐ Tidal Data
☐ Tidal range (ft) _____
☐ Time between tides _____
☐ Time next low tide _____
☐ Time next high tide _____
( ) *Post grounding tank and void soundings ☐ Available ( ) Not available
☐ Soundings to be taken every _____ ☐ minutes ☐ hours
☐ Speed prior to grounding _____
(X) *Bottom material (X) Mud/Silt ☐ Sand ☐ Rock ☐ Other
( ) Slope: Channel Bank ( ) Topography: _
( ) Current effects _____
Other Relevant Information regarding the refloating operation:
_____

Collision/Allision-Not Applicable

Lifting/Dewatering Operations
(Provide below information if not described in Salvage Methods and Operations Section)

(X) *Description of Straps/wire rope: **2 X 2 1/2" Wire Slings (approx. 800,000 lb. break)**
(X) *Number of straps to be used-2
(X) *Protection against slicing hull- **diameter of the 2X2 1/2" wire slings**
(X) *Salvage equipment to be used – **DB Chesapeake 1000, Attendant Tug, Dive/Salvage team, Miscellaneous Water pumps, Rigging/Patching materials**
(X) *Measures to be taken to minimize pollution release – **Vessel will be surveyed and any possible sources of pollution will be secured or removed if necessary**
(X) *Pumping Equipment, Arrangement, and General Procedure – **Due to the relatively small size of the vessel, 3" portable diesel driven pumps will be utilized, if necessary, with 30' lengths of suction and discharge hose.**
☐ *Air Equipment, Arrangement, and General Procedure

Patching/Temporary Hull Repairs - As Necessary
(Provide below information if not described in Salvage Methods and Operations Section)

Vessel Transit

(X) Destination - local mooring and disposition area in Empire

(X) Route- **local waterway**
(X) Estimated time of arrival Date: **TBD** Time:**TBD**
(X) Maximum and minimum speed: **5 knots**
(X) Weather-**Fair**
(X) Purpose of transit (offload, repair, etc.): **Storage**
(X) Special Conditions of Transit (Tugs, Air Bubbles, etc.): **NONE**

Submitted by:_____Mike Brown/Donjon Marine_ Date/Time:___12/1/05_____

Approved by _____ Date/Time:_____

Office of the Supervisor of Salvage & Diving, USN
Director of Ocean Engineering

20 September 2005

MEMORANDUM

From: SUPSALV
To: CAPT Paskewich, COTP New Orleans

Subj: SUPSALV Process for Tracking Costs in Support of Katrina Hurricane Tasking Disaster No. 2005082401) Under FEMA MA 1603DR-LA-USCG-07

Encl: (1) Process for Tracking Costs

1. In support of subject sub-tasking from the USCG, SUPSALV is implementing a process detailed in enclosure (1) to track costs. This enclosure, which was initially provided by SUPSALV memo dated 17 SEP 05, has been modified to reflect revised case numbers.

2. Request your concurrence that these procedures will comply with requirements for reimbursement.

3. The SUPSALV point of contact is Mr. Richard Asher, SEA 00CB, on 202-781-0418 or email Richard.asher@navy.mil.

JAMES R. WILKINS, III
Supervisor of Salvage
Director of Ocean Engineering, USN

Copy to:
Ms. Sharon Palustre
MSTC Robin Klarmann

Process for Tracking Cost
20 Sep 2005

A CASE will be set up for each separate task or object being removed. Case numbers will take the form of nnnn.nn. DonJon, Phoenix, GPC and other contractors will track costs for each "CASE" separately. The Geospatial Information System (GIS) and Database Management Team (aka "Voodoo Lounge") in conjunction with the USCG and SUPSALV will establish a separate CASE with a unique number for each item of interest. That CASE will be maintained in the Voodoo Lounge database. While each item being tracked will be issued a CASE number, those that are approved for removal by the Incident Management Team (IMT consisting of USCG, FEMA, USACE and State of Louisiana) will be designated on the database with the date approved. DonJon and other SUPSALV contractors providing specific support for a CASE will provide the information detailed below and will use the CASE number provided from the Voodoo Lounge to track costs. DonJon and other contractors will maintain records for all costs incurred and will also provide the data to the Voodoo Lounge. DonJon, other SUPSALV contractors and the Voodoo Lounge will maintain backup copies of the databases and other information.

Daily Reports – Each day, DonJon and other SUPSALV contractors will prepare reports for each active CASE. DonJon and others will retain hard copies of all backup information supporting the costs. DonJon and other SUPSALV contractors will provide three reports to the Voodoo Lounge each day for active cases (an active case is an approved case with activity for the day) to include:

1. Management Summary reports (non-financial), which provide a brief summary of the activity on the CASE for the day including information on work accomplished, started, continued or completed. Information items such as logs, photographs and backup data will be provided to the Voodoo Lounge for entry into the database, most likely in a scanned format.
2. Pollution Incident Daily Resource Reports for each CASE, which provide details on the USCG forms (CG-5136E). For small CASES with only limited action, a single form, CG-5136E-4 may be used. For larger cases, there are three forms that will be used; one for contractor personnel, one for contractor equipment and one for subcontractors and material. The forms are to be signed and certified by the contractor and signed and certified by the SUPSALV representative. These signed forms will be scanned and provided in digital format (pdf) by DonJon and other SUPSALV contractors to the Voodoo Lounge for incorporation into the database.
3. Summary Cost Report to be provided by DonJon and other SUPSALV contractors for each CASE is to be provided each day to the Voodoo Lounge. This report will provide the current CASE total estimate for each active CASE as well as the cost to date for each active case. The report will be provided in spreadsheet format (template to be provided by Voodoo Lounge). The Voodoo Lounge will insert the data into the database each day.

- CASE 9,100 will be used to track management and administration costs by the DonJon HQ team. CG-5136E will be completed for these costs and entered into the database. In addition, a management report will be provided to document the efforts for the day. Costs will include general surveys in advance of formal CASE assignment and approval.
- CASE 9,200 will be used to track costs from the Voodoo Lounge. CG-5136E will be completed for these costs and entered into the database. In addition, a management report will be provided to document the efforts for the day.
- CASE 9,300 will be used to track costs for ROH onsite support team. CG-5136E will be completed for these costs and entered into the database. In addition, a management report will be provided to document the efforts for the day.
- CASE 9,400 will be used to track costs for SUPSALV. CG-5136E will be completed for these costs and entered into the database. SUPSALV personnel will input timecards detailing time supporting the Katrina Hurricane response efforts. Time will be reported for support on site and at the Washington Navy Yard. 00C1 will be responsible for reporting costs on a daily basis to the Voodoo Lounge.

DEPARTMENT OF TRANSPORTATION U.S.COAST GUARD CG-5136E-4 (01-93)	POLLUTION INCIDENT DAILY RESOURCE REPORT	CONTRACTOR SHORT FORM Page__of__ RCN-16451-1

FPN/CERCLA NUMBER _____ DATE _____

CONTRACTOR _____ PO/CONTRACT NO. _____

If information below is documented separately, in a form or format previously reviewed and found acceptable by the National Pollution Funds Center and the Contracting Officer, this form need not be completed.

PERSONNEL

CLIN	NAME (LAST,FIRST)	HOURS FROM	TO	TOTAL HRS	HOURLY RATE	RATE CHG	PER DIEM	TOTAL COST
								0.00
								0.00
								0.00

TOTAL COST FOR THIS DATE 0.00

EQUIPMENT

CLIN	ITEM DESCRIPTION	RATE BASIS	EMPLOYED FROM	TO	#UNITS	RATE/ UNITS	RATE CHG	NON-RATE	TOTAL COST
									0.00
									0.00
									0.00

TOTAL COST FOR THIS DATE 0.00

SUBCONTRACTORS

Were any subcontractors hired? Yes____ No____

If yes, list below and attach Sub. Daily Reports

CLIN	SUBCONTRACTOR'S NAME	COST	ADMIN FEE	TOTAL COST
				0.00
				0.00

TOTAL COST OF SUBCONTRACTORS FOR THIS DATE 0.00

MATERIALS USED/OTHER EXPENSES

CLIN	DESCRIPTION	UNIT DESCRIPT	UNITS USED	UNIT COST	TOTAL COST
					0.00
					0.00
					0.00

TOTAL COST OF MATERIALS USED/EXPENSES FOR THIS DATE 0.00

CONTRACTORS CERTIFICATION:

I certify that this report is a true and complete record of the materials, labor, equipment and subcontractors provided by the contractor on the date listed above for the project number cited above.

_____

Contractor's Authorized Representative

ON SCENE COORDINATOR'S/LEAD TRUSTEE'S REVIEW:

I certify that inspection and acceptance of the listed items has been made by me or under my supervision, except as noted herein or on supporting documents.

_____

FOSC/Lead Trustee

(LOCAL REPRODUCTION)

Appendix C

MOBILIZATION DOCUMENTS

Appendix C
Mobilization Documents

WATERWAY RECOVERY TASK FORCE
AMERICAN SALVAGE ASSOCIATION ONSITE CONTRACTORS AND ASSETS
September 3, 2005

CO	QTY	ID	DERRICK BARGES AND A-FRAME CRANES	ETA from notice to proceed	Location	Assignment	Boom Ft	Lift Capacity (Short Tons)	Quarters - Additional Personnel	Notes
			WATERWAY RECOVERY PERSONNEL							
ASA	1	Mauricio Garrido	Senior Project Manager / Salvage Master	ON SITE	ICP	*				
T&T Bisso	1	Rick Chianelli	Senior Project Manager / Salvage Master	ON SITE	ICP	*				
Resolve	1	Todd Schauer	Senior Project Manager / Salvage Master	ON SITE	ICP					
Smit	1	Roger Elliott	Senior Project Manager / Salvage Master	12 hours	Houston	Coord Smit Jobs				
T&T Marine	1	Rudy Teichman	Senior Salvage Master	ON SITE	ICP	*				
T&T Marine	1	Ted Hosking	Senior Salvage Master	ON SITE	ICP	*				
DonJon	1	Billy Kratz	Salvage Master	ON SITE	Milepost 93	Chious Beauty				
MRC	1	Frank Magaraci	Salvage Master	24 hours	South Carolina					
MRC	1	George Yatsko	Salvage Master	24 hours	South Carolina					
T&T Marine	1	Kevin Teichman	Salvage Master	ON SITE	ICP	*				
T&T Marine	1	Tom Flesner	Salvage Master	24 hours	Houston					
Titan	1	Roy Dodgen	Salvage Master	ON SITE	ICP					
Bisso	1	Peter Drummond	Salvage Master	24 hours	Louisiana					
DonJon-Smit	1	Paul Hankins	Salvage Project Manager	ON SITE	ICP	*				
Resolve	1	Brad Rosello	Salvage Engineer/Project Manager	Enroute ICP						
MRC	1	Bill Woods	Salvage Foreman / Logistician	24 hours	South Carolina					
MRC	1	Ken Edgar	Salvage Engineer / Master	Out of Service	Alt Galveston	*				
MRC	1	Chuck Gillespie	Salvage Engineer	24 hours	South Carolina					
Independent	1	Rik Van Hemmen	Naval Architech	24 hours	New Jersey					
T&T Marine	1	Kelly Teichman	Project Manager / Logistics	ON SITE	ICP	*				
DonJon	4	Salvage Technicians	Salvage Technicians	ON SITE	Milepost 93	Chious Beauty				
T&T Marine	50	Salvage Technicians	Salvage Technicians	24 hours	Galveston					
Smit	10	Salvage Technicians	Salvage Technicians	ON SITE	Gulf	Oil Rigs				
RMA	1	Ray Meyer	Project Manager	ON SITE	ICP	*				
RMA	1	Patricia Adams	Documentation / Logistics	ON SITE	ICP	*				
RMA	12	Management Staff	12 persons	24 hours	Houston					
Smit	1	Ray Lord	Logistics	12 hours	Houston	Coord Smit Jobs				
RMA	28	Support Staff	28 persons	24 hours	Houston/ICP					
TOTAL	**127**	**WATERWAY RECOVERY PERSONNEL**								
			HELICOPTERS							
T&T Marine	1	Helo 1	6 Seat (850 lbs), 2hr airtime, Bell Helicopter,206 L-3 Model 7,	ON SITE	Alexandria	*				
T&T Marine	1	Helo 2	4 Seat (550 lbs), 1.5 hr airtime, Bell 206 B Model	ON SITE	Patterson	*				
Titan	2	Helo 3 & 4	5 Seats (1100 lbs) , 2.5 hours, Bell 407	ON SITE	Alexandria	*				
TOTAL	**4**	**HELICOPTERS**								
			DERRICK BARGES AND A-FRAME CRANES							
Bisso	1	Cappy Bisso	A-frame Crane	12 hours	New Orleans		150	700	0	
Bisso	1	Ajax	A-frame Crane	36 hours	Baton Rouge		120	260	0	
DonJon	1	Chesapeake 1000	A-frame Crane	12 days	En Route			1000	0	Dep Date 3Sept fr NJ
T&T Marine	1	Big T	A-frame Crane	72 hours	Galveston		150	600	0	24 person quarters ava
T&T Marine	1	Josie T	A-frame Crane	72 hours	Galveston		85	300	0	
DonJon	1	Ferrel 256	CB Crane Barge	14 days	New Jersey		160	190	0	length 200 ft
DonJon	1	Columbia	CB Crane Barge	14 days	New Jersey		260	400	0	80 ft jib
T&T Marine	1	George T	CB Crane Barge	72 hours	Galveston		120	150	0	
Bisso	1	Boaz	DB Derrick Barge	36 hours	En Route	Pilotown	220	250	58	
Bisso	1	Big Eagle	DB Derrick Barge	36 hours	En Route	off site	80	100	0	
Resolve	1	RMG 400	A-frame Crane	14 days	Caribbean		100	400		
Resolve	1	RMG 300	Crane Barge/Pulling Barge	14 days	Florida		140	225		
TOTAL	**12**	**CRANES**								

			TUGS				Length			
Bisso	1	Beau Bisso	Inland Tug	36 hours	New Orleans		80		0	
DonJon	1	Atlantic Salvor	Ocean Tug	12 days	En Route	to Bollinger Tugs			4	Towing Chesapeake
DonJon/Navy	2	TATF	Ocean Tug	14 days	NJ & SF		226		30	
T&T Marine	1	Tug 1	Tug - 800-1,000 HP Barge Tender	72 hours	Galveston		50-70			
T&T Marine	1	Tug 2	Tug - 800-1,000 HP Barge Tender	72 hours	Galveston		50-70			
T&T Marine	1	Tug 3	Tug - 800-1,000 HP Barge Tender	72 hours	Galveston		50-70			
DonJon	1	Tug 4	Tug	14 days	New Jersey					
TOTAL	**8**	**TUGS**								
			WORKBOATS							
Bisso	1	Capt WA Bisso JR	DSV Dive Support Vessel	36 hours	New Orleans		150		10	
T&T Marine	1	Eddie T	Shallow Draft Work Boat	24 hours	Galveston		35		0	Shallow Draft work
T&T Marine	1	WB 1	Shallow Draft Work Boat	24 hours	Galveston		30			Shallow Draft work
T&T Marine	1	WB 2	Shallow Draft Work Boat	24 hours	Galveston		30			Shallow Draft work
T&T Marine	1	WB 3	Shallow Draft Supply & Logistics	24 hours	Galveston		32			Shallow Draft Supply
T&T Marine	1	WB 4	Shallow Draft Crew Boat	24 hours	Galveston		26			Shallow Draft Crew
Resolve	1	Lana Rose	Utility/Supply Vessel	5 days						
Resolve	1	DSV	45' Dive Support Vessel	48 hrs	Mobile					
TOTAL	**8**	**WORKBOATS**								
			PUMPS							
Combined	Abundant	Dewatering Pump	Pumps - 200,000 GPM dewatering capacity	24 hours	Various					
T&T Marine	1	PFP 1	Portable Fire Pump - 3000 GPM Twin Monitors, Hand Lines, Foam Capacity	24 hours	Galveston					
T&T Marine	1	PFP 2	Portable Fire Pump - 3000 GPM Twin Monitors, Hand Lines, Foam Capacity	24 hours	Galveston					
T&T Marine	1	PFP 3	Portable Fire Pump - 3000 GPM Twin Monitors, Hand Lines, Foam Capacity	24 hours	Galveston					
T&T Marine	1	PFP 4	Portable Fire Pump - 3000 GPM Twin Monitors, Hand Lines, Foam Capacity	24 hours	Galveston					
T&T Marine	1	PFP 5	Portable Fire Pump - 3000 GPM Twin Monitors, Hand Lines, Foam Capacity	24 hours	Galveston					
T&T Marine	1	PFP 6	Portable Fire Pump - 3000 GPM Twin Monitors, Hand Lines, Foam Capacity	24 hours	Galveston					
T&T Marine	1	PFP 7		24 hours	Galveston					
Smit	1	PFP 8	Portable Fire Pump - 3000 GPM Twin Monitors, Hand Lines, Foam Capacity	12 hours	Houston					
Smit	1	PFP 9	Portable Fire Pump - 3000 GPM Twin Monitors, Hand Lines, Foam Capacity	12 hours	Houston					
Resolve	4		Ultralight Portable Jet Turbine Fire Pumps 4500 gpm	24-48 hours	Florida/California					
Resolve	4		Portable fire Pump - 2500 gpm	24-48 hours	Florida/California					
TOTAL	**17**	**PUMPS**	**PLUS HUNDREDS OF DEWATERING PUMPS AS NEEDED**							
Total	**23**	Roller bags	250 ton pneumatic	24 hours	Florida					
			FIELD COMMAND POSTS							
T&T Marine	1	Command Post - 1	53 ft fully contained, satellite communications (Internet and phone), VHF marine, UHF & VHF repeaters, 50' towere antenna, Aircraft radio, 2 Cellular phone lines, 1 Cellular fax line, 6 phone line land connection	ON SITE	ICP	*				
T&T Marine	1	Command Post - 2	44 ft fully contained, Cellular Phone and Fax, VHF marine, 50' tower antenna	24 hours	Houston					
RMA	1	Command Post - 3	45 ft fully contained, satellite communications (Internet and phone), VHF marine, UHF & VHF repeaters, 50' tower antenna	Out of Service	Alt. Baton Rouge					
TOTAL	**3**	**FIELD COMMAND POSTS**								

			FIELD SUPPORT ASSETS							
DonJon	1	Berthing Unit	36 foot Conex	48 hours	New Jersey				12	
DonJon	1	Galley	36 foot Conex	48 hours	New Jersey					
DonJon	1	Lounge & Bath Unit	36 foot Conex	48 hours	New Jersey					
DonJon	1	Composit Unit	40 foot Conex / Berthing / Galley / Bathing Unit	48 hours	New Jersey				8	
T&T Marine	1	RV	Recreational Vehicle - Support for Command - 1	ON SITE	ICP	*				
TOTAL	**5**	**FIELD SUPPORT ASSETS**								
			SALVAGE DIVE ASSETS							
DonJon	2	Shallow Dive	Shallow Water River Dive Packages	48	New Jersey					
Smit	2	Shallow Dive	Shallow Water River Dive Packages	72	Houston					
T&T Marine	3	Shallow Dive	Shallow Water River Dive Packages	24-72	Galveston					
T&T Marine	1	Deep Dive	Deep Water Dive packages	24-72	Houston					
MRC	1	SDT 1	Salvage Dive Teams with Shallow Water Salvage Equipment	24-72	South Carolina					
MRC	1	SDT 2	Salvage Dive Teams with Shallow Water Salvage Equipment	24-72	South Carolina					
Resolve	2	SDT 3	Salvage Dive Teams							
DonJon	1	SDT 4	Salvage Dive Team	48	New Jersey					
TOTAL	**13**	**SALVAGE DIVE ASSETS**								

