THE RESPONDER
TEXAS GENERAL LAND OFFICE • GEORGE P. BUSH, COMMISSIONER
OIL SPILL PREVENTION AND RESPONSE PROGRAM • APRIL 2016

A Not So Merry Christmas

On December 12, 2015 General Land Office Senior Response Officer (SRO) Al Oswalt was notified of a spill by the Corpus Christi Fire Department. Oswalt responded with U.S. Coast Guard personnel and found a discharge of oil from a recreational vessel that caught fire, burned, and sank in three feet of water off of the Intracoastal Waterway near the entrance to the North Padre Island canals. The vessel, named *Miss-B-Haven*, was a 52 foot long Sea Ray owned by residents of nearby Corpus Christi.

Oswalt contacted the owners of the *Miss-B-Haven* and arranged to meet them at their residence to develop a plan to remove the vessel from coastal waters. The owners had insurance on the vessel. Tow Boat U.S. deployed absorbent boom around the vessel to contain the sheen that emanated from the wreck. The insurance company was contacted and arrangements for salvage and removal began.

What was left of the *Miss-B-Haven*.

The salvage company hired to remove the vessel was Land and Sea Marine from the Houston area. Land and Sea Marine contracted with Derrick Construction to have a crane barge brought on site to assist in removal operations. The entire lift operation took approximately an hour from start to finish. All debris was removed from the site by Land and Sea Marine personnel.

A crane was used to load the damaged vessel on to barge.

The hull and engines were all that remained of the vessel *Miss-B-Haven* after the fire. The vessel superstructure burned completely to the waterline. The vessel had 400 gallons of diesel on board at the time of the incident but the fuel was observed burning off from the fuel tanks. It was determined that the cause of the fire and subsequent sinking was an electrical short. The vessel had recently been outfitted with underwater lights on the hull. When the lights were turned on, an electrical "buzzing" sound was heard, and then smoke filled the cabin. The owner tried to extinguish the flames to no avail.

No persons were injured in the resulting fire and the owners were rescued by passing boaters.

OSPRA Marks 25 Years

March 28th marked the 25th anniversary of the Oil Spill Prevention and Response Program at the Texas General Land Office. In a ceremony at the Texas Capitol attended by the House and Senate bill sponsors and then-Land Commissioner Garry Mauro, Governor Ann Richards signed the Oil Spill Prevention and Response Act of 1991 (OSPRA), which designated the Texas General Land Office as the lead state agency for coastal oil spill prevention and response. The firm foundation laid by the passage of OSPRA has had a dramatic and positive effect on the Texas Coast. We thank our partners for their support and look forward to a long future protecting our coastal resources.

Greg Pollock
Deputy Director
Oil Spill Prevention and Response Program

Region 5 Helps with Plant ID Project

In November, Robb Muil and Tony Belton of the Region 5 office, based in Port Lavaca, helped researchers from the University of Texas' Bureau of Economic Geology conduct an airborne hyperspectral survey of Espiritu Santo Bay to map mangrove distribution. Hyperspectral imaging is used to collect and process information across an electromagnetic spectrum. Spectral imaging divides the image into more color bands that the human eye is able to see.

GLO staff helped Bureau of Economic Geology staff use portable hyperspectral imagery in conjunction with an aerial unit provided by the Texas Department of Transportation flying at approximately 2,500 feet to confirm the hyperspectral signatures on 400 wave length channels at key field mangrove sites in Espirtiu Santo Bay.

The data that has been acquired and analyzed using the hyperspectral survey can be used automatically to identify mangroves and map their distribution on the central Texas Coast.

The GLO assists with study of shoreline characteristics movements.

65-Foot Towing Vessel Sinks in Remote Area

The Texas General Land Office Oil Spill Prevention and Response Division is prepared to respond to any oil spill along the Texas coast on a 24/7 basis. However, the remoteness of some areas can pose a response and logistical challenge.

This was the case in October, 2015. Early on a Saturday morning, the GLO Region 4 Oil Spill office received a call reporting a sunken 65' towing vessel in a remote area, off the Arroyo Colorado. After arriving on scene on the outskirts of Harlingen and San Benito, the GLO and USCG conducted a rapid assessment and observed heavy amounts of red dye diesel being discharged though the sunken vessel's port side vents.