PROJECTED TASKING FOR 11/14/05

as of noon 11/13/05

AREA	LEAD	ASSET	PROJECTED TASKING	FOLLOW-ON CASES
Venice	**DONJON**	Chesapeake (1000T)	safety meeting, cases 786, 788 (app to proceed)	
Morgan City		Columbia (400T)	safety meeting, case 2308 (pending USCG app to wreck)	
Empire	**T&T MARINE**	George T (200T)	safety meeting, finish Leatherneck (case 2271)	case 1811, 1812 (both approved to proceed)
Empire		Big T (600T)	safety meeting, finish Leatherneck (case 2271)	case 1811, 1812 (both approved to proceed)
Empire		Side Scan System		
Empire	**KOSTMAYER**	Land Crane (70T)	safety meeting, case 1989 (approved to proceed)	1785, 1992, 1994 (approved to proceed)
Empire		Marine Crane #1	safety meeting, case 1278 (approved to proceed)	2167, 2233, 2118, 2236 (NOT approved to proce
Empire	**STEIGHNER**	Land Crane (100T)	safety meeting, case 1241 (NOT approved to proceed)	1243, 1244 (NOT app to proceed), 1255 (app to
Empire		Land Crane (75T)	safety meeting, case 1241 (NOT approved to proceed)	1243, 1244 (NOT app to proceed), 1255 (app to
		Land Crane (30T)	safety meeting, case 1241 (NOT approved to proceed)	{ possible per owner/USCG req (2040, 0955, 127
Empire		Land Crane (300T)	mobilizing	2040 app to pro, 0955 & 1276 NOT app to pro}
Morgan City		Land Crane (TBD)	Awaiting mob order	
		Land Crane (Tom's Weld)	debris removal to reach Capt Anthony	
Empire	**DEAN**	Clamshell & Crane (30T)	General debris recovery in Empire	
Empire		Spud Barge, Tug	General debris recovery in Empire	
Violet Canal	**BAYOU FABRICATION**	Clamshell & Crane (30T)	Awaiting Tasking (debris removal)	
Violet Canal	(NO COST)	Spud Barge, Tug	Awaiting Tasking (debris removal)	
Venice	**SHANNON-FAYARD**	Clamshell & Crane (30T)	Mobilizing (debris recovery in Venice)	
Venice	(NO COST)	Spud Barge, tug	Mobilizing (debris recovery in Venice)	
St. Bernard Parish	**TBD**	Land Crane (TBD)	Awaiting Tasking//Debris removal	

OPERATIONS DOCUMENTS

Appendix D
Operations Documents

R 090635Z SEP 05 PSN 416746M28

FM COMNAVSEASYSCOM WASHINGTON DC
TO AIG 239
AIG 11295
RUCOJAU/COMARFPCOM NORFOLK VA
INFO RULSSEA/COMNAVSEASYSCOM WASHINGTON DC
BT
UNCLAS
QQQQ
SIC: N03150
SUBJ: DIVING ADVISORY 05-10: GUIDANCE FOR DIVING OPERATIONS IN /CONTAMINATED WATERS ISO JTF KATRINA//
UNCLASSIFIED//
UNCLAS //N03150//
PASS TO OFFICE CODES:
COMARFPCOM NORFOLK VA//N7//
COMNAVSEASYSCOM WASHINGTON DC//00C//
MSGID/GENADMIN/NAVSEA 00C//
SUBJ/DIVING ADVISORY 05-10: GUIDANCE FOR DIVING OPERATIONS IN /CONTAMINATED WATERS ISO JTF KATRINA//
REF/A/DOC/NAVSEA/01AUG2004//
PAGE 02 RUCOMFB8588 UNCLAS
REF/B/DOC/NEDU/02SEP2005/-/NOTAL//
NARR/REF A IS GUIDANCE FOR DIVING IN CONTAMINATED WATERS TECHNICAL MANUAL. REF B IS INITIAL NEDU GUIDANCE FOR DIVING OPERATIONS ISO JTF KATRINA.//
POC/FLEISCHMAN/LCDR/NAVSEASYSCOM/LOC:WASHINGTON DC/TEL:(202)781-3821 /TEL:CELL (703)489-8382/EMAIL:PAUL.FLEISCHMAN@NAVY.MIL//
POC/RUTERBUSCH/LT/NEDU/LOC:PANAMA CITY FL/TEL:(850)230-3149 /TEL:CELL (850)276-2519/EMAIL:VICTOR.RUTERBUSCH@NAVY.MIL//
RMKS/1. THE RECENT FLOODING CATASTROPHE IN NEW ORLEANS HAS LED TO SEVERAL INQUIRIES REGARDING GUIDANCE FOR DIVING OPERATIONS IN CONTAMINATED WATERS. REF A PROVIDES GENERAL GUIDANCE FOR THE CONDUCT OF THESE DIVING OPERATIONS AND IS AVAILABLE ON THE SUPSALV WEBSITE (WWW.SUPSALV.ORG) UNDER 00C3 DIVING PUBLICATIONS. REF B PROVIDED INITIAL AMPLIFYING GUIDANCE WHICH IS SUMMARIZED AND UPDATED BELOW.
2. PERSONAL PROTECTION: A. THE CENTER FOR DISEASE CONTROLS CURRENTLY REQUIRES TETANUS, DIPTHERIA AND HEPATITIS B VACCINES FOR ALL EMERGENCY RESPONDERS INVOLVED IN THE RECOVERY EFFORT. GAMMA GOBULIN INJECTIONS ARE ALSO HIGHLY RECOMMENDED. CURRENT HEPATITIS A AND UP TO DATE STANDARD IMMUNIZATIONS ARE HIGHLY ENCOURAGED BUT NOT REQUIRED. OTHER VACCINES PAGE 03 RUCOMFB8588 UNCLAS
E.G. TYPHOID, CHOLERA, RABIES ARE NOT REQUIRED.
B. DIVERS MUST TAKE PREVENTATIVE TREATMENT (PROPHYLAXIS) AGAINST BACTERIAL AND VIRAL DISEASE. GOOD PERSONAL HYGEINE PRACTICES ARE THE MOST ESSENTIAL AND EFFECTIVE METHOD TO PREVENT THE CONTRACTION OF DISEASES AND/OR INFECTIONS. ANTIBIOTIC PROHYLAXIS USING A BROAD

SPECTRUM ANTIBIOTIC SHOULD ONLY BE USED UNDER THE DIRECT SUPERVISION OF COMPETENT MEDICAL AUTHORITY. DIVING IN CONTAMINATED WATERS WITH OPEN WOUNDS IS PROHIBITED.

C. PERSONNEL WORKING NEAR DIVER RECOVERY OR DECONTAMINATION SHOULD WEAR PROTECTIVE EQUIPMENT EQUAL TO THE DIVER. REF A RECOMMENDS A MINIMUM OF EPA LEVEL D WHICH INCLUDES PROTECTIVE SUITS E.G. TYVEK, RUBBER GLOVES AND FACE PROTECTION. MOST MANUFACTURERS OF CHEMICAL PROTECTIVE SUITS SPECIFY WHAT LEVEL OF PROTECTION EACH SUIT PROVIDES.

D. DUE TO THE HEAT, HUMIDITY AND PROTECTIVE CLOTHING, HEAT EXHAUSTION AND DEHYDRATION ARE SUBSTANTIAL CONCERNS FOR BOTH DIVERS AND TENDERS. ACTIVE COOLING OF DIVERS, STAND-BY DIVERS, AND TENDERS IS STRONGLY ENCOURAGED. THE PREFERRED METHOD FOR COOLING DIVERS AND STANDBY DIVERS SHOULD BE BAGS OF ICE OR BLUE COOL PACKS PLACED WITHIN THE DRY SUIT AGAINST THE DIVER'S BACK AND/OR CHEST. DIRECT PAGE 04 RUCOMFB8588 UNCLAS

SKIN CONTACT IS NOT RECOMMENDED. PLACE AN INSULATING LAYER E.G. NEOPRENE PAD BETWEEN THE ICE PACK AND SKIN. TERMINATE THE DIVE IMMEDIATELY WHEN THE ICE OR COOLING PACK LOSES ITS COOLING EFFECT. AMPLE HYDRATION WITH POTABLE WATER SHOULD OCCUR PRIOR TO AND AFTER EACH DIVE.

3. EQUIPMENT: REF A PROVIDES INITIAL GUIDANCE FOR SELECTION OF DIVING EQUIPMENT BASED UPON THE EXPECTED LEVEL OF CONTAMINATION. A. DIVING SUPERVISORS ARE REQUIRED TO MAKE DECISIONS ON THE MOST APPROPRIATE EQUIPMENT BASED UPON LOCAL CONDITIONS. AS A MINIMUM A FULL FACE MASK IS REQUIRED.

B. FREQUENT INSPECTION AND REPLACEMENT OF DETERIORATED SOFT GOODS IN THE DIVE HELMETS, SUITS, UMBILICALS, AND CONSOLES SHOULD BE ANTICIPATED DUE TO THE PRESENCE OF HIGH CONCENTRATIONS OF PETROCHEMICALS IN THE WATER. PMS SHOULD BE PERFORMED AT THE END OF EACH DIVE DAY UNTIL THE NEED FOR LESS FREQUENT MAINTENANCE HAS BEEN DEMONSTRATED.

C. FOR EXTREMELY CONTAMINAED WATER THE MINIMUM DIVING EQUIPMENT WILL CONSIST OF A MK21 DIVE HELMET WITH DOUBLE-VALVE EXHAUST (OR EQUIVALENT) MATED TO A VULCANIZED RUBBER DRY SUIT.

D. NAVSEA IS CURRENTLY WORKING ON OTHER EQUIPMENT OPTIONS WITH PAGE 05 RUCOMFB8588 UNCLAS

FURTHER GUIDANCE TO FOLLOW.

4. DECONTAMINATION: DECONTAMINATION OF PERSONNEL AND EQUIPMENT IS IMPORTANT TO MAINTAIN THE HEALTH AND EFFECTIVENESS OF BOTH. THE PROCEDURES OUTLINED IN REF A MAY NOT BE POSSIBLE DUE TO THE ABSENCE OF AN ABUNDANT SUPPLY OF FRESH WATER. HOWEVER, INITIAL DECON CAN BE ACCOMPLISHED USING SIMPLE GREEN, BLEACH OR OTHER AVAILABLE SOLUTION.

A. IF POSSIBLE, TO MINIMIZE CONTAMINATION OF THE DIVE STATION AND ASSOCIATED PERSONNEL, RECOVER AND DECONTAMINATE DIVERS IN A DESIGNATED AREA WHICH IS SEPARATED FROM THE REST OF THE DIVE STATION.

B. A "FIRST DECON CLEANSING STATION" (WADING POOL, LARGE TUB, ETC THAT IS LARGE ENOUGH TO ACCOMMODATE A FULLY SUITED DIVER) WAS FOUND TO BE EFFECTIVE AT NEDU AND ALLOWED THE INITIAL WASH DOWN MATERIALS (BOTH THE SOAP AND THE WATER) TO BE CONSERVED AND REUSED BY SUBSEQUENT

DIVERS. FOLLOW ON STAGES WILL REQUIRE AT LEAST SOME POTABLE WATER BEFORE STRIPPING OUT THE DIVER.

C. SOFT-BRISTLE BRUSHES ARE PREFERABLE TO HARD-BRISTLE BRUSHES AND MINIMIZE THE CHAFFING DAMAGE TO DIVING GEAR DURING DECONTAMINATION.

D. DURING RECENT TESTING, PASSIVE DECONTAMINATION OF EQUIPMENT (I.E., SOAKING IN A BLEACH-BASED SOLUTION FOR 30 MINUTES) WAS FOUND PAGE 06 RUCOMFB8588 UNCLAS
TO BE INSUFFICIENT. EQUIPMENT MUST BE ACTIVELY CLEANED (I.E., SCRUBBED) WITH THE SAME SOAP, BLEACH, OR OTHER SOLUTION USED TO DECONTAMINATE THE DIVERS.

E. TIME SHOULD BE ALLOCATED TO NOT ONLY TRAIN DIVERS AND TENDERS IN DECONTAMINATION BUT ALSO TO PRACTICE THE PROCEDURE. DRY DIVING THE PROCEDURES WAS FOUND TO BE THE MOST EFFECTIVE METHOD TO ENSURE ADEQUATE DECONTAMINATION.

5. NEDU POC IS AVAILABLE TO ANSWER QUESTIONS RELATED TO MEDICAL ASPECTS OF DIVING IN CONTAMINATED WATER. EQUIPMENT AND PROCEDURAL QUESTIONS SHOULD BE DIRECTED TO NAVSEA POC.

6. FURTHER GUIDANCE ON EQUIPMENT AND PROCEDURES WILL BE PROVIDED AS INFORMATION BECOMES AVAILABLE.//

BT

Samples Records from
Marine Debris Targets Database

Marine Debris Targets

Case #: 2006 | Storm: Katrina | Parish/County: LA-Plaquemines | Waterway: Venice Industrial Canal | Zone: Venice

Current Status: Work Complete

Owner/RP: ELLEN RUTH GILES | RP Action: RP Contacted | Salvage Plan: Approved

Vessel Name: JARED LUKE | Vessel #: 529742 | Vessel Type: Fishing Vessel | Initial Cond | Loading Cond | Priority Class | CG Priority

Mile Marker | OCS Grid # | Water Depth (ft) | Weight (kips) | Length (ft) | Width (ft) | Height (ft)

Open: 10/12/2005 | Appr to Proceed: 10/13/2005 | In Progress | Work Complete: 10/15/2005 | Closed-Wk Complete | Closed-Admin | Closed Arch USCG | 90C | Closed-Archived

Funding: Src: USCG-New Orleans ESF03 | Tsk #: 231 | Doc: HSCG84-06-J-HYZ743 | Curr Est: $65,196.70 | Cost To Date: $45,196.20

Lat | Lon | Notes: LOCATION: VENICE INDUSTRIAL CANAL

Document Name	Date
2006 010606 5136.pdf	01/11/2006
2006 101505 5136.pdf	11/01/2006
2006 101605 5136.pdf	11/01/2006
2006 JARED LUKE.jpg	11/14/2006
2006 Salvage Plan Signature.pdf	10/31/2006
Final_5136_2006.pdf	01/26/2006
Salvage Plan case 2006.doc	10/19/2006

Closed-Duplicate | Dup xref | Salvage Lead: Donjon | RP Compl Target | Working Cond: Moored at site 10/18

Status	mm/dd/yyy hh:mm:ss	Notes	Update Dat
Open	10/12/2005 16:47:02	TALKED TO OWNER ONSITE, OWNER HAS NO INSURANCE OR MEANS TO REMOVE VESSEL	10/12/20 16:4
Follow-Up	10/14/2005 9:31:57	OWNER INFO: ELLEN RUTH GILES, 151 EAAST 3RD ST, BELLE CHASE, LA 70037 504-433-7108	10/14/20 9:3
Follow-Up	10/15/2005 0:00:00	started working 10/14, stopped in P.M. 10/15 due to RP issues	10/15/20 0:0
Follow-Up	10/15/2005 9:31:51	OWNER REQUESTS OGS CONTRACTOR TO SALVAGE VESSEL AND REPORTS THERE IS FUEL ONBOARD	10/15/20 9:3
Follow-Up	10/15/2005 9:37:02	RECEIVED PERMISSION FROM IOF TO SALVAGE VESSEL	10/15/20 9:3
Follow-Up	10/15/2005 17:41:22	Donjon Marine directed by US NAVY SUPSALV: Josh Price to pick up and refloat the vessel. This information was communicated to the Donjon crew, the US Navy on-scene, and the USCG on-scene. LTCD Calhoun was contacted by Josh Price and he concurred to go ahead with the lift and refloating based on the fact that Donjons assets were already on scene at the vessel.	10/15/20 17:4
Follow-Up	10/15/2005 17:42:15	Salvage plan approved	10/15/20 17:4
Closed	10/16/2005 16:57:59	COLUMBIA BARGE REMOVED JARED LUKE, SALVAGED, CASE CLOSED	10/16/20 16:5
Follow-Up	10/16/2005 16:00:00	Columbia and spud barge completed salvage. Work complete vessel moored in place	10/16/20 16:0
Closed	10/27/2005 13:35:03	CASE AWAITING REVIEW BY SALVAGE BRANCH	10/27/20 13:3
Follow-Up	11/13/2005 8:42:02	Approved to proceed date set per K Hopson	11/13/20 8:4
Follow-Up	11/12/2005 12:26:58	Parish and Zone updated	11/12/20 12:2
Follow-Up	11/14/2005 13:22:31	added picture 2006 JARED LUKE.jpg as per Jane from Don Jon	11/14/20 13:2
Follow-Up	11/28/2005 14:03:01	WISLE LISTED OWNER AS PATTERSON AND EDMONSON PO BOX 1316 HOUMA, LA 70360 REQUEST SENT TO FEMA	11/28/20 14:0
Follow-Up	11/28/2005 16:24:09	RP action changed by request from OS, by ENS Vital	11/28/20 16:2
Follow-Up	01/20/2006 12:35:24	Added Waterway	01/20/20 12:3
Follow-Up	01/24/2006 11:24:14	LT DAVIS DOUBLE CHECKED FILE FOLDER AND DATABASE AND COMPLETED RP QUESTIONNAIRE WILL CONTACT RP TUESDAY 01/24/06 TO INFORM RP THAT WE NEED ROA AND VSL TRANSFER.	01/24/20 11:2
Follow-Up	01/24/2006 11:26:48	RECEIVED VSL OWNER CONTACT QUESTIONNAIRE	01/24/20 11:2
Follow-Up	01/27/2006 7:11:03	Overwrote existing Final_5136_2006.pdf as per Karen Hopson	01/27/20 7:1

Marine Debris Targets

Field	Value
Case #	0216
Storm	Katrina
Parish/County	LA-Plaquemines
Waterway	Venice Marina
Zone	Venice
Current Status	Work Complete
Owner/RP	Unknown
RP Action	RP Contact Attempted
Salvage Plan	Approved
Vessel Name	SIERRA MARIE
Vessel #	[illegible]
Vessel Type	Fishing Vessel
Initial Cond	Capsized
Loading Cond	
Priority Class	Pol / Nav
CG Priority	
Mile Marker	
OCS Grid #	
Water Depth (ft)	
Weight (kips)	
Length (ft)	75
Width (ft)	
Height (ft)	
Open	09/13/2005
Appr to Proceed	10/07/2005
In Progress	12/01/2005
Work Complete	12/03/2005
Closed-Wk Complete	
Closed-Admin	
Closed Arch USCG / OOC	
Closed-Archived	
Funding Src	USCG-New Orleans-ESF10
Task #	028
Doc	HSCG84-06-X-HYZ741
Curr Est	$125,362.75
Cost To Date	$402,246.80
Closed-Duplicate	0117 Dup ent
Salvage Lead	Donjon
RP Complt Target	
Working Cond	In shallows,compromised hull

	Deg	Min	Sec
Lat	29.2416		
Lon	89.36136		

Notes:
NVDC: OWNER, A&M SHRIMP BOAT LLC
504.564-0270 (NOT IN SERVICE)
200 ORANGEWOOD DR/PO BOX 276
PORT SULPHUR, LA 70083
OWNER OF VESSEL:
MAXIE R. MACHADO
HM: 504 564-2095
WK: 504 564-0270
CP: 504 912-0583

Document Name	Date
0216 POST SALVAGE.jpg	11/11/2005
0216 Salvage Plan.doc	10/03/2005
0216 SIERRA MARIE.jpg	09/23/2005
216 100205 5136.pdf	10/07/2005
216 100305 5136.pdf	10/07/2005
216 100405 5136.pdf	10/08/2005
216 120105 5136.pdf	12/03/2005
216 120205 5136.pdf	12/04/2005
216 Salvage Plan Signature.pdf	10/21/2005
Case 0216.jpg	12/07/2005
Case 0216A.jpg	12/07/2005
N0002403D4204 DO 0010 Case 216 100205 Daily Management Report.doc	10/06/2005
N0002403D4204 DO 0010 Case 216 100305 Daily Management Report.doc	10/06/2005
N0002403D4204 DO 0010 Case 216 100405 Daily Management Report.doc	10/08/2005

Status	mm/dd/yyyy hh:mm:ss	Notes	Update Date
Open	09/13/2005 0:00:00	VESSEL IS CAPSIZED TO PORT IN SHALLOW WATER. APPROX 1/2 OF VESSEL IS ABOVE WATERS EDGE. VESSEL APEARS TO BE RESTING ON GUNNAL/PILOTHOUSE DUE TO VESSEL ORIENTATION. VESSEL IS A POLLUTION AND A NAVIGATION HAZARD	[illegible]
Follow-Up	09/19/2005 11:29:53	VSL CAPSIZED 1105. ATTEMPTED TO CONTACT RP AT (251) 986-6252 AND LEFT VOICEMAIL.	[illegible]
Follow-Up	09/20/2005 11:02:51	Vessel will be lifted in conjunction with cases 218 and 219 within the next couple days, weather dependent	[illegible]
Follow-Up	09/20/2005 14:48:42	Salvage Plan submitted for review (WFW)	[illegible]
Follow-Up	09/21/2005 10:19:06	Progress is on hold pending passage of Hurricane Rita	[illegible]
Follow-Up	09/23/2005 16:03:17	Formally assigned the case from USCG. Working the cost estimate and salvage plan submittals. No field work due to Rita.	[illegible]
Follow-Up	09/24/2005 8:11:47	SITE SAFETY AND SALVAGE PLANS HAVE BEEN RECEIVED	[illegible]
Follow-Up	09/25/2005 8:12:47	SITE SAFETY AND SALVAGE PLANS HAVE BEEN RECOMMENDED FOR APPROVAL	[illegible]
Follow-Up	09/26/2005 8:13:14	SITE SAFETY AND SALVAGE PLANS HAVE BEEN APPROVED	[illegible]
Follow-Up	09/29/2005 12:04:59	T&T on site. Working vessels in order. Schedule for this vessel TBD.	[illegible]
Follow-Up	09/30/2005 14:59:42	T&T on site. Working vessels in order. Schedule for this vessel TBD.	[illegible]
Follow-Up	10/01/2005 13:39:16	T&T on site. Work began late 10/01	[illegible]
Follow-Up	10/03/2005 15:11:53	Phone con w/ Edward Schoen, MSLE RP. Claims he sold the vsl 6 years ago and doesn't know current owner. Original name of vessel "Desperado". Mr. Shoen will attempt to find the name of the third party buyer if possible.	[illegible]
Follow-Up	10/04/2005 10:46:57	Crews active in mud removal and fuel transfer. Vessel's hull found to be in poor condition, patching having little effect. Vessel moved to shallow water, leaking hull unrepairable. Case Complete.	[illegible]
Follow-Up	10/04/2005 16:35:02	T&T confirmed vsl has been lifted, dewatered & docked in shallow water. Case closed	[illegible]
Follow-Up	10/04/2005 16:47:18	SALVAGE COMPLETE CASE CLOSED.	[illegible]
Follow-Up	10/26/2005 14:06:29	CASE SENT TO ARCHIVE	[illegible]
Follow-Up	11/29/2005 8:37:06	RE OPEN CASE 0216 NEW STATEMENT OF WORK TO BE ISSUED FOR REMOVAL	[illegible]
Follow-Up	12/02/2005 9:00:00	progress by Donjon (Columbia)	[illegible]
Follow-Up	12/03/2005 11:32:51	PER SUPSALV SURVEY, UPDATED LAT AND LON FROM N29 14 11.3", W089 21 48.21", ENTERED VESSEL SIZE AND HULL NUMBER. ECONOMIC RECOVERY TO THE AFFECTED COMMUNITY WOULD BE TO THE BENEFIT OF THE COMMUNITY AT LARGE. SIGNIFICANT DAMAGE REPORTED.	[illegible]
Follow-Up	12/04/2005 8:30:46	VESSEL OWNER REPORTED	[illegible]
Follow-Up	01/05/2006 14:17:49	VESSEL WAS MOVED A SECOND TIME BY DONJON SO IT SHOULD NOT INTERFERE WITH THE BOAT RAMP IN THE NE CORNER. THE VESSEL IS CURRENTLY MOORED AT PIER #8 AT THE VENICE MARINA. RP'S NEED TO BE CONTACTED TO LET THEM KNOW TO TAKE CHARGE OF THEIR VESSEL.	[illegible]
Follow-Up	01/12/2006 11:31:59	added waterway to case	[illegible]
Follow-Up	01/16/2006 0:00:00	POST SALVAGE ASSESSMENT: VESSEL TIED TO PIER 8 AT VENICE MARINA. SLIGHT LIST TO PORT. DAMAGE TO RIGGING. SUPERSTRUCTURE INTACT EXCEPT PORT SIDE IS CAVED IN. COSMETIC DAMAGE TO RUB RAIL AND PORT SIDE RAILING. RIGGING BENT OVER PORT SIDE.	[illegible]
Follow-Up	01/26/2006 12:45:31	VESSEL NEEDS TO BE SALVAGED AGAIN. VESSEL IS SUNK. NEEDS TO BE PLACED IN APPROPRIATE LAND BASED STORAGE	[illegible]

Marine Debris Targets

Caution: Closed Case must not be modified!

Case #: 0221

Storm: Katrina

Parish/County: LA-Plaquemines

Waterway: Doullut Canal

Zone: Venice

Current Status: Closed-Work Complete

Owner/RP: Unknown

Wreck Removal Worksheet View

Vessel Name	SEA KING		
Vessel #	1120473	Mile Marker	
Vessel Type	Fishing Vessel	OCS Grid #	
Initial Cond	Beached	Water Depth (ft)	
Loading Cond		Weight (lbs)	
Priority Class	Pol / Nav	Length (ft)	
CG Priority		Width (ft)	
		Height (ft)	

RP Action	RP Contacted	Salvage Plan	Approved
		Open	09/13/2005
		Appr to Proceed	
		In Progress	
		Work Complete	
		Closed-Wk Complete	12/28/2005
		Closed-Admin	
		Closed Arch USCG	OSC
		Closed-Archived	

Funding

Src	USCG-New Orleans-ESF03
Tsk #	004
Doc	HSCG84-05-X-HYZ737
Curr Est	$63,190.00
Cost To Date	$100,119.88

	+/- DD.ddd	N/W	DDD MM.mm	DDD MM SS.ss
Lat	29.258440	N29 15.30676		
Lon	-89.354836666	W089 21.2902		

Notes: THOA NGUYEN
504-361-1180
2212 FRIENDSHIP DRIVE
HARVEY LA 70058

Document Name	Date
0221A.JPG	09/21/2005
0221B.JPG	09/21/2005
221 100805 5136.pdf	10/15/2005
N0002401D4204 DO 0010 Case 221 100805 Daily Management Report.doc	10/15/2005
Salvage Plan-case 221.doc	10/19/2005

Closed-Duplicate	2770 Dup xref
Salvage Lead	Responsible Party
RP Complt Target	
Working Cond	RP in charge

Status	mm/dd/yyyy hh:mm:ss	Notes	Update Dat
Open	09/13/2005 0:00:00	V GROUNDED BY BOW. 2/3 OF VESSEL IS ONSHORE WITH STERN HANGING OVER PIER FACE. VESSEL IS SITTING UPRIGHT.	09/13/20 0:00
Follow-Up	09/17/2005 9:23:51	RECEIVED DETAILED REPORT FROM STEVEN STOWERS FOR VESSEL INFORMATION IN AND AROUND VENICE AREA	09/17/20 9:23
Follow-Up	09/17/2005 10:56:50	SITTING ON TOP OF RETAINING WALL AT BARGE FACILITY	09/17/20 10:56
Follow-Up	09/20/2005 10:22:57	ATTEMPTED TO CONTACT THOA NGUYEN, MANAGING OWNER, AT(504) 347-7481 AND LEFT VOICEMAIL	09/20/20 10:22
Follow-Up	09/29/2005 12:29:16	ATTEMPTED TO CONTACT THOA NGUYEN, LEFT VOICEMAIL	09/29/20 12:29
Follow-Up	09/29/2005 13:15:15	ATTEMPTED TO CALL OWNER THOA NGUYEN AT 504-361-1180 GOT BUSY SIGNAL AT 1600 AND 1635	10/01/20 13:1
Follow-Up	10/01/2005 12:39:36	Statement of Work in progress	10/01/20 12:39
Follow-Up	10/02/2005 14:35:50	Awaiting determination of USCG	10/02/20 14:35
Follow-Up	10/03/2005 16:33:08	SALVAGE PLAN RECEIVED BY USCG	10/03/20 16:33
Follow-Up	10/05/2005 14:47:52	SALVAGE PLAN AND SITE SAFETY PLAN FOR VENICE AREA APPROVED BY USCG	10/05/20 14:47
Follow-Up	10/06/2005 14:00:00	ON SITE SURVEY OF VSL SHOWED THAT THERE IS A SIGNIFICANT AMOUNT OF FUEL ONBOARD. FUEL WILL NEED TO BE REMOVED PRIOR TO LIFTING OPERATIONS. DON JON IS REASSESSING SITUATION AND WORKING TOWARDS GETTING A TANK BARGE ONSCENE. HOLDING ON SALVAGE PLAN UNTIL IT CAN BE DETERMINED HOW MUCH FUEL IS GOING TO BE LIGHTERED AND THEY REVIEW THE CASE	10/06/20 14:00
Follow-Up	10/11/2005 17:57:36	WRECK REMOVAL STATUS REPORT FROM DONJON MARINE HAS THIS CASE IN "IN PROGRESS" STATUS. RECORD UPDATED TO REFLECT THIS STATUS	10/11/20 17:5
Follow-Up	10/12/2005 15:40:14	Spoke wit RP's daughter, Kim Nguyen. She left contact # 504-340-1735. Owner has insurance. Owner requests to be notified when vsl is refloated	10/12/20 15:4
Follow-Up	10/14/2005 0:00:00	USCG notifies DonJon RP is taking charge of recovery	10/14/20 0:00
Follow-Up	10/19/2005 8:14:43	RECEIVED NVOC CONTACT INFO SHEET. NO TELEPHONE NUMBER LISTED. NAME OF CONTACT IS THOA NGUYEN.	10/19/20 8:14
Follow-Up	11/11/2005 14:37:20	RIGHT OF ACCESS AND INSURANCE COVERAGE AGREEMENT SIGNED 11-01-05	11/11/20 14:37
Follow-Up	11/12/2005 11:35:15	RIGHT OF ACCESS AND INSURANCE COVERAGE AGREEMENT SIGNED 10-14-05	11/12/20 11:35
Follow-Up	11/15/2005 8:57:30	RIGHT OF ACCESS AND INSURANCE COVERAGE AGREEMENT SIGNED 10-15-05	11/13/20 9:5
Follow-Up	11/28/2005 15:21:37	CASE 2770 IS A DUPLICATE CASE	11/28/20 15:2
Follow-Up	12/03/2005 12:05:01	PHYSICAL VERIFICATION REPORT. VESSEL NOT OBSERVED. REASON: MOVED IN ACCORDANCE WITH USCG. REPORTED BY PO WAGNER	12/03/20 12:0
Follow-Up	12/17/2005 11:53:40	UPDATE LAT AND LON	12/17/20 11:53
Follow-Up	01/06/2006 9:26:12	VESSEL HAS BEEN REMOVED BY RP. VESSEL IS NO LONGER IN LOCATION WHERE IT WAS AFTER THE HURRICANE. RECOMMEND STATUS BE CHANGED TO REFLECT THIS	01/06/20 9:26
Follow-Up	01/16/2006 15:09:42	Added Waterway	01/16/20 15:0
Follow-Up	01/20/2006 17:01:29	VESSEL IS NOT A DUPLICATE OF 2770. CHANGED RP CONTACT INFO BACK, CHANGED VOOC NUMBER BACK	01/20/20 17:0
Follow-Up	01/21/2006 13:16:43	Scanned ICS 214 that RP salvaged	[illegible]

Marine Debris Targets

Case # 0222

Storm: Katrina

Parish/County: LA Plaquemines

Waterway: Venice Marina

Zone: Venice

Current Status: In Progress

Owner/RP: BRUCE DRURY

Vessel Name: APACHE TRAIL

RP Action: RP Contacted

Salvage Plan: Approved

Vessel #		Mile Marker	
Vessel Type	Fishing Vessel	OCS Grid #	
Initial Cond	Damaged	Water Depth (ft)	
Loading Cond		Weight (kips)	
Priority Class	Pollution	Length (ft)	65
CG Priority		Width (ft)	20
		Height (ft)	

Open	09/13/2005
Appr to Proceed	11/13/2005
In Progress	12/12/2005
Work Complete	
Closed-Wk Complete	
Closed-Admin	
Closed Arch USCG / ESC	
Closed-Archived	

Funding

Src	USCG New Orleans ESF03
Tsk #	017
Doc	HSCG84-05-X-HT2737
Curr Est	$45,803.50
Cost To Date	$124,532.82

	+/- DD.ddd	dW	DDD MM.mm	DDD MM SS.ss
Lat	29.238904	N29 14.33414	N29 14 20.05
Lon	-89.361033	W89 21.66196	W89 21 39.72

Notes: OWNER ID
BRUCE DRURY
504-913-6682

Document Name	Date
0222 AT FIRST.JPG	01/09/2006
0222 Salvage Plan Signature.pdf	01/06/2006
0222.doc	02/02/2006
0222.jpg	02/02/2006
0222A.jpg	01/06/2006
0222B.JPG	10/04/2005
0222C.JPG	12/12/2005
0222D.JPG	12/12/2005
0222F.JPG	12/12/2005
0222G.JPG	12/17/2005
0222R.JPG	01/06/2006
0222S.JPG	10/04/2005
0222T.JPG	12/12/2005
0222U.JPG	12/19/2005
0222V.JPG	12/17/2005
0222W.JPG	12/17/2005
0222X.JPG	12/17/2005
0222Y.JPG	12/19/2005
0222Z.JPG	12/19/2005
222 121205 5136.pdf	01/06/2006
222 121305 5136.pdf	01/06/2006
222 121605 5136.pdf	01/06/2006
222 121905 5136.pdf	01/06/2006
222 121705 5136.pdf	01/06/2006
Salvage Plan case 222.doc	01/06/2006

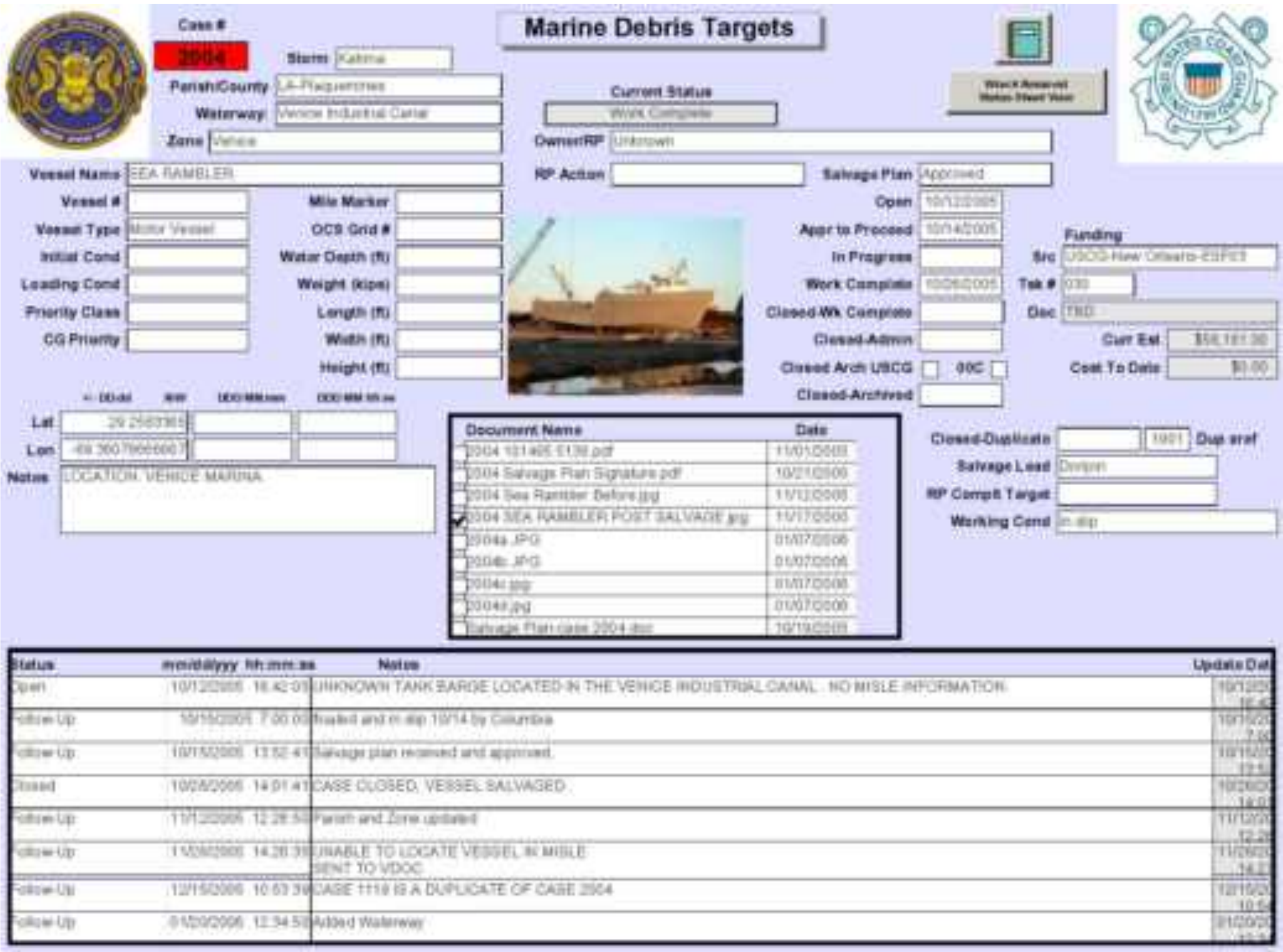
Closed-Duplicate: / Dup xref

Salvage Lead: Donjon

RP Compl Target:

Working Cond:

Status	mm/dd/yyyy hh:mm:ss	Notes	Update Dat
Open	09/13/2005 0:00:00	VESSEL IS SITTING ON PORT SIDE ATOP SECOND VESSEL AND PIER, VESSEL APEARS TO BE A WOOD HULL WITH BOW DAMAGE	09/13/2 0:0
Follow Up	10/01/2005 13:32:52	Added vessel into CG Priority Matrix. Recommend obtaining RP ID.	10/01/2 13:3
Follow Up	10/04/2005 19:00:18	ATTEMPTED TO CALL RP MR. DRURY AT 504-534-2967, NUMBER HAS BEEN DISCONNECTED	10/04/2 19:0
Follow Up	10/12/2005 0:00:00	Salvage plan approved by USCG	10/12/2 0:0
Follow Up	10/12/2005 13:55:58	Received and approved salvage plan from Donjon Marine	10/12/2 13:5
Follow Up	10/19/2005 12:15:36	CALLED RP ON FRIDAY 504-912-6682. RP STATED HIS INSURANCE COMPANY WILL SALVAGE THE APPACHE TRAIL NEXT SAT. CONTACT PHONE FOR INSURANCE IS 985 764-8321, 504 460 2135	10/19/2 12:1
Follow Up	10/19/2005 13:34:59	ATTEMPTED ATTEMPTED TO CONTACT CHRIS LADURE, INSURANCE SURVEYOR FOR VESSEL APACHE TRAIL, TO REQUEST SALVAGE PLAN. LEFT MESSAGE WITH SECRETARY TO CALL OR EMAIL COMMAND CENTER	10/19/2 13:3
Follow Up	11/09/2005 14:32:11	LAST ENTRY OF 10/19/05 STATES THAT PRIVATE PARTY INSURANCE COMPANY WILL SALVAGE F/V APACHE TRAIL. NO NEW ENTRIES AFTER 10/19/05 HOWEVER ESF-03 FUNDING IS ASSIGNED TO THIS CASE	11/09/2 14:3
Follow Up	12/03/2005 12:58:30	RECEIVED ESF-3 VESSEL CHECKLIST. VESSEL REPORTED 20 FEET FROM ROAD, 100 FEET TO NAVIGABLE WATERWAY. VESSEL IS ON TOP OF A PIER AT THE SHORELINE. VESSEL IS A SHRIMP BOAT WITH A WOOD AND FIBERGLASS HULL. MODERATE DAMAGE REPORTED	12/03/2 12:1
Follow Up	12/11/2005 14:13:53	RECEIVED OWNER/AGENT CONTACT QUESTIONNAIRE AND RIGHT OF ACCESS	12/11/2 14:1
Follow Up	12/13/2005 9:30:46	PRE REMOVAL CONDITION REPORT. FILLED INTO RECORD	12/13/2 9:3
Follow Up	12/16/2005 8:11:45	ICS 214: LEFT MESSAGE FOR RP TO INDICATE VESSEL IS ON WORK LIST AND WILL BE SALVAGED IN NEAR FUTURE	12/16/2 8:1
Closed	12/21/2005 10:15:21	RECEIVED POST SALVAGE REPORT. VESSEL HAS SIGNIFICANT DAMAGE, ETC. REPORT IS FILED. DAMAGE DOES NOT APPEAR TO BE FROM SALVAGE WORK	12/21/2 10:2
Follow Up	01/06/2006 15:10:58	RECEIVED MANY MORE PICTURES OF THE SALVAGE OPERATION	01/06/2 15:4
Follow Up	01/06/2006 9:08:03	Genie- Listed on the 1/6/06 Heavy Lift list	01/06/2 9:3
Follow Up	01/12/2006 12:27:29	added waterway to case	01/12/2 12:2
Follow Up	01/19/2006 11:46:30	Removed from heavy lift list per Rick Thiel (Supsalv)	01/19/2 11:4
Follow Up	01/19/2006 13:16:05	NOTIFIED RP, BRUCE DRURY, OF POSSIBLE SALVAGE WITHIN NEXT FEW DAYS. RP WAS INFORMED OF POSSIBLE DAMAGE THAT COULD OCCUR AS A RESULT OF SALVAGE AND WOULD BE CONTACTED 24 HOURS PRIOR TO EVOLUTION. RP WOULD PREFER THAT BOTH VESSELS BE BLOCKED IN VENICE STAGING AREA	01/20/2 13:1
Follow Up	01/25/2006 6:55:17	CONTACTED RP. HE HAS EVERYTHING OFF THE VESSEL THAT HE NEEDS, AND GIVES THE GO AHEAD FOR SALVAGE	01/26/2 6:5
Follow Up	01/26/2006 16:31:54	Informed on ICS 214 stating that vessel needs to be moved to appropriate storage facility	01/26/2 16:3
Follow Up	01/27/2006 6:55:36	RCVD UPDATED PRE SALVAGE ASSESSMENT	01/28/2 6:5
Follow Up	01/27/2006 15:22:38	VESSEL IS NOT WORK COMPLETE. DELETED DATE 12/16/2005	01/27/2



Marine Debris Targets

Case # 2004

Storm: Katrina

Parish/County: LA-Plaquemines

Waterway: Venice Industrial Canal

Zone: Venice

Current Status: Work Complete

Owner/RP: Unknown

Vessel Name: SEA RAMBLER

RP Action:

Salvage Plan: Approved

Vessel #:

Mile Marker:

Open: 10/12/2005

Vessel Type: Motor Vessel

OCS Grid #:

Appr to Proceed: 10/14/2005

Initial Cond:

Water Depth (ft):

In Progress:

Loading Cond:

Weight (kips):

Work Complete: 10/26/2005

Priority Class:

Length (ft):

Closed-Wk Complete:

CG Priority:

Width (ft):

Closed-Admin:

Height (ft):

Closed Arch USCG ☐ 00C ☐

Closed-Archived:

Funding

Src: USCG-New Orleans-ESF03

Tsk #: 030

Doc: TBD

Curr Est: $58,181.30

Cost To Date: $0.00

	+/- DD.dd	###	DDD MM.mm	DDD MM SS.ss
Lat	29.2583365			
Lon	-89.3607666667			

Notes: LOCATION: VENICE MARINA

	Document Name	Date
☐	2004 101405 5138.pdf	11/01/2005
☐	2004 Salvage Plan Signature.pdf	10/21/2005
☐	2004 Sea Rambler Before.jpg	11/12/2005
☑	2004 SEA RAMBLER POST SALVAGE.jpg	11/17/2005
☐	2004a.JPG	01/07/2006
☐	2004b.JPG	01/07/2006
☐	2004c.jpg	01/07/2006
☐	2004d.jpg	01/07/2006
☐	Salvage Plan case 2004.doc	10/19/2005

Closed-Duplicate: 1901 Dup eref

Salvage Lead: Donjon

RP Compl. Target:

Working Cond: in dip

Status	mm/dd/yyyy hh:mm:ss	Notes	Update Dat
Open	10/12/2005 16:42:05	UNKNOWN TANK BARGE LOCATED IN THE VENICE INDUSTRIAL CANAL. NO MISLE INFORMATION.	10/12/20 16:4
Follow Up	10/15/2005 7:00:00	floated and in dip 10/14 by Columbia	10/15/20 7:0
Follow Up	10/15/2005 13:52:41	Salvage plan received and approved.	10/15/20 13:5
Closed	10/26/2005 14:01:41	CASE CLOSED, VESSEL SALVAGED	10/26/20 14:0
Follow Up	11/12/2005 12:28:50	Parish and Zone updated	11/12/20 12:2
Follow Up	11/26/2005 14:26:35	UNABLE TO LOCATE VESSEL IN MISLE SENT TO VDOC	11/26/20 14:2
Follow Up	12/15/2005 10:53:39	CASE 1119 IS A DUPLICATE OF CASE 2004	12/15/20 10:5
Follow Up	01/20/2006 12:34:52	Added Waterway	01/20/20 12:3

Office of the Supervisor of Salvage & Diving, USN
Director of Ocean Engineering

15 November 2005

MEMORANDUM

From: SUPSALV
To: Director, USCG Wreck Removal & Salvage Coordination Group

Subj: PROPOSAL TO PROVIDE "POTENTIAL CASES" SURVEY TEAM

Encl: (1) POTENTIAL CASES SURVEY TEAM PROPOSAL

1. In an effort to expeditiously define remaining "Federalized" Hurricane KATRINA and RITA wreck removal and salvage operations, recommend assign SUPSALV a task to provide a team of approximately five personnel to deploy for approximately 30 days under mission as prescribed below:

"Identify, survey and report remaining potential wreck removal and salvage cases in areas identified by the USCG in the KATRINA and RITA operational areas. Survey and report will include characterizing vessel type, characteristics (dimensions, displacement, critical issues), orientation (upright, on side, capsized), general damage condition (slight damage, moderate damage, significant damage, apparent constructive loss, etc.) location (relative to deep water approaches, land approach options, levee structures, roadways, buildings), any evident environmental factors, proposed type of salvage or wreck removal operation (float, pump, pull, lift, cut/scrap), evidence of ownership or registration, and other characteristics or information as prescribed by SUPSALV representatives."

2. Find attached an estimate for the cost of this assignment.

J.R. WILKINS III

"POTENTIAL CASES" SURVEY TEAM PROPOSAL

CONTRACTOR:	**GPC a JOINT VENTURE**	**ESTIMATE NO.:**	**FORM: (01/21/03) HURRICANE SALVAGE DOCUMENTATION**
CONTRACT # :	**N00024-01-D-4018**		
DELIVERY ORDER NO. :	**NEW**	**DATE SUBMIT:**	**11/15/2005**

STATEMENT OF WORK:
Provide labor and material necessary to provide ESSM documentation personnel to support salvage planning or operations in various locations in Louisiana at the direction of SUPSALV. This estimate is for 30 days on site operations.

Estimated Complete Date:	**9/30/2006**

ESSM OPERATIONAL DELIVERY ORDER

TOTAL COST AWARD FEE= **$144,265**

	ESTIMATE	LIABILITY	
MATERIAL	$50,111		
G&A	$1,754		
TOTAL MATERIAL	$51,865	$51,865	
AWARD FE @ 10%	$5,187		$5,187
SCHED LABOR	$51,035		
G&A	$1,786		
TOTAL SCHED LABOR	$52,821	$52,821	
AWARD FEE @ 3%	$1,585		$1,585
NON-SCHED LABOR	$28,817		
G&A	$1,009		
TOTAL NON-SCHED LABOR	$29,825	$29,825	
AWARD FEE @ 10%	$2,983		$2,983
SUBCONTRACT	$0		
G&A	$0		
TOTAL SUBCONTRACT	$0	$0	
AWARD FEE @ 3%	$0		$0
COST-PLUS-AWARD-FEE- (CPAF)			
MAXIMUM LIABILITY ON CONTRACT		**$134,511**	
AWARD FEE SET ASIDE			**$9,754**
TOTAL COST (Max Liability + AF)			**$144,265**

ESF-3 VESSEL CHECKLIST

Case No. : _____

- ☐ Survey Complete

- ☐ **Physical Verification of Case**
  - ☐ Not observed (reason): _____
    _____

– or –

- ☐ Name of Vessel: _____
- ☐ Hull / State Registration #: _____
- ☐ GPS Coordinates (decimal minutes): N_____ W_____
- ☐ City: _____, Parish: _____

- ☐ Digital Photos (show case #, surrounding areas, and include any damage to the vessel):
  - ☐ List file names of digital photos: _____

- ☐ Vessel Characterization
  - ☐ Service ☐ Commercial ☐ Recreational
  - ☐ Vessel Type: _____
  - ☐ Vessel Dimensions (ft) Length: _____ Beam: _____ Depth: _____
    Displacement (L/T): _____ Draft: _____
  - ☐ Vessel construction
    - ☐ Steel ☐ Aluminum ☐ Other (Specify): _____
    - ☐ Wood ☐ Fiberglass
  - ☐ Vessel Condition
    - ☐ Afloat ☐ Sunk
    - ☐ Stranded ☐ Beached
  - ☐ Vessel Orientation
    - ☐ Upright ☐ On side
    - ☐ Capsized ☐ Other (Specify): _____
  - ☐ Vessel Damage
    - ☐ Slight damage ☐ Moderate damage
    - ☐ Significant damage ☐ Total loss/debris

- ☐ Vessel Proximity to Geographic Features (as applicable)
  - ☐ Nearest Landmark (cross street, marina, creek, etc..) _____
    - ☐ Distance to Landmark: _____
  - ☐ Distance to road: _____ ☐ Levee: _____ ☐ Building: _____
  - ☐ Distance to navigable water (9' LWL): _____

  - ☐ Interferences (specify): _____
    _____
    _____

  - ☐ Access (specify): _____
    _____

❑ **ESF-3 Applicability - Purpose for Removal in the Public Interest**

❑ **Location**

❑ In the Navigable Waterway, which includes
- Waterways impacted by ebb and flow of the tide
- Is capable of sustaining commerce on the waterway

❑ Adjacent to the Navigable Waterways and Channels
- Immediate Shoreline
- Those areas immediately inland of the shoreline if the debris removal activity can be staged from the waterway
- Poses an immediate threat to human life, public health, and safety of left in place

❑ Not in the Navigable Waterway or Channels
- Federally constructed levee (removal conducted IAW USACOE MOU)
- Swamps, marshes, and backwater areas that are theoretically but are not practically or actually navigable

❑ **Threat or Impact**

❑ Immediate threat to human life, public health, or safety
- Poses an immediate threat to human life
- Blocking a navigable waterway
- Inhibiting commercial transit
- Directly inhibiting commercial activity on the shore
- Must be removed to restore Maritime Transportation System Infrastructure
- Due to high water or heavy rain, could fall back into the water and pose a problem referenced above.

❑ Not an Immediate threat to human life, public health, or safety
- Recreational vessels on private property
- Vessels that have simply been washed ashore without meeting any of the above criteria
- Threat that does not directly emanate from the vessel and/or its location
- Debris that would require dredging operations to facilitate removal

❑ **Responsible party Activity** (check boxes that apply)

❑ Evidence that the vessel owner is engaged in private efforts to remove vessel

❑ Owner ID:

Name: _____

Address: _____

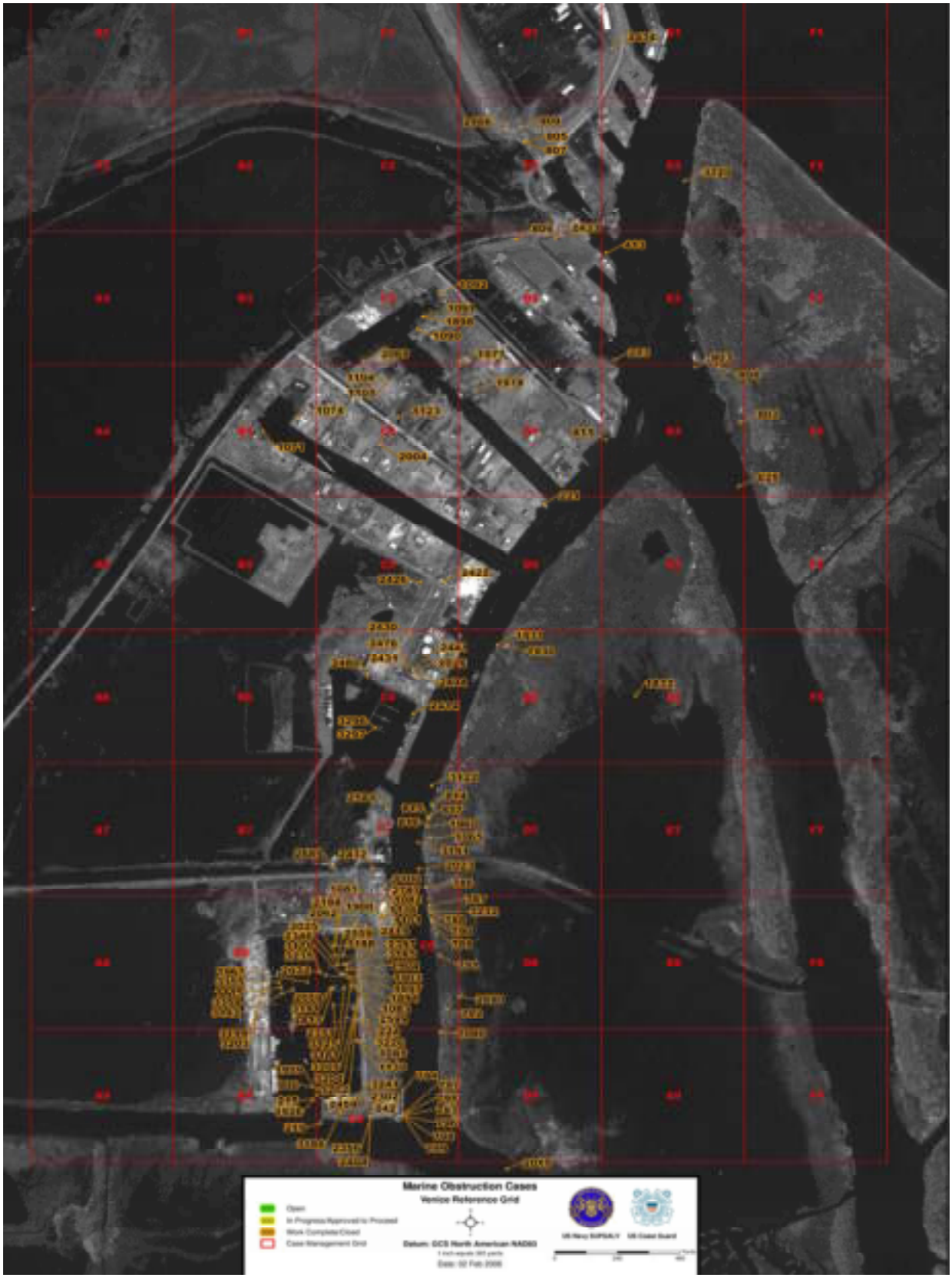
_____

Phone: _____

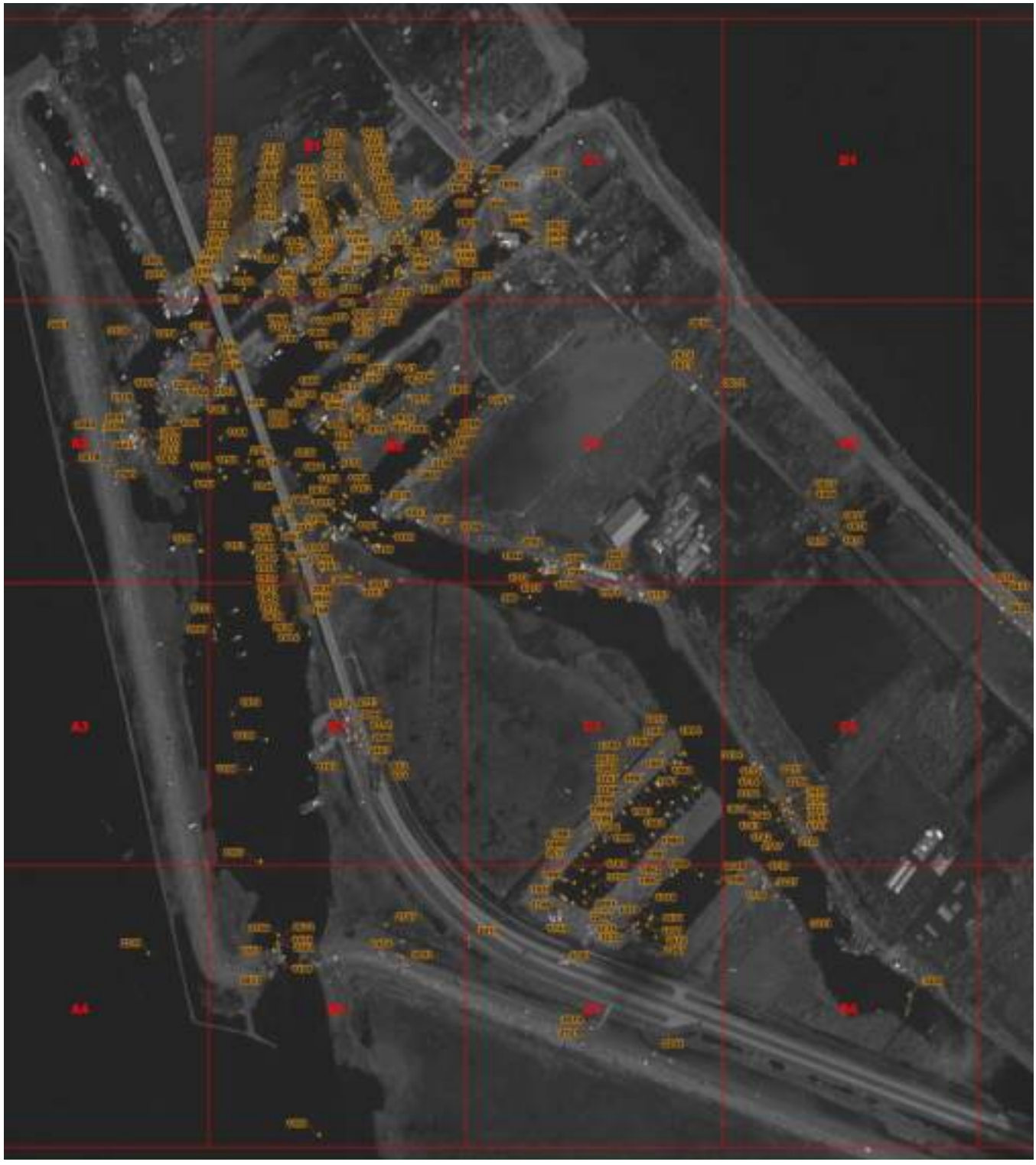
❑ Vessel Insurance?

Insurance Carrier: _____

Policy Number: _____



Targets in Venice, LA



Targets in Empire, LA

Appendix E

CONCLUSION DOCUMENTS

Appendix E
Conclusion Documents

Office of the Supervisor of Salvage & Diving, USN
Director of Ocean Engineering

SUPSALV Hurricane KATRINA/RITA Exit Strategy

BACKGROUND

SUPSALV is committed to completing our mission in the US Gulf Coast regions affected by Hurricanes KATRINA and RITA, and supporting FEMA, USCG and USACE in execution of their responsibilities. Nonetheless, we feel a responsibility to "work ourselves out of a job" and to complete our mission as soon as possible in order to speed recovery of the region and reduce the cost burden to Federal taxpayers.

At the direction of the Chief of Naval Operations and the Deputy Secretary of Defense, our SUPSALV mission is:

> *Under the direction of FEMA, provide coordinated strategic direction of national assets for KATRINA*-related hydrographic survey and marine salvage response in selected off-shore areas, channels, waterways, ports and harbors, with an ultimate goal of critical maritime reconstitution consistent with FEMA priorities.*
>
> *National assets include the major capabilities of industry, DoD and other Federal agencies for hydrographic survey, marine salvage, and oil pollution abatement incident to marine salvage*.
>
> * On Friday 23 September 2005 as Hurricane RITA (then Category 5) approached Houston/Galveston, USCG District 8 requested the SUPSALV mission be expanded to include Hurricane RITA affected areas as well as Hurricane KATRINA.

The hydrographic survey mission completed when the various USCG and USACE authorities determined there were no remaining hazards to navigation precluding opening of the Federal navigable channels and port systems.

Our oil pollution abatement mission is limited to pollution which is directly or indirectly associated with marine salvage, and therefore, from an exit strategy standpoint, will complete as soon as SUPSALV marine salvage responsibilities come to an end.

Our marine salvage response mission completion objective is considerably less well defined. As there was no historical precedent for a mission of this scope and nature, and

in the immediate aftermath of the chaos of the destruction of KATRINA, SUPSALV developed and executed ad-hoc strategic direction of national marine salvage assets by:

1. Formal and informal liaison with all levels of FEMA, USCG and USACE in Louisiana, Mississippi and Alabama.
2. Development of a state by state approach for harnessing FEMA "Emergency Support Function" tasking for marine salvage and wreck removal.
3. Assisting and coordinating the efforts of the organic US Navy salvage and diving assets working under the Joint Task Force (JTF) KATRINA.
4. Development of a Joint Area Hurricane KATRINA/RITA marine casualty database.
5. Providing emergency diving and salvage services when requested by other Federal agencies.
6. Executing the US Navy "Emergency Ship Salvage Material Contract" to provide emergency response salvage material including command and control facilities and to provide a team to perform salvage surveys to support the effort.
7. Executing the US Navy "East Coast Salvage Contract" to engage and coordinate commercial salvage response (including the American Salvage Association, and local salvage and wreck removal industries) throughout the entire Gulf Coast region.

Two and one-half months later, it is apparent that much of the SUPSALV marine salvage mission is complete. In particular, items "1" and "2" above no longer need SUPSALV on site presence as all three agencies' marine salvage coordination processes are either defined and stable, or if necessary, remaining issues can be addressed through conference calls or infrequent meetings. Item "3" was complete when the JTF demobilized. Item "4" (Joint Database) will require continued SUPSALV and contractor on scene presence for the foreseeable future for data entry and database maintenance, but will shortly be in a caretaker status and will not require significant SUPSALV resources. Regional and local demand for Item "5" emergency services is greatly reduced since the early weeks after the storms, and can be satisfactorily executed remotely from SUPSALV offices in Washington, DC (as is our routine approach to national and international emergency taskings). Our responsibilities in execution of items "6" and "7", however, still require local area support, have no clear "mission accomplished" definition and are the principal reason that this SUPSALV Exit Strategy is required.

FEMA (through USCG District Eight), and to a lesser extent USACE Mississippi Valley Division (for the most part also through USCG District Eight) continue to assign marine salvage and wreck removal case work to SUPSALV to execute through our commercial salvage contract. Due to broad and sometimes unclear interpretation of the FEMA mission assignment for marine wreck debris removal, USCG tasked SUPSALV (with full SUPSALV endorsement) to undertake both (1) conventional marine salvage missions (vessel removal in waterways and on shorelines) and (2) rather unconventional marine salvage missions (non-vessel marine debris removal incident to clearance of waterways and immediate surrounding shoreline areas). For the conventional marine salvage missions, specialized heavy-lift equipment and experienced marine salvors were provided

through the SUPSALV contract and continue to provide afloat lift and recovery capability. Additionally, land-based heavy-lift assets are being provided through sub-contractors to recover vessels which cannot be reached from afloat vessels, and require specialized expertise for safe recovery. In execution of unconventional marine salvage missions (non-vessel debris recovery on land), for expediency SUPSALV (in response to USCG tasking) used our salvage contract to engage local sub-contractors capable of land-based non-vessel debris removal.

DEFINITION

Given the above, our SUPSALV Exit Strategy is to complete existing tasks and limit new tasking to only that which specifically requires heavy-lift assets and specialized salvage expertise. Any new tasking, which is either non-vessel debris, or vessel debris that requires no specialized salvage expertise, whether afloat or on land is recommended to be undertaken by local salvage firms or contractors through USCG administered Basic Ordering Agreement (BOA) contracts. The extended timeframe since Hurricanes KATRINA and RITA no longer argues for the criticality or expense of immediate response capability. Instead, the lengthy work identification, assignment and funding process that is currently in place argues for hiring less expensive local capability for as much of the remaining work as possible.

EXECUTION

This SUPSALV Exit Strategy will be undertaken as follows:

a. Current tasking: SUPSALV team completes current work assignments as expediently as possible, with target date to demobilize afloat heavy lift assets no later than 22 Dec 2005. SUPSALV management and oversight of existing sub-contracted tasks will continue until sub-contracted work is completed.

b. New tasking:

(1) Survey: SUPSALV survey teams deploy to gather data on known remaining but unclassified cases.

(2) Classification: USCG uses survey team data to classify remaining Federalized work

(3) Assignment: Federalized work is then assigned to either SUPSALV (only those requiring specialized heavy-lift and salvage expertise) or non-SUPSALV work (better and more inexpensively executed by locally administered contracts).

New SUPSALV tasks will be targeted for completion by 22 December 2005 or as soon thereafter as possible.

c. SUPSALV Joint Database support: SUPSALV will maintain database support functions for USCG until no longer required, reducing scope of effort commensurate with USCG requirements.

It should be noted that SUPSALV will continue to provide financial support until all of the SUPSALV costs are documented. Thereafter, SUPSALV will continue to assist the USCG in the preparation of documentation in support of the claim for reimbursement to FEMA. SUPSALV personnel will support the database contracting and financial documentation from headquarters in the Washington Navy Yard with periodic visits to the New Orleans command center as needed.

FINAL REPORT

HURRICANE KATRINA

POLLUTION SUPPORT

BATON ROUGE AND VENICE, LA

FINAL REPORT
HURRICANE KATRINA
POLLUTION SUPPORT
BATON ROUGE AND VENICE, LA

5 September – 29 October 2005

Prepared by:
GPC, A Joint Venture
P.O. Box JK
Williamsburg, VA 23187

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Naval Sea Systems Command
1333 Isaac Hull Avenue, SE (Mail Stop 1072)
Washington Navy Yard, DC 20376

12/15/05

TABLE OF CONTENTS

APPENDIXES

SECTION A – EXECUTIVE SUMMARY

On Monday, 29 August 2005, Hurricane Katrina slammed into the Gulf Coast of the United States of America between Louisiana and Mississippi, killing over 1,000 people and inflicting billions of dollars of damage to homes and businesses in those two states, as well as Alabama (see Figure 1). In the aftermath of this storm, GPC, A Joint Venture, was tasked to assist the U.S. Navy Supervisor of Salvage and Diving (SUPSALV) by providing labor and material necessary to support pollution response operations in Louisiana, Mississippi, and Alabama. GPC would provide this assistance by staging various pollution equipment, response personnel, and other support at Clean Harbors, Inc., Baton Rouge, LA for Hurricane Katrina spill response efforts. Funding covered the first 30 days of on-site operation.

Figure 1. An example of the devastation caused by Hurricane Katrina in Louisiana

GPC was directed to issue, set up, and operate SUPSALV Emergency Ship Salvage Material (ESSM) pollution equipment as required with support equipment and vessels necessary to provide support for 24-hour operations. Additional equipment, equipment specifications, and/or personnel were to be provided at the direction of the SUPSALV Representative. Upon job completion, all equipment was to be refurbished and returned to ready-for-issue status.

SECTION B – CHRONOLOGY OF EVENTS

Monday (9/5/05)

SUPSALV Representative Bill Walker and GPC Project Manager Ron Worthington traveled to Clean Harbors, Inc., Baton Rouge, LA, where the USCG Incident Command Center was set up, to coordinate SUPSALV's response to this emergency pollution situation.

Tuesday (9/6/05)

SUPSALV Representative Bill Walker and GPC Project Manager Ron Worthington worked with the USCG Pollution Response Command Center, Baton Rouge, assigned to the Vessel Branch of the Operations Section. CWO Harvey Atkinson, Branch Director, developed a Vessel Salvage Pollution Plan (see Appendix B). At this point, it was recognized as more of a list of objectives than a plan, but it highlighted current concerns. It was suggested that SUPSALV should ensure that salvage operations under SUPSALV's cognizance properly address pollution risks and appropriate standby response resources, and that plans were properly coordinated with USCG with respect to plan approvals.

USCG identified the following primary facilities of concern at which significant spills from storage tanks had occurred:

- Shell Facility at Pilot Town (29° 11' N, 89° 16' W)
- Bass Facility at Homeplace East (29° 27' N, 89° 38' W)
- Murphy Facility at Meraux (29° 55.6' N, 89° 56' W)

Bill Walker and Ron Worthington attended a meeting with Responsible Parties (RPs) of the listed facilities and with some of their Oil Spill Removal Organizations (OSROs). Before this meeting, it appeared USCG was likely to request mobilization of SUPSALV spill response resources, primarily Skimmer Systems and Containment Boom with Shop and Rigging Vans. But the RPs convinced USCG that appropriate resources had been mobilized.

SUPSALV provided USCG with a list of available spill response resources with estimated costs; mobilization times and so forth (see Appendix C).

USCG was most interested in SUPSALV's satellite communications systems and berthing vans at that time.

Wednesday (9/7/05)

SUPSALV Representative Bill Walker and GPC Project Manager Ron Worthington continued working with USCG CWO Atkinson in the Vessel Branch of the Operations Section at the Clean Harbors, Inc., Baton Rouge, LA Operations Center. The objective of this branch was addressing vessel salvage pollution threats, including identification and resolution of such threats.

They worked on locating overflight documentation that might help in identifying high priority salvage pollution threats. On the recommendation of the NOAA Scientific Support Coordinator (SSC), they visited the USCG Marine Safety Unit (MSU) Baton Rouge. The MSU provided some

useful information and referred them to an Environmental Protection Agency (EPA) representative at the Department of Environmental Quality (DEQ) building in Baton Rouge.

The EPA representative provided several DVDs with overflight video. This video was of excellent quality, but focused on New Orleans streets, highways, and housing areas. They planned to investigate other video, but they were scheduled for an overflight tomorrow that would likely provide the best opportunity for useful documentation.

As of 1952 that evening, there was no apparent USCG interest in mobilization of SUPSALV spill response resources. However, at approximately 2205, CDR Laferriere, Hurricane Katrina ESF-10 Maritime Operations Deputy Incident Commander, called Bill Walker and Ron Worthington to the Incident Command Post and requested mobilization of SUPSALV spill response resources to the Clean Harbors, Inc., Baton Rouge staging area. Specifically, three Class V Skimmer Systems with appropriate support vans, the SUPSALV 5,000' Floating Hose System, all available berthing vans, and a suitable vessel to support remote river operations were requested.

Following this meeting, CAPT Jim Wilkins, SUPSALV Director, approved the issuance of a verbal delivery order to GPC to proceed with the requested mobilization in accordance with SUPSALV procedures for emergency response. GPC mobilized personnel to the ESSM bases in Williamsburg, VA, and Port Hueneme, CA, to prepare equipment for shipping.

Thursday (9/8/05)

On Thursday, 8 September 2005, GPC Program Manager Lloyd L. Saner contacted SUPSALV Deputy Director Richard Asher to reconfirm the verbal direction. At that time, Richard Asher directed GPC to hold any deployment until he got back to Lloyd Saner.

Friday (9/9/05)

GPC was on standby waiting for direction.

Saturday (9/10/05)

On Saturday, 10 September 2005, at approximately 2030, GPC Program Manager Lloyd Saner received a telephonic notification from SUPSALV Deputy Director Richard Asher that verbal tasking had been approved. GPC was to commence deployment of equipment; personnel would be deployed at the direction of the on-site SUPSALV Representative, Bill Walker. Lloyd Saner notified ESSM Base Cheatham Annex, VA, and ESSM Base Port Hueneme, CA, to recommence arranging for trucks and to ship equipment to the Clean Harbors, Inc. storage yard.

Sunday (9/11/05)

On Sunday, seven tractor-trailer loads of ESSM pollution equipment left ESSM bases bound for the Baton Rouge staging area, four from ESSM Base Cheatham Annex (CAX), VA, and three from ESSM Base Port Hueneme (PHE), CA, as follows:

CAX Trailer 1:	1 each 24' BHB and 1 each 18' Boom Tending Boat
CAX Trailer 2:	1 each 24' RHIB and 1 each 24' BHB
CAX Trailer 3:	1 each Class V Skimmer, 1 each pilot house for Skimmer, 1 each 5-kW generator, and 1 each 4-kW generator
CAX Trailer 4:	1 each Class V Sponson Rack, 1 each 25-kW generator and 1 each 20-kW generator

PHE Trailer 1:	2 each BHBs
PHE Trailer 2:	1 each Class V Skimmer
PHE Trailer 3:	1 each Class V Sponson Rack

Monday (9/12/05)

On Monday, eleven more tractor trailer loads of ESSM pollution equipment left ESSM bases bound for the Baton Rouge staging area, four from CAX and seven from PHE, as follows:

CAX Trailer 5:	1 each Floating Hose Van 2 of 4 and 1 each Floating Hose Van 4 of 4
CAX Trailer 6:	1 each Floating Hose Van 1 of 4 and 1 each Floating Hose Van 3 of 4
CAX Trailer 7:	2 each Safety of Life at Sea (SOLAS) Berthing Vans
CAX Trailer 8:	1 each 2" to 6" Hydraulic Submersible Pumping System
PHE Trailer 4:	2 each BHBs
PHE Trailer 5:	1 each Skimmer
PHE Trailer 6:	1 each Sponson Rack
PHE Trailer 7:	1 each Workshop Van
PHE Trailer 8:	1 each 18' Workboat and 1 each 20' container with PPE
PHE Trailer 9:	1 each Rigging Van
PHE Trailer 10:	1 each Command Van and 1 each Berthing Van

Trailer 1 was enroute with an estimated time of arrival (ETA) of Wednesday morning. Trailer 2 was being loaded and would ship that day. Trailer 3 was waiting for carrier arrival. Port Hueneme ESSM Base Manager Mike Pricola planned to send a followup e-mail message with all of this day's ETAs and driver information at the conclusion of the day's evolution. Trailers 4 through 10 would ship the next day.

SUPSALV Representative Joe Stahovec forwarded to GPC Program Manager Lloyd Saner an e-mail message from SUPSALV Deputy Director Richard Asher giving emergency tasking approval for the equipment mobilization that was underway.

While the equipment was being mobilized, SUPSALV Representative Bill Walker and GPC Project Manager Ron Worthington went on an overflight of portions of the lower Mississippi River from New Orleans to Venice, LA. The purpose of the flight was to get a first hand overview of the salvage and spill situation, and possible staging areas on the river (see Figure 2). Route 23, running parallel to the river, appeared good as far south as mile 39, just north of Homeplace, LA. There appeared to be facilities north of this point with piers on the river capable of supporting a mobile crane for launching Skimmers and small boats and/or loading support vessels. They were still waiting for word from the Operations Section on the selection of the forward staging area.

Figure 2. View of an Oil Spill Caused by Hurricane Katrina, as Seen During the Overflight

The first of eighteen trucks sent over the weekend from ESSM Base Cheatham Annex, VA, and ESSM Base Port Hueneme, CA, arrived at approximately 1330 with Class V Skimmer #01 sides, boom, bladder, and ancillaries. The second truck arrived at approximately 1700 with the center body for Class V Skimmer #01. They now had one complete Skimmer System less two BHBs. The remaining trucks from Williamsburg were expected to arrive over the next two days.

The Logistics Section in Baton Rouge was working on the requested support vessel. Bill Walker and Ron Worthington believed that the Logistics Section planned to call the Federal Emergency Management Administration (FEMA) to request USNS *Apache* or an alternate platform.

Tuesday (9/13/05)

ESSM Base Port Hueneme, CA, shipped a 20' container of personnel protective equipment (PPE) to Baton Rouge.

Meanwhile, in Baton Rouge, trucks continued to arrive with SUPSALV pollution response equipment (five trucks had arrived as of 1847). Two BHBs were now on the scene, completing one Class V Skimmer System.

USCG personnel augmentation provided more Senior Section Chiefs and a new Hurricane Katrina ESF-10 Maritime Operations Deputy Incident Commander, CDR Ron Cantin, at the Baton Rouge command post. SUPSALV representatives discussed support vessel and forward staging area requirements.

SUPSALV Representative Bill Walker developed written "Options for Deployment of SUPSALV Resources" (see Appendix C) to assist USCG in directing SUPSALV to meet USCG response needs. The options were presented to the USCG Incident Command.

National Response Corporation (NRC – GPC team member) advised of the availability of a high-speed support vessel to provide messing and berthing for up to 20 personnel to augment the Oil Spill Recovery Barge (OSRB) and pusher tug. Three NRC vessels were proposed to USCG to meet the SUPSALV support vessel requirement and were subsequently approved. GPC negotiated an agreement with NRC. "Options for Deployment of SUPSALV Resources" still applied, with the OSRB *NRC Defender* and the installed Class XI Skimmer and NRC sweep boom as mobile initial response.

Bill Walker reported that he would attempt further discussions with USCG Incident Command this evening or the next day to work out forward staging area issues and number of ESSM equipment operators to be deployed (desired readiness level).

Wednesday (9/14/05)

Most trucks had arrived. The following equipment was now staged at Clean Harbors, Inc., Baton Rouge:

- Skimmer #01 complete
- Skimmer #91 Sponson Rack
- 6 each BHBs
- 1 each 24' RHIB
- 2 each 18' Boom Tending Boats

- 1 Floating Hose System (4 Vans – 5,000' floating hose)
- 2 each SOLAS Bunk Vans (USCG-approved for vessels)
- 1 each Salvage Support Skimming Van
- 1 each 2" to 6" Hydraulic Submersible Pumping System

Still waiting for the following:

- Skimmer #91 mid-body
- Skimmer #92 complete
- 1 each Shop Van
- 1 each Rigging Van
- 1 each Bunk Van

No decision yet on forward staging.

Mike Pricola, Port Hueneme ESSM Base Manager, was due in tomorrow to relieve GPC Project Manager Ron Worthington, who was scheduled to depart Saturday, 17 September 2005. SUPSALV Representative Bill Walker had a tentative flight home next Wednesday, 21 September. He suggested that SUPSALV Representative Ric Sasse fly to Baton Rouge or New Orleans on Monday, 19 September. Early arrangements were critical. The alternative was taking a flight to Houston and driving to Baton Rouge, which Bill Walker did due to rental car availability.

Thursday (9/15/05)

GPC's Ron Worthington reported that they were waiting for four trucks. Three were towing ESSM trailers, which had flat tires and were delayed for repairs.

SUPSALV Representative Bill Walker presented a proposal to USCG ICS to include the NRC OSRB Task Force. At approximately 1115, the USCG approved the use of the NRC Task force, to be on standby in the lower Mississippi River. GPC placed the order with NRC for the OSRB *NRC Defender* with pusher tug and the vessel *Utila Aggressor* as a berthing vessel. This Task Force proceeded to the Bass Oil Refinery dock in Venice, LA. (See Appendix D.)

Bill Walker discussed options for deck-loading two SUPSALV Class V Skimmer Systems on the forward deployed U.S. Department of Transportation Maritime Administration (MARAD) vessel, possibly at Port Sulfur. He recommended placing ESSM operators for one Skimmer System on the MARAD vessel and mobilizing additional personnel as required. One Skimmer System was to remain in Baton Rouge or the forward staging area for mobilization by truck to other remote spill locations.

GPC's Mike Pricola was enroute to Baton Rouge, driving from Houston to relieve GPC's Ron Worthington.

Friday (9/16/5)

All but one truck, with one Shop Van, had arrived. The Shop Van was due Saturday morning.

GPC's Mike Pricola arrived this morning to relieve Ron Worthington as Project Manager. Ron Worthington would leave Saturday morning. SUPSALV Representative Rick Sasse was due in on

Monday morning to relieve SUPSALV Representative Bill Walker. Bill Walker would leave Wednesday morning.

The berthing vessel *Utila Aggressor* was underway from Morgan City to marry up with the *NRC Defender* Task Force at Venice, LA and was expected to arrive at 0600 on Saturday.

GPC's Craig Moffatt and Jeff Coughlin would arrive Saturday to join the OSRB crew Sunday morning for command and control.

No confirmation of when the MARAD ship would be available to load the Skimmer Systems and position them downriver.

Saturday (9/17/05)

GPC's Mike Pricola relieved Ron Worthington as Project Manager on-scene. GPC's Craig Moffatt and Jeff Coughlin arrived at 1200 from ESSM Base Cheatham Annex, VA, to go aboard the OSRB *NRC Defender* Task Force to augment the NRC crew and provide command and control.

The OSRB *NRC Defender*, pusher tug *Emmett Eymard*, and berthing vessel *Utila Aggressor* were at the Bass facility this morning. In addition, the tug *Emmett Eymard* departed and tug *Angelica E* arrived to support *NRC Defender*. *Angelica E* was a more powerful tug.

At the request of SUPSALV Representative Bill Walker, he and Mike Pricola met with the new Incident Commander (IC), CDR Ron Cantin, the departing IC, CDR Roger Laferriere, the Operations Section Chief, CDR Monica Rochester, and other members of the ICS staff to determine their intentions for the deployment of SUPSALV equipment. CDR Cantin requested a SUPSALV proposal for mobilizing the SUPSALV Skimmers and support systems on appropriate offshore vessels to provide a standby spill response capability in the Gulf of Mexico. The mission would be in response to potential spills from offshore oil rigs, pipelines, and other oil infrastructure sources from the mouth of the Mississippi River out into the Gulf of Mexico as far as Hurricane Katrina oil infrastructure damage might exist. Spills were anticipated when damaged infrastructure was repaired and brought back on line.

GPC Program Manager Lloyd Saner was requested to identify potential support vessels for the proposed offshore task force. Bill Walker contacted Mike Herb, SUPSALV Salvage Operations Director, to discuss the potential for accessing a U.S. Navy amphibious vessel to support the SUPSALV spill response task force, just as the LSD USS *Comstock* supported Operation Iraqi Freedom (OIF) operations in the Persian Gulf.

Bill Walker worked on a draft proposal of the offshore support plan.

Sunday (9/18/05)

GPC's Mike Pricola arrived at ICS command at Clean Harbors, Inc. at 0630 and met with CDR Ron Cantin. He then obtained transportation via truck to La Fitte for GPC's Craig Moffatt and Jeff Coughlin. From there, they would obtain transportation on a small craft down to the Gulf of Mexico and then up Tiger Pass to the Chevron facility at Venice, LA. At this point, *Utila Aggressor* (personnel support vessel) would pick them up to augment *NRC Defender*'s crew and provide command and control. They arrived at vessel *NRC Defender*, berthing vessel *Utila Aggressor*, and tug *Angelica E* at approximately 1400.

NRC Defender Task Force planned to conduct crew training on OSRB and Skimmer Systems. Task Force vessels had to clear Bass facility berths to make room for other resources. The Task Force vessels, as of 1630 on 18 September 2005, were berthed at the Chevron facility in Venice, LA.

Craig Moffatt and Jeff Coughlin were onboard *NRC Defender,* and would try to establish Internet capabilities and power to make it easier to communicate information. No phones were working, cellular or Iridium (satellite phone). The vessel phone could call out, but could not receive calls. It was a technical problem that Craig Moffatt would try to get resolved with the captain.

Utila Aggressor was tied up next to a Chevron vessel. Chevron Oil Co. monitors the weather in the Gulf of Mexico. Chevron has a 3-phase weather system in place. At this time, Chevron was in weather phase 2, calling for the mandatory evacuation of all Chevron contractor personnel due to hurricane activity in the Caribbean. By copy of a SITREP, SUPSALV advised USCG Incident Command in Baton Rouge of the weather warning, but pending further direction, would rely on *NRC Defender* Task Force vessel captains to take appropriate action.

Craig Moffatt reported that a lot of traffic was traveling south on the river and it appeared to be business as usual.

GPC Program Manager Lloyd Saner worked to identify vessel resources to support the new offshore spill standby requirement. SUPSALV Representative Bill Walker worked on an offshore support plan proposal (see Appendix E). He anticipated completing the draft on Monday as requested by USCG, but might not have specific resources identified. Might need rapid approval of proposal to get vessels on hire while available.

Bill Walker submitted daily cost summaries to USCG Financial Section for Saturday and today, summarizing cost to date. Cost to date was well under the PRFA estimate because most GPC ESSM equipment operators were not yet mobilized from bases. PRFA estimate might have to be revised due to the new offshore tasking. The new cost estimate and logistics plan for mobilizing resources would be provided with the final proposal for the SUPSALV offshore standby requirement.

Monday (9/19/05)

GPC's Craig Moffatt reported that the *NRC Defender* Task Force was moored at the Chevron facility in Venice, LA. Crew performed small boat operations and inspected the slips and facilities around Venice for potential sources of petroleum leakage.

Monday evening, while testing the hydraulics on board the Class XI Skimmer belonging to OSRB, a hydraulic problem was discovered in the skimmer system. Tropical Storm Rita was bearing down on the Florida Keys at that time and was being watched closely by the *NRC Defender* Task Force personnel.

Chevron reported the activation of weather phase 2 of its 3-phase hurricane evacuation plan in place – the evacuation of all contractor personnel.

Craig Moffatt reported that the *NRC Defender* Task Force vessels intended to proceed to New Orleans or Morgan City if evacuation was necessary. Unless otherwise directed, SUPSALV would leave evacuation to the judgment of the vessel captains.

SUPSALV Representative Ric Sasse arrived in Baton Rouge around noon today and started the turnover process with SUPSALV Representative Bill Walker, who was to depart on Wednesday.

At about 1500, the Operations Section Chief requested that SUPSALV develop a Hurricane Rita evacuation plan (see Appendix F). SUPSALV and GPC representatives were working on it. They did not see the need or practicality of moving the ESSM equipment staged in Baton Rouge. They might get a tractor to park the trailers closer together to preclude the possibility of one tipping over in the wind.

Bill Walker worked on a Draft Offshore Plan (see Appendix E). GPC Program Manager Lloyd Saner worked with NRC/SEACOR to identify commercial vessel candidates.

Bill Walker received initial NRC proposal for vessels for the offshore standby requirement by e-mail, but had not yet discussed it. The proposal is listed below:

- Heavy lift barge *Signet Hercules*, based in Ingleside, TX. She would be capable of storing and deploying three Marko Class V Skimmer Systems along with six BTBs.
- Accommodation vessel *Coral Vision*, a former USCG buoy tender, capable of housing 60 individuals; based in Florida.
- Temporary recovered product storage platform NRC OSRV *Valiant*, capable of storing 20,000 barrels; based in Ingleside, TX.

As alternative platforms for accommodations, NRC was prepared to offer two NRC 110 OSRVs. One was based in the Mississippi River and one was in Mobile, AL. Each of these vessels had accommodations for 20 personnel and was equipped with small 10-ton cranes, boom, skimmers, and small support boats.

Tuesday (9/20/05)

GPC's Craig Moffatt requested an official response as to SUPSALV's plans for the Venice contingent to evacuate vessels from Venice, LA. At noon Tuesday, Hurricane Rita was a Category II hurricane that was over the Florida Keys and Venice was becoming a ghost town. GPC received the official word from SUPSALV to make preparations and get underway to safe haven as soon as they were able.

The tug *Angelica E* was secured at the stern of *NRC Defender* and *Utila Aggressor* was secured alongside *NRC Defender*. All vessels and crew were under way by 1430, making 6 knots with destination of the United Tugs Inc. dock in the Harvey Canal south of New Orleans. The estimated ETA was 0500 on 21 September 2005.

SUPSALV Representative Bill Walker had submitted the "Draft Offshore Plan" (see Appendix E) to the USCG for review.

USCG was making preparations for personnel to evacuate from Baton Rouge to Texarkana until Hurricane Rita passed. SUPSALV Representative Ric Sasse contacted SUPSALV command center in Alexandria, LA, about the potential of relocating two personnel there temporarily. USCG Operations Section Chief agreed with the temporary move to Alexandria. SUPSALV pollution personnel would maintain an open line of communication with the USCG. GPC coordinated with

local Clean Harbors, Inc. personnel to move and rearrange ESSM trailers and equipment into a more protected arrangement.

Wednesday (9/21/05)

The *NRC Defender* Task Force arrived at the Algiers locks in the Mississippi River at 0030 and broke off the *Utila Aggressor* from the *NRC Defender* barge. Task Force arrived at the United Tugs Inc. dock in Harvey Canal at 0310 and tied up all vessels. Arrangements were made to stay through the duration of bad weather.

At 0830, personnel in the *NRC Defender* Task Force were working on the Class XI Skimmer hydraulics problems, took on supplies, and received the computer system that ties into the satellite communications phone.

By 1000, the skimmer was repaired. At 1400, *Utila Aggressor* moved upriver to take on fuel and water.

At 1600, Hurricane Rita was a Category IV hurricane located far south and west in the Gulf. Current projected path was central Texas.

USCG had received and was reviewing SUPSALV Representative Bill Walker's "Draft Offshore Plan."

USCG Baton Rouge evacuation plans had been put on hold based on the current hurricane track heading towards Texas. Their field teams had returned to camp for a temporary standdown.

Thursday (9/22/05)

The *NRC Defender* Task Force, berthed at the United Tugs Inc. dock in Harvey Canal, was moving vessels and barges around to prepare for Hurricane Rita, which was classified as a Category V hurricane at this time with 170-mph winds. Its projected path took it into the Louisiana/Texas border.

GPC's Craig Moffatt met with the captains of the vessels in the *NRC Defender* Task Force, as well as other vessels rafted up so as to make the best preparations with everyone's input. The decision was made to ballast down *NRC Defender* three feet and tie *Utila Aggressor* and the tug *Emmett Eymard* on the outside of the barge. Ballasting the barge started at approximately 1430 and went on into the night. It was decided that this plan would be kept regardless as to where the storm was to make landfall. There was no immediate land or water transportation available and no place else to go without the risk of getting into flooded areas or being in the path of the storm.

USCG Baton Rouge was evacuating to Huntsville, AL. SUPSALV Pollution Support was relocating to the SUPSALV Salvage Command Center in Alexandria, LA. Contact information had been forwarded (both paper and digital) to USCG to maintain communications.

USCG had received and was reviewing SUPSALV Representative Bill Walker's "Draft Offshore Plan." The unofficial word received was that there were many things to work out, all of which would have to wait until they returned from Huntsville.

Friday (9/23/05)

The weather in the area of the *NRC Defender* Task Force in Harvey Canal had picked up considerably. Gale force winds were being felt with an increasing steady wind that started in the north and swung around out of south. There were scattered rain and wind gusts through out the day. The Harvey Canal water level was rising and the crew was taking ballast water onto the OSRB at a slow pace using a portable pump, which brought the OSRB down to the seven-foot draft level at the pier.

Saturday (9/24/05)

The *NRC Defender* Task Force crew continued ballasting the barge and secured items from wind. Winds and rain were not great; sporadic gusts did not exceed 40 mph.

Sunday (9/25/05)

The *NRC Defender* Task Force crew prepared for sea duty. Unchained equipment, took down storm shutters, and put up equipment and rigging for work. Also took on groceries.

Monday (9/26/05)

The *NRC Defender* Task Force was in Harvey Canal awaiting contract renewal and/or work assignment. This was conveyed to the USCG. Personnel continued preparing the vessels for sea duty. The crew washed down vessels and took on potable water.

SUPSALV Representative Ric Sasse and GPC Project Manager Mike Pricola re-established the SUPSALV pollution office at the USCG Baton Rouge command center. Ric Sasse and Mike Pricola were awaiting direction from the USCG regarding the fate of the *NRC Defender* Task Force.

USCG and SUPSALV had a productive meeting to iron out miscommunications and laid out a path forward. USCG was to make a decision about the *NRC Defender* Task Force soon. The "Draft Offshore Plan" was to be discussed further in the near future.

Tuesday (9/27/05)

CDR Cantin, the IC, instructed SUPSALV Representative Ric Sasse and GPC Project Manager Mike Pricola to turn off the *NRC Defender* Task Force and remove them from contract. The contract was terminated at 1700.

USCG requested that SUPSALV generate a contingency plan to respond to an offshore oil spill, assuming the ESSM equipment was staged at Baton Rouge. Ric Sasse and Mike Pricola prepared this document to be presented on Wednesday, 28 September 2005.

Wednesday (9/28/05)

The two GPC personnel on board the *NRC Defender* Task Force departed for home.

The SUPSALV contingency plan requested by the USCG was completed and reviewed by SUPSALV Representatives Ric Sasse and Bill Walker, and by GPC personnel Mike Pricola, Lloyd Saner, and Ron Worthington.

Ric Sasse reported receiving an official memo from USCG requesting SUPSALV to stand down and assume a "standby posture as an offshore response resource."

Thursday (9/29/05)

SUPSALV Representative Ric Sasse reported that the SUPSALV contingency plan was submitted to USCG Deputy IC Campbell; complete, thorough, and on time. He expected official feedback and acceptance within 24 hours.

The logistics necessary to directly support this long-term standby posture had been coordinated through GPC with the Clean Harbors, Inc. facility. No support would be required of the USCG.

Friday (9/30/05)

Mike Herb, SUPSALV Salvage Ops (00C2), had been in communication with CDR Cantin (IC) and LCDR Campbell (Deputy IC) discussing the level and type of support requested by USCG in Baton Rouge. He made a site visit and spoke face-to-face with Ops (LCDR Rochester); the IC and Deputy IC were offsite.

Per GPC request, Clean Harbors, Inc. moved both an ESSM Berthing Van and an ESSM Command Van, to be used to berth GPC's standby crew, into position to be put into operation. Electric power was being wired. This would allow the GPC standby crew to have a location from which to operate that was independent of the USCG.

Saturday (10/1/05)

SUPSALV Representative Ric Sasse reported that he met with USCG LCDR Campbell. USCG approved SUPSALV's transition to a "standby posture."

Logistics arrangements for the transition were progressing smoothly. The replacement crew were to arrive early the next week.

Sunday (10/2/05)

The ESSM Berthing Van was operational. The ESSM Command Van was expected to be operational on Monday.

SUPSALV Representative Ric Sasse made arrangements to rejoin the Salvage Group in Alexandria, LA.

Monday (10/3/05)

The replacement GPC crew would arrive the next day, Tuesday. GPC representative Archie Hall from ESSM Base Cheatham Annex, VA, would become the GPC on site Project Manager, with Matthew Curlee from ESSM Base Port Hueneme, CA, as the mechanic / operator. Mike Pricola, the current on-site GPC Project Manager, would stay until Thursday to bring them up to speed.

SUPSALV Representative Ric Sasse traveled to Alexandria to rejoin the Salvage Group.

Tuesday (10/4/05)

GPC's Archie Hall arrived. GPC's Matthew Curlee was to arrive at 2200.

GPC's Mike Pricola began turnover to Archie Hall.

Completed setup of the Command Van, Iridium satellite antenna, and cellular phone antenna. Phone checks completed satisfactorily.

Wednesday (10/5/05)

GPC's Mike Pricola sent the following equipment update:

- Arrangements started today for the trailer tire repairs.
- The phone person was here this morning to look at the Command Van. Would get a quote for a single phone line and single fax line. GPC's Archie Hall was to send the quote before he committed to it.
- Made arrangements for a lift to repair the whaler trailer jack and to shuttle two trailers to the place where the rest of our gear was located.

Introduced Archie Hall to all of the Clean Harbors, Inc. POCs for support.

GPC's Matt Curlee arrived.

This morning's Ops/Safety briefing revealed that USCG CDR Laferriere and a deputy who was not named would replace USCG CDR Cantin and LCDR Campbell tomorrow. The ICS here will rotate every three weeks.

Mike Pricola completed the turnover with Archie Hall.

Thursday (10/6/05)

GPC's Archie Hall attended the USCG briefing. No change in status.

Checked over equipment; everything was ok.

Friday (10/7/05)

GPC's Archie Hall attended the USCG briefing. No change in status.

Checked over equipment; everything was ok.

The new commander relieved the old commander.

Saturday (10/8/05) through Tuesday (10/18/05)

GPC's Archie Hall attended the daily USCG briefing. No change in status.

Checked over equipment each day. Everything was ok.

Wednesday (10/19/05)

GPC's Archie Hall attended the USCG briefing. No change in status.

Checked over equipment; everything was ok.

SUPSALV Representative Ric Sasse visited and requested that an 18' BTB (WB0942) be issued to USCG LCDR Joshua Price on 20 October 2005 to be used in Venice, LA. Archie Hall prepped the boat for shipment.

GPC's Gerald Hollenbeck arrived at 17:30 from ESSM Base Port Hueneme, CA, to relieve Archie Hall as GPC Project Manager. Archie Hall began the turnover process.

Thursday (10/20/05)

GPC's Gerald Hollenbeck attended the USCG briefing. No change in status.

GPC's Archie Hall completed the turnover with Gerald Hollenbeck and departed for ESSM Base Cheatham Annex, VA.

Gerald Hollenbeck test ran two of the BHBs to ensure that batteries were charged and checked over the other equipment; everything was ok.

Friday (10/21/05)

GPC's Gerald Hollenbeck attended the USCG briefing. No change in status.

Test ran various types of equipment to ensure that batteries were charged and checked over the other equipment; everything was ok.

Saturday (10/22/05)

GPC's Gerald Hollenbeck attended the USCG briefing. No change in status.

Test ran various types of equipment to ensure that batteries were charged and checked over the other equipment; everything was ok.

Sunday (10/23/05)

GPC's Gerald Hollenbeck attended the USCG briefing. No change in status.

Issued 18' BTB (WB0942) to USCG LCDR Joshua Price for use in Venice, LA.

Test ran various types of equipment to ensure that batteries were charged and checked over the other equipment; everything was ok.

Received memo from USCG (see Appendix G) requesting that SUPSALV begin demobilizing its equipment from Baton Rouge on 24 October 2005.

Monday (10/24/05)

GPC's Gerald Hollenbeck attended the USCG briefing. No change in status.

Prepared 1149 for shipments.

Shipped the following equipment to ESSM Base Cheatham Annex, VA:

Quantity	ESSM No.	Nomenclature
1	GE0440	Generator, 25-kW, Dsl, Model CI4J-25
1	GE0500	Generator, 20-kW, Dsl, 480-V ac, 3-Ph, Skid Mount

Quantity	ESSM No.	Nomenclature
1	GE0503	Ancillary Set for Generator GE0500/GE0500A
1	SK0712	Rack System for SK0711
1	TR0938	Trailer, 40' Flatbed

Checked over the other equipment; everything was ok.

Tuesday (10/25/05)

GPC's Gerald Hollenbeck attended the USCG briefing. No change in status.

Shipped the following equipment to ESSM Base Port Hueneme, CA:

Quantity	ESSM No.	Nomenclature
2	SK0711	Skimmer, Oil, Sorb Belt, Mod 36' Vessel (Cls V)
2	SK0712	Rack System for SK0711
3	TR0020	Trailer, Lowboy, 40' Drop Deck, 20-Ton
2	TR0928	Trailer, 32' Drop Deck
1	TR0938	Trailer, 40' Flatbed
1	TR0942	Trailer, 45' Flatbed, w/Air Ride
1	VA0010	Van, Rigging
1	VA0508	Van, Workshop
1	WB0722A	Boat, 24' Boom Handling, 0 Series
1	WB0722B	Boat, 24' Boom Handling, 40 Series

Shipped the following equipment to ESSM Base Cheatham Annex, VA:

Quantity	ESSM No.	Nomenclature
3	GE0418	Generator, 5-kW, Dsl, 120/240-V ac, 1-Ph
1	GE0419	Generator, 4.5-kW, Dsl, 120/240-V ac, 1-Ph
1	SK0711	Skimmer, Oil, Sorb Belt, Mod 36' Vessel (Cls V)
1	TR0938	Trailer, 40' Flatbed
1	TR0940	Trailer, 44' Drop Bed, w/Air Ride
1	TR0942	Trailer, 45' Flatbed, w/Air Ride
1	VA2150	Van, Floating Hose System (Van 1 of 4)
1	VA2151	Van, Floating Hose System (Van 2 of 4)
1	VA2152	Van, Floating Hose System (Van 3 of 4)
1	VA2153	Van, Floating Hose System (Van 4 of 4)

Checked over the other equipment; everything was ok.

Issued an Iridium Satellite Phone (PH1731) to SUPSALV Representative Rick Thiel.

Wednesday (10/26/05)

GPC's Gerald Hollenbeck attended the USCG briefing. No change in status.

Shipped the following equipment to ESSM Base Cheatham Annex, VA:

Quantity	ESSM No.	Nomenclature
1	VA0280	Van, 2" to 6" Submersible Hydraulic Pumping System
2	VA0735	Van, Berthing, Shipboard
1	VA2220	Van, Salvage Skimmer System
2	WB0722D	Boat, 24' Boom Handling, 90 Series
1	WB0736	Boat, 24' Rigid Hull Inflatable
1	WB0942	Boat, 18' Boom Tending

Shipped the following equipment to ESSM Base Port Hueneme, CA:

Quantity	ESSM No.	Nomenclature
1	VA1987	Van, Container, 20' x 8' x 8' (Personal Protective Equipment)
1	WB0722D	Boat, 24' Boom Handling, 90 Series

Checked over the other equipment; everything was ok.

Thursday (10/27/05)

GPC's Gerald Hollenbeck attended the USCG briefing. No change in status.

Shipped the following equipment to ESSM Base Port Hueneme, CA:

Quantity	ESSM No.	Nomenclature
1	TR0020	Trailer, Lowboy, 40' Drop Deck, 20-Ton
1	VA0727	Van, Command, 20'
1	VA0734	Van, Berthing

Friday (10/28/05)

GPC's Gerald Hollenbeck attended the USCG briefing. No change in status.

Shipped the following equipment to ESSM Base Port Hueneme, CA:

Quantity	ESSM No.	Nomenclature
1	WB0722D	Boat, 24' Boom Handling, 90 Series

Saturday (10/29/05)

GPC's Gerald Hollenbeck and Matthew Curlee departed for ESSM Base Port Hueneme, CA.

SECTION C – PROBLEMS ENCOUNTERED

Problem:	Transportation problem in getting GPC personnel to Venice, LA, to marry up with the *NRC Defender* Task Force.
Solution:	No real solution since most all transportation was out due to hurricane damage.
Problem:	Communication between the *NRC Defender* Task Force and SUPSALV at the ICS in Baton Rouge was problematic due to lack of any cell phone, landline, or radio, and distance between the two. Only communication was via satellite phone and that was only one way.
Solution:	Review ESSM Iridium Satellite phones to determine if there may be better systems available.

SECTION D – LESSONS LEARNED

SHIPPING

There were no weights and cubes on any of the 1149s issued from Cheatham Annex or Port Hueneme.

Port Hueneme needs to remove all master locks from the spare tires on trailers. All spares should be secured by chain and nuts/bolts like Cheatham Annex trailers.

INCIDENT COMMAND

Under the National Response Plan (NRP), SUPSALV is named as a Special Team. Special Teams are Technical Specialists that advise the Incident Command (IC) in their areas of expertise. Technical Specialists are typically assigned to the Planning Section of a response initially, and then directed to wherever they are needed. In our initial response of equipment, the Coast Guard assigned us, or at least that was our impression, to the Vessel Branch of the Operations Section. It cannot be answered definitively how we became assigned to the Operations Section. When the equipment was not utilized, were we really a part of Operations? Since we were physically not operating, it is believed that the answer is no. With the change of the IC and, with that, change in personnel, there was a change in response objectives. The prior IC wanted an operational asset; the new IC wanted a contingency response asset and the technical advice that goes with it. It is felt that it may have been in our best interest to suggest that we become Technical Specialists in the Planning Section as called for in the NRP, as soon as it was apparent that we were not becoming operational. Since we are operators by nature, it may be a difficult pill to swallow, but an area that we need to look into.

SUPSALV equipment lists should have been given to the Planning Section Resources Unit Leader (RUL) for inclusion in the on-site spills assets. Giving the list to the Operations Section does not ensure that the equipment is acknowledged as on-site and available as a response asset.

In retrospect, the USCG appeared to see the SUPSALV assets as independent assets, outside of the ICS structure. A better phrase may be “standalone assets,” much like the Army and Air Force units operating in the area. While the USCG knew the Army units were operating in the area, they did not support them with the ICS support system and all of the forms, reports, and associated bureaucracy.

In trying to comply with ICS, SUPSALV gave the impression of not being independent and relying too heavily on the ICS staff to accomplish the aspects of the SUPSALV mission.

In reality, the USCG was looking for a totally independent asset that they could task without bogging down their own support structure. This begs the question of how independent is the SUPSALV pollution assets for offshore work? Clearly, the assets are not independent and self-supporting in an offshore environment, requiring vessel and tankage support through Navy or subcontracted assets. In the eye of the USCG, the options for providing the required support using the ICS model were too complex, especially when the perception was that by calling the SUPSALV assets into play they would receive a complete and independent package that could be simply tasked without the normal ICS bureaucratic formality.

In concert with this approach, SUPSALV needs to ensure that future taskings are specific, detailed, and mission-oriented before accepting the tasking. If the tasking is "phased," as was the Hurricane Katrina response tasking (i.e., deploy equipment to a forward marshalling area), a specific point of contact needs to be designated for subsequent taskings. In the Hurricane Katrina response, SUPSALV equipment sat idle in the remote staging area due to the fact that a specific operational area was not assigned before the equipment arrived at the staging area. When an operational assignment was finally specified in the lower Mississippi River and offshore, SUPSALV's equipment required extensive non-organic support to meet the tasking.

In future major responses, SUPSALV should consider sending military representation into the supporting DoD Joint Task Force Forward Command Post to better coordinate and support SUPSALV capabilities and requirements.

DOCUMENTATION

It is very important that both the contractor Project Manager and the SUPSALV representative maintain a complete daily log of all action.

Ensure that daily Situation Reports (SITREPs) are provided to all parties.

SECTION E – EQUIPMENT USED

System #	System Nomenclature	ESSM #	ESSM Nomenclature	Qty
Boat Systems				
P03100	Boom Handling Boat	WB0722	Boat, 24’ Boom Handling	6
P03200	Boom Tending Boat (Rigid)	WB0942	Boat, 18’ Boom Tending	2
P19900	Personnel Transfer Boats	WB0736	Boat, 24’ Rigid Hull Inflatable	1
Primary Skimmer Systems				
P16100	Rapid Deployment Skimmer System	SK0711	Skimmer, Oil, Sorb Belt, Mod 36’ Vessel (Class V)	3
P16100	Rapid Deployment Skimmer System	SK0712	Rack System, for SK0711	3
P16100	Rapid Deployment Skimmer System	OB0809	Bladder, Spill Recovery, 26K-Gallon, Type E, Rubber	3
Secondary Skimmer Systems				
P16200	Salvage Support Skimmer System	VA2220	Van, Salvage Skimmer System	1
Pumping Systems				
P17200	2” to 6” Submersible Hydraulic Pumping System	VA0280	Van, 2” to 6” Submersible Hydraulic Pump System	1
Pollution Containment Systems				
P19100	Oil Containment Boom System	VA0737	Van, Oil Containment Boom (USS-42HB Boom)	1
Support Systems				
P19300	Command Van	VA0727	Van, Command, 20’	
P19500	Personnel Bunk Van	VA0734	Van, Berthing	1
P19550	Personnel Bunk Van – Shipboard SOLAS	VA0735	Van, Berthing, Shipboard	2
P19600	Rigging Van	VA0010	Van, Rigging	1
P19700	Shop Van	VA0508	Van, Workshop	1
NA	Various	VA1987	Van, Container, 20' x 8' x 8' (Personal Protective Equipment)	1
Oil Recovery Systems				
P08100	Floating Hose System	VA2150	Van, Floating Hose System (Van 1 of 4)	1
P08100	Floating Hose System	VA2151	Van, Floating Hose System (Van 2 of 4)	1
P08100	Floating Hose System	VA2152	Van, Floating Hose System (Van 3 of 4)	1

System #	System Nomenclature	ESSM #	ESSM Nomenclature	Qty
P08100	Floating Hose System	VA2153	Van, Floating Hose System (Van 4 of 4)	1
Generator Systems				
NA	Various	GE0418	Generator, 5-kW, Dsl, 120/240-V ac, 1-Ph	3
NA	Various	GE0419	Generator, 4.5-kW, Dsl, 120/240-V ac, 1-Ph	1
NA	Various	GE0440	Generator, 25-kW, Dsl, Model CI4J-25	1
S12400	Generator, 20-kW, Dsl, 120/240/480-V ac, 1-Ph/3-Ph	GE0500	Generator, 20-kW, Dsl, 480-V ac, 3-Ph, Skid Mount	1
S12400	Generator, 20-kW, Dsl, 120/240/480-V ac, 1-Ph/3-Ph	GE0503	Ancillary Set for Generator GE0500/GE0500A	1
Field Support Gear				
NA	Various	PH1731	Phone, Satellite, Iridium Model M9505A	1
NA	Various	TR0020	Trailer, Lowboy, 40’ Drop Deck, 20-Ton	4
NA	Various	TR0928	Trailer, 32’ Drop Deck	2
NA	Various	TR0938	Trailer, 40' Flatbed	3
NA	Various	TR0940	Trailer, 44’ Drop Bed, w/Air Ride	1
NA	Various	TR0942	Trailer, 45’ Flatbed, w/Air Ride	2
NA	Various	NA	Printer	1
NA	Various	NA	Nextel Cell Phone	1

SECTION F – EQUIPMENT EVALUATION

RIGGING VAN

A/C in the Rigging Van was not operating upon arriving. Attempts to get it repaired determined that it was non-repairable. The Rigging Van will not have A/C unless a new unit or compressor is shipped to Baton Rouge. No replacement available in Baton Rouge.

TELEPHONES

Field personnel need to be better trained in the use of our different types of cellular/satellite phones.

Need to ensure that instruction manuals are issued with cellular telephones and satellite phones.

WORKSHOP VAN

Lights fell down from road trip.

BERTHING VAN

Refrigerator needs to be secured to deck; it came loose during shipment.

Electrical box needs locking device on door; stays open.

Eye wash station did not survive road trip.

BTB TRAILER

Trailer jack broke.

TRAILERS

Port Hueneme needs to do something different with its trailer PM, possibly more frequent? Tires should be changed out at some life cycle period. There were too many blown tires during shipment and some tires were over ten years old. Need to review the oddball-size wheels on some trailers and consider changing them to a standard size, since the odd-size tires are hard to find.

Each trailer needs a spare tire.

If the trailers are considered deployable pollution assets, they need to be put on the pollution IO and the PM schedule should be changed to reflect their criticality.

GPC SUBCONTRACTORS AND EQUIPMENT

The *NRC Defender* Task Force was assembled and adequate for the mission for which it was intended. However, it was never given a specific mission and was on standby the entire time.

PERSONNEL

APPENDIX A – PERSONNEL

Name	Position(s)	Organization
Bill Walker Ric Sasse	SUPSALV Representative	U.S. Navy
Ron Worthington Archie Hall	GPC Project Manager	ESSM Base, Cheatham Annex, VA
Mike Pricola Jerry Hollenbeck	GPC Project Manager	ESSM Base, Port Hueneme, CA
Craig Moffatt	GPC Field Project Manager, *NRC Defender* Task Force	ESSM Base, Cheatham Annex, VA
Jeff Coughlin	GPC Technical Support, *NRC Defender* Task Force	ESSM Base, Cheatham Annex, VA
Matthew Curlee	GPC Mechanic	ESSM Base, Port Hueneme, CA

Appendix B

HURRICANE KATRINA

VESSEL SALVAGE POLLUTION PLAN

APPENDIX B – HURRICANE KATRINA VESSEL SALVAGE POLLUTION PLAN

Objective: To provide assistance to the Salvage Group located at Incident Command Post (ICP), Alexandria, LA, in the prevention of oil pollution during salvage operations.

- Obtain copies of all pertinent information located at ICP Alexandria, Salvage Group.
- Obtain daily updates via e-mail from ICP Alexandria, Salvage Group.
- Create visual display chart with all salvage cases listed (along with other pertinent data); NOAA to provide display chart.
- Obtain list of cases deemed as priorities from ICP Alexandria Salvage Group.
- Establish communication line between ICP Alexandria Salvage Group and Fwd Command Post Baton Rouge (all available contact numbers, e-mail addresses).
- Identify resources available through Navy SUPSALV. ID locations, materials, costs involved, delivery times, and any pertinent special conditions/notes.
- Identify current salvage activities already in progress. Ensure adequate pollution prevention measures are in place.
- Identify current pollution prevention/recovery resources currently controlled by Salvage Group, Salvage contractors, and Salvage subcontractors.
- Identify who is responsible for reviewing pollution prevention measures when approving submitted salvage plans.
- Identify who is responsible for providing oversight for salvage operations and are they monitoring pollution prevention measures.
- Schedule familiarization overflight for SUPSALV/Vessels branch.

Develop and submit for approval final Vessel Salvage Pollution Plan.

CWO Harvey “Chris” Atkinson

OFFSHORE SPILL RESPONSE OPTIONS

APPENDIX C – OFFSHORE SPILL RESPONSE OPTIONS

OPTION 1 – SUPSALV EQUIPMENT ON DECK BARGE WITH SUPPORT VESSELS

Resource	Resource Name	Cost Per Day	Cost for Two Weeks	Notes
Deck Barge (tug, crane, and vessel included)	Signet Hercules	$30,275.82	$423,861.48	* See Below
Deck Barge Outfitting (securing containers etc.). Estimate 1 week outfitting & 1 week demobilization @ $1,000.00 per day ($14,000.00) in addition to Barge lease cost (2 weeks)***				
Accommodation Vessel (60 Bunks) (est. Fully Founded)	Coral Vision	$25,719.75	$360,076.50	** See Below
Temp Storage Platform	NRC Valiant	$8,253.75	$115,552.50	* See Below
Tug for the Temp Storage Platform		$6,123.75	$85,732.50	* See Below
SUPSALV & GPC Personnel labor & meals				
Option 1A – Manning 1 Class V Skimmer System		$12,452.80	$174,339.20	
Option 1B – Manning 2 Class V Skimmer Systems		$17,088.40	$239,237.60	
Option 1C – Manning 3 Class V Skimmer Systems		$21,724.00	$304,136.00	
Total Option 1A		$82,825.87	$1,159,562.18	
Total Option 1B		$87,461.47	$1,224,460.58	
Total Option 1C		$92,097.07	$1,289,358.98	
*** Add Barge mob (outfitting) & demobilization to 1A, 1B, or 1C		$437,861.48		

OPTION 2 – NRC OSRVS AND OSRBS

SUPSALV equipment remains in Baton Rouge staging for cost of two GPC caretaker personnel.

Resource	Resource Name	Cost Per Day	Cost for Two Weeks	Notes
NRC OSRV (with Skimmer crew)	Sentinel	$18,775.95	$262,863.30	* See Below **** See Below
NRC OSRB (with Skimmer crew)	Valiant	$14,462.70	$202,477.80	* See Below
Tug for OSRB		$6,123.75	$85,732.50	* See Below
NRC OSRV (with Skimmer crew)	Liberty	$18,775.95	$262,863.30	* See Below **** See Below
NRC OSRB (with Skimmer crew)	NRC Defender	$14,462.70	$202,477.80	
Tug for OSRB		$6,123.75	$85,732.50	* See Below
Bunk/Meal charges $60 Per Person (36 Skimmer crew)	OSRBs & OSRVs	$2,160.00	$30,240.00	*** See Below
Total cost for four OSRVs/OSRBs with Skimmers		$80,884.80	$1,132,387.20	
3 NRC systems to compare with 3 SUPSALV systems		$59,758.35	$836,616.90	

Option 2 provides comparable or greater capability as option 1C with quicker mobilization and demobilization, multiple site capability and generally greater flexibility at considerably lower cost.

This cost estimate is preliminary and dependant on availability of vessels. Cost of non-NRC vessels is subject to NRC 15% markup. Cost of NRC vessels is as presented. Option 2 with 2 OSRBs includes the *NRC Defender*, already on hire via SUPSALV/GPC.

* Per day plus fuel, lube and cordage.

** This is an estimated rate for a fully founded vessel. Actual cost received was for a bareboat charter assuming six-month duration. We are pressing the owners for specifics matching your terms.

*** Add barge mobilization (outfitting) and demobilization to 1A, 1B, or 1C.

**** Crew is two licensed captains, two unlicensed crew and a cook.

NRC DEFENDER TASK FORCE

APPENDIX D – *NRC DEFENDER* TASK FORCE

Two weeks after Hurricane Katrina made landfall, the Joint Operations Facility (JOF) at the ICS Command Post in the Clean Harbors, Inc. facility in Baton Rouge, LA, requested SUPSALV to contract for an Oil Spill Recovery Barge (OSRB) and support vessels to be on standby in the Mississippi River area in the vicinity of Venice, LA. SUPSALV requested GPC to provide these services. GPC contracted National Response Corporation (NRC) for their OSRB *NRC Defender* (see Figure 1), the berthing vessel *Utila Aggressor* (see Figure 2), and the tug *Angelica E* (see Figure 3). The *NRC Defender* Task Force was formed and placed on standby at the Bass Oil Refinery in Venice LA.

Figure 1. Oil Spill Recovery Barge *NRC Defender*

Figure 2. Berthing Vessel *Utila Aggressor*

Figure 3. Tug *Angelica E*

Appendix E

SUPSALV OFFSHORE SPILL RESPONSE CAPABILITY PROPOSAL

APPENDIX E – SUPSALV OFFSHORE SPILL RESPONSE CAPABILITY PROPOSAL

DRAFT
(1200 – 9/20/05)

Hurricane Katrina Response
SUPSALV Proposal for Offshore Spill Response Capability

Proposal Outline Page

1. Tasking: At approximately 1050 Saturday, 17 September 2005, Navy Supervisor of Salvage (SUPSALV) representative, Bill Walker met with CDR Cantin, Hurricane Katrina ESF-10 Maritime Operations Deputy Incident Commander, and members of his staff, to discuss employment of SUPSALV spill response resources deployed to Baton Rouge. CDR Cantin requested development of a proposal for positioning SUPSALV oil spill response resources, and appropriate support vessel(s) to sustain those resources at a to-be-determined offshore location in the Gulf of Mexico. The proposed mission, if approved, would be to provide a mobile, self-sustaining, spill response capability to address a large release of oil from an offshore oil platform, pipeline, or other oil infrastructure source. The potential Area of Operations (AOR) would be from the mouth of the Mississippi River, out into the Gulf of Mexico as far as Hurricane Katrina oil infrastructure damage might exist. The proposed capability would be provided under the Federal Agency Pollution Removal Funding Authorization (PRFA) Document Control Number: 28-05-295HYZK02, signed 10 September 2005 by CDR Laferriere. The SUPSALV task force would be self-supporting under the PRFA, with appropriate command and control communications links with USCG Incident Command.

2. Previous Tasking: At approximately 2205 on Wednesday, 7 September 2005, CDR Laferriere, Hurricane Katrina ESF-10 Maritime Operations Deputy Incident Commander, called Bill Walker

and SUPSALV contractor (GPC) representative Ron Worthington to the Incident Command Post and requested mobilization of SUPSALV spill response resources to the Clean Harbors, Baton Rouge staging area. Specifically, three Marco Class V skimmer systems with appropriate support vans, the SUPSALV (5000') Floating Hose System, all available berthing vans, and a suitable vessel to support remote river operations were requested.

Following the 2205 meeting, CAPT Wilkins, the Navy Supervisor of Salvage, approved issuance of a verbal delivery order to GPC to proceed with the requested mobilization, in accordance with SUPSALV procedures for emergency response. GPC mobilized personnel to the Emergency Ship Salvage Material (ESSM) bases in Williamsburg, VA, and Port Hueneme, CA, to prepare equipment for shipping, and arranged for trucks to arrive Thursday morning for pickup.

3. SUPSALV Resources Now on Scene: The following is a list of SUPSALV spill response equipment now in the Baton Rouge staging area:

- 3 each Marco Class V ("Five") Skimmer Systems
  - 36' vessel skimmer w/ 1300 gallon sump
  - 2 ea 300' legs of V-boom per system
  - 2 ea MonArk V-boom Tow Boats per system
  - 1 ea 26,000 gallon towed oil storage bladder per system
- Skimmer Support Systems
  - 1 Shop Van
  - 1 Rigging Van
  - 1 each 2-6 Pumping Van (see attached system inventory)
  - 2 each SOLAS 4-man bunk vans (USCG-approved for vessel use)
  - 1 each Shoreside 6-man Bunk Van
  - 3 ea Logistic support boats (1 ea 24' RHIB & 2 ea "Boston Whaler – type" w/ outboards)
  - Miscellaneous communications & personal protective equipment (PPE)
- 1 each Floating Hose 5,000' system (see attached system inventory)

4. Additional Requirements:

4.1. Offshore support vessel(s) - required to provide the following:

- Messing and berthing for up to 35 SUPSALV, contractor, and USCG personnel
- Communications suite to support command and control functions offshore (Satellite Phones / Fax / Email capability)
- Open deck area adequate to position three Marco Class V skimmers assembled, six MonArk tow boats, six V-boom pallets, 3 dracone bladders (in nets), shop van, rigging van, 2-6 pump van, cleaning van, consumables van and two 24' RHIBs (6,000 square feet), plus deck area for equipment assembly and decontamination station (12,000 total square feet, minimum)
- Crane to deploy 11-ton skimmer vessels and smaller towboats over the side (minimum 50 ton marine crane w/ man-lift capability – Billy Pugh?)
- 6,000 – 8,000# forklift (for unloading containers and positioning equipment on deck)

- Tie-down pads and chain-binders for all deck-loaded equipment
- Low freeboard and/or accommodation ladder to support small boat operations - sea state permitting
- Fenders to support large and small vessels alongside
- Recovered oil storage (minimum 15,000 barrel capacity)
- Deck manifold to receive recovered oil/water from skimmers and/or dracones & minimum 6,000# davit/boom/crane to lift dracone nose from sea.
- Helicopter deck

4.2. Additional SUPSALV Equipment (to support offshore operations)**:**

- 1 ea RHIB (In addition to the one in staging. We won't need the two "Whalers")
- 1 ea Debris Boat
- 1 ea Cleaning Van (To support a decontamination station on the primary support vessel)

4.3. Other Support Requirements:

- Helicopter on call for medical emergencies, logistics support, and skimmer spotting when responding to significant spills. (Era Aviation is the USCG BOA contractor and is affiliated with GPC subcontractor NRC – Era & NRC are owned by SEACOR). The Era representative advises of their network of offshore, rig-mounted helicopter pads with refueling capability throughout the Gulf of Mexico.

4.4. Proposed Manning: We propose having sufficient personnel with the offshore skimmer systems to operate one or two of the three Class V skimmer systems (per USCG direction to be provided) and flying in additional personnel in the event of a major oil release.

5. Alternative Support Vessels for Offshore Response:

5.1. Navy Landing Ship Dock (LSD)

During Operation Iraqi Freedom the Navy amphibious ship USS COMSTOCK (LSD-45) served as a support platform for three SUPSALV Marco Class V skimmer systems. Operationally, this is the preferred option, meeting all above requirements with the possible exception of recovered oil/water storage. If an assigned LSD is not willing to put recovered oil/water in dedicated tank(s), an accompanying tank barge will be provided. The LSD offers the unique capability of supporting skimmers and towboats in a well deck as indicated in the above photographs. This removes the requirement to deploy and recover the 36' long, 11-ton skimmer vessel between the weather decks and the sea surface by crane, thereby providing a safer, higher sea state response capability.

USS ASHLAND (LSD-48)

LSD Welldeck

Skimmers in welldeck - LSD ballasted down aft

Marco Class V Skimmer System with COMSTOCK

We are advised that the LSD is to be considered only if acceptable commercial platforms are not available. If this is the case, the Incident Commander can request USCG District Eight initiate a Request for Forces (RFF) to the Hurricane Katrina Joint Field Office (JFO). If approved, the RFF will be passed to the Defense Coordinating Office (DCO) for action.

5.2. Pre-configured Commercial Vessel

GPC/NRC/SEACOR is attempting to identify available commercial vessels, self-propelled or barge/tug combinations, meeting the support requirements identified above. An example of such a vessel is the Crowley Marine Barge 450 indicated below in a moored status during Ehime Maru recovery operations off Oahu, Hawaii in 2001.

"Pre-Configured Commercial Vessel" - Crowley Marine Derrick / Work Barge 450

There are a wide variety of such vessels, especially in the Gulf of Mexico, and elsewhere but availability is questionable during the current Hurricane Katrina recovery operations. If such a work barge can be identified with adequate recovered oil/water storage, having all personnel and operations supported from a single platform offers many advantages. Perhaps the greatest advantage is minimizing the requirement to transfer personnel between vessels for messing, berthing, etc.

5.3. Purpose-Configured Commercial Deck Barge with Tug

A large available deck barge could be configured as a work barge to transport, launch, and recover skimmer systems with a portable deck-mounted crane of adequate capacity. Configuring, outfitting, and inspecting such a work barge to meet regulatory requirements could be time consuming, and all personnel support (messing, berthing, etc.) would likely have to be provided by a separate platform, requiring frequent personnel transfers that could be difficult and delayed due to sea state conditions.

The photographs below indicate a deck barge leased and configured as a work barge in Singapore for the USS MISSISSINEWA oil removal operation at Ulithi Atoll in the Pacific Ocean in 2003. USCG regulations for US waters would preclude some of the configurations and operations indicated below.

Deck Barge FELS-20 specially configured as a work barge

FELS-20 as a work platform in a 6-point moor

5.4. Commercial OSRV / OSRB Combinations

We will also propose an option of combinations of commercially available OSRVs and OSRBs that does not involve employment of SUPSALV ESSM spill response systems. NRC has two OSRVs and one OSRB, in addition to the OSRB "Defender" currently on hire via SUPSALV for a minimum of two weeks. Any one or combination of the NRC resources may be hired under an amended SUPSALV PRFA with SUPSALV and GPC management support, or via another contractual mechanism external to the SUPSALV PRFA.

Support vessel options and SUPSALV recommendations will be presented to USCG as soon as one or more suitable options are identified. A rapid decision may be required to secure the resource(s) before otherwise engaged.

6. Logistics Plan

- Be self-sufficient, independent of USCG Baton Rouge Incident Command to the extent feasible, but keep Operations Section Chief advised of status of preparations and operations.
- Provide professional vessel inspection of vessels chartered to document pre-lease conditions.
- Select port facility where support vessel(s) are to be loaded out with required equipment – Facility selection dependent on characteristics of vessel(s) hired (e.g. vessel draft), cost, and time considerations. (Weigh pros and cons of New Orleans site against those of more remote sites).

- Identify SUPSALV Emergency Ship Salvage Material (ESSM) equipment to be mobilized from Baton Rouge staging area - currently all but:
    - Floating hose system (4 vans)
    - 2 ea 18' Boston Whaler-type boats

- Salvage Skimmer Van – mobilized to support Navy salvage operations, on space-available basis when ESSM spill response equipment mobilized.
- 2 ea SOLAS & 1 ea Shore bunk vans – unless needed for offshore platform(s)

The above resources not mobilized are to remain in the Clean Harbors staging pending further direction.

- Identify source of tractors & trailers to move designated equipment from the Clean Harbors staging area to a designated load out site. The below list may be adjusted depending on characteristics of support vessel(s) selected. All "Vans" are standard 20'x8'x8' or 20'x8'x8.5' ISO shipping containers. Need three (3) tractors **with trailers** for the following loads:
  - Trailer #1 – 1 ea 2-6" Pump System Van (20'x8'x8', 25,000#)
    1 ea Consumables Van (20'x8'x8', 7,500#)
  - Trailer #2 – 1 ea 24' MonArk Towboat (24'x8'x8.3', 10,000#)
    1 ea 24' RHIB (30'x 10'x8', 7,000#)
  - Trailer #3 – 2 ea MonArk Towboats (24'x8'x8.3', 10,000# each)
  - *Only if needed offshore:* 2 ea SOLAS Bunk Vans (20'x8'x8.5', 19,200#)

  Need **"bobtail" tractors** (without trailers) with an additional 10 chain binders per tractor, to move the following trailers:
  - Trailer #4 - Skimmer 01 center module (36'x8'x9', 16,000#)
    4 ea small (4-5kw) generators (est. 4'x8'x3', 500# total)
  - Trailer #5 – Skimmer 01 sides & ancillaries (32.5'x8'x8', 22,000#)
  - Trailer #6 - Skimmer 91 center module (36'x8'x9', 16,000#)
  - Trailer #7 – Skimmer 91 sides & ancillaries (32.5'x8'x8', 22,000#)
  - Trailer #8 - Skimmer 92 center module (36'x8'x9', 16,000#)
  - Trailer #9 – Skimmer 91 sides & ancillaries (32.5'x8'x8', 22,000#)
  - Trailer #10 – 2 ea MonArk Towboats (24'x8'x8.3', 10,000# each)
  - Trailer #11 – 1 ea MonArk Towboat (24'x8'x8.3', 10,000#)
    1 ea Command Van (20'x8'x8', 9,200#)
  - Trailer #12 – 1 ea Shop Van (20'x8'x8', 22,000#)
  - Trailer #13 – 1 ea Rigging Van (20'x8'x8', 14,000#)

- Determine (w/trucking company) any road/load limitations for best route from Clean Harbors Staging to Load out site.
- Arrange MHE to load trailers at the Clean Harbors staging area – 50-ton crane or 30,000# forklift.
- Arrange MHE to offload trailers, unload some vans and position loads on support vessel(s) at load-out site – At least one 6-8,000# forklift, **and** one 30,000# forklift, **and** one 50 ton or greater crane, depending on characteristics of support vessel(s) and self-loading capability.
- Coordinate with trucking company and MHE supplier to have resources in place to move designated equipment from the Clean Harbors staging to vessel(s) efficiently and cost effectively. Consider available lay-down area at load-out site and coordinate move accordingly (i.e. don't get more trucks to load-out site than can be handled at one time.)

7. Concept of Operations

- Manning (in addition to vessel operating crews):
  - USCG liaison at USCG discretion
  - Navy SUPSALV Project Manager (Military 04 if Navy support vessel assigned)
  - Navy Contractor (GPC) Project Manager
  - Subcontractor (NRC) Manager – as assigned
  - Foremen, equipment operators, mechanics
- Command and Control: The on-scene SUPSALV representative will direct task force operations via the GPC Project Manager per ICS-204 or alternate direction received via an embarked USCG liaison or direct with USCG ICP Operations Section. If a US Navy ship is assigned, SUPSALV will coordinate with Navy chain of command to identify to Navy On-Scene Commander for USCG. Based on our understanding of USCG direction, we will not provide SUPSALV or GPC representatives at the Baton Rouge Incident Command Post.

Organization Chart to be developed

- Communications: The SUPSALV task force will ensure satellite telephone, fax, and internet connection for email is available offshore for communication with USCG ICP. A daily SITREP will be provided as a minimum, and ability to pass ICS forms will be available. Additional radio communication links (VHF, HF, etc.) to be determined.
- When vessel(s) is/are loaded, provisioned, and personnel embarked, SUPSALV will report to Incident Command Operations Section Chief and await further direction. We understand the vessel / task force is to be positioned to provide spill response standby in the Gulf of Mexico where Hurricane Katrina damage to offshore oil infrastructure is anticipated.
- Once operational and pending further direction, SUPSALV will direct optimum positioning of equipment on support vessel(s), revise operational procedures as required by vessel configurations, conduct appropriate safety briefings, and initiate equipment deployment and on-water crew training as required.

8. Site Safety Plan - TBD

9. Timeline for Mobilization – TBD

10. Estimated Cost – See attached preliminary Offshore Spill Response Options with estimated cost. Cost to be refined.

[Not part of Proposal] - Other Considerations for SUPSALV / GPC Planners:

- Consider "Defender" as recovered oil storage & high capacity Marco Class XI
- Sorbents
- Fresh Crude Oil - Air Monitoring, Qualified Safety Professional (IH), Respirators, Dosimeters
- EMT(s)
- Dispersants & Application Capability
- Current Buster (??)
- USCG (?) – Dracone offload pump adapters
- Put together plan & equipment for offloading dracones to tank vessel.
- Consider single vessel concept or other means of limiting requirement for personnel vessel to vessel transfers

Appendix F

SUPSALV HURRICANE EVACUATION PLAN

FOR RESPONSE ASSETS LOCATED

AT BATON ROUGE STAGING AREA

APPENDIX F – SUPSALV HURRICANE EVACUATION PLAN FOR RESPONSE ASSETS LOCATED AT BATON ROUGE STAGING AREA

Equipment:

All SUPSALV spill response assets currently located at the Baton Rouge staging area shall remain on site. SUPSALV contractor personnel will contract with a local trucking company for a tractor to move all of the SUPSALV assets into one location. The assets will be placed in as tight of a footprint as possible to minimize any wind damage. Assets that are smaller in size shall be placed within the footprint of the larger equipment. SUPSALV is not concerned with damage from water.

Personnel: (Total of 4)

SUPSALV personnel (2) at the Baton Rouge Command have two options for evacuation sites. SUPSALV personnel can accompany the Command to Texarkana if it is deemed necessary to have SUPSALV personnel at the evacuation site. If it is not necessary to have SUPSALV personnel on site in Texarkana, arrangements have been made for SUPSALV personnel to evacuate to the Alexandria site. SUPSALV personnel would provide Baton Rouge Command personnel with phone numbers to remain in contact. SUPSALV forward deployed personnel (2) on board *NRC Defender* will evacuate in accordance with the vessel Captain's plans.

Ric Sasse

SUPSALV Representative

DEMOBILIZATION OF PRESTAGED SUPSALV EQUIPMENT AT FOB BATON ROUGE

APPENDIX G – DEMOBILIZATION OF PRESTAGED SUPSALV EQUIPMENT AT FOB BATON ROUGE

U.S. Department of Homeland Security
United States Coast Guard

Federal On Scene Coordinator
U.S. Coast Guard
FOB Baton Rouge

C/O Clean Harbors Inc.
13351 Scenic Highway
Baton Rouge, LA 70807
Phone: (225) 778-3621
Fax: (225) 778-3553

16465
21 Oct 2005

MEMORANDUM

From: Incident Specific FOSC @ FOB Baton Rouge

To: William A. Walker, Navy Supervisor of Salvage and Diving

Subj: DEMOBILIZATION OF PRESTAGED SUPSALV EQUIPMENT AT FOB BATON ROUGE

Ref: Pollution Removal Funding Authorization (PRFA) dated 10 September 2005

1. As per ref (a), this memo is an official request from FOB Baton Rouge to demobilize Navy Supervisor of Salvage equipment beginning 24 Oct 2005 unless otherwise directed. Due to demobilization of commercial resources from Katrina related responses and their return to normal standby status, the Unified Command has determined that maintaining the equipment on site is not required for current or future response objectives.

2. The assistance and responsiveness provided by Navy SUPSALV was greatly appreciated and serves as a reminder to the excellent cooperation our agencies share. If you need any assistance in coordinating this effort, please contact my Planning Section Chief at (225) 778-3592.

#

PHOTOGRAPHS

APPENDIX H – PHOTOGRAPHS

Figure H-1. Hurricane Katrina Left These Two Boats Blocking a Highway

Figure H-2. Barge Grounded by Hurricane Katrina

Figure H-3. Aerial View of Barges Stranded on the Mississippi River

Figure H-4. Crane Unloading BHB from Truck Bed

Figure H-5. BTBs and BHBs in the Staging Area

Figure H-6. Helicopters on Standby

Figure H-7. U.S. Army High Speed Vessel on the Mississippi River

Figure H-8. Crane on Barge Launching the Skimmer

Figures H-9 and H-10. Boats Left High and Dry by Hurricane Katrina

Figure H-11. Barge *NRC Defender* Being Pushed by Tug Boat *Angelica E*

Figure H-12. Boats Tangled Up by Hurricane Katrina