After briefing the vessel's owner on the status of the situation he notified a spill contractor – CRRC, which has an office and warehouse on the north side of Harlingen. This quickened their arrival time to the remote dock and prevented additional diesel from contaminating a much larger area. Within a few hours of notification, the vessel was boomed off with 600' of 18" containment boom and vacuum trucks arrived on scene to begin skimming operations.

After several hours of skimming and recovery operations with truck hoses and absorbent material, the workers were making slow progress and only a minimal amount of product had been recovered. With cleanup operations continuing, a planning meeting was conducted with State, Federal, RP and cleanup contractor reps and the decision was made to utilize the GLO 460 drum skimmer trailer, which contains the only drum skimmer in the Region 4 area from Brownsville to Port Mansfield.

The GLO Drum Skimmer in action.

With the amount of product in the water rapidly approaching the 1,000 gallon mark, the drum skimmer was the only type of skimming device that could efficiently recover the diesel fuel from the affected areas. Approximately six hours into the cleanup operation the GLO 460 response trailer arrived on scene and the drum skimming unit along with diesel power packs were deployed by GLO and CRRC representatives.

After strategic placement of boom, skimmers and power packs, they started skimming operations before nightfall. With spill contractor CRRC operating the drum skimmer throughout the evening hours, over 1,000 gallons of diesel fuel was efficiently and effectively recovered from the dock and turning basin area, thus preventing further contamination of sensitive areas. The spill cleanup continued at three separate cleanup divisions and approximately 300 gallons of additional product was recovered within the next day and a half. Because of the remoteness and sensitivity of the area, the containment boom and absorbent material remained around the sunken vessel until a salvage company could be brought in to raise the vessel.

"Although the Arroyo Colorado posed a challenge to all responders logistically, the ability to maintain a safe, rapid and efficient operation is a credit to everyone's preparedness and teamwork," said GLO Area Manager Raymond Oliveira.

The sunken tugboat *Libra.*

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Report oil spills
800.832.8224
24 hours

The Responder is published by the Texas General Land Office. Questions and comments may be submitted to Debbie Saenz via email at debbie.saenz@glo.texas.gov or by phone at 512.475.1466.

Abandoned Vessels Removed from Lower Texas Coast

The removal of derelict vessels and structures along the Texas coast is beneficial to both the environment and the State of Texas. Removal of these eyesores aids in the beautification of our rivers, beaches, marinas, and harbors. Abandoned vessels are a public health threat and can serve as dumping grounds for less environmentally-conscious members of the public. By removing abandoned vessels from our waters we help lessen the threat of oil pollution that often comes from unattended and unwanted vessel tanks, fuel lines, engines, and bilges.

In late 2015, the General Land Office (GLO) Oil Spill Prevention and Response Program (OSPR) Region 5 office in Port Lavaca received final approval to remove and dispose of two nuisance vessels. A contract was awarded for the removal of *Miss Sand Dollar*, a 50 foot long steel-hulled barge, and *Texcor*, a 46 foot long tug boat. This has been a long awaited operation and the removal of these two vessels aided in restoring the natural flow of the Colorado River in Matagorda.

The GLO continues to remove abandoned vessels from Texas waters.

The problematic history of the *Miss Sand Dollar* began in December 2007 when the barge caught fire and sank, causing a small spill. The barge was refloated at the owner's expense only to sink again in 2011, where the vessel remained until its removal in 2015. The 46 foot tug boat *Texcor* sank in 2008, causing a spill. It was refloated at the owner's expense and remained tied to its moorings until its removal in 2015.

The removal of these two vessels began on November 18, 2015 and was completed on December 22. As a result, approximately 9,000 pounds of steel was removed from the Colorado River and Texas coastal waters. The operation was completed with the use of a deck barge, a work barge, and a crane. The tools used by the crane included a drop chisel and a grappling claw. The drop chisel was suspended in the air from the crane cable and was allowed to free fall onto the barge. The weight of the drop chisel accompanied with its hardened blade allowed it to cut through the steel. This process created smaller, more manageable pieces that were removed by the grappling claw and placed on the deck barge.

More than four tons of steel were removed from Texas coastal waters.

Callan Marine secures the vessel for removal.

In October of 2015, the OSPR Region 3 office, based in Corpus Christi, contracted Callan Marine to remove a total of 14 derelict vessels from coastal waters. The abandoned boats were located between Mesquite Bay, located behind the Aransas National Wildlife Refuge and the Laguna Madre, north of the mouth to Baffin Bay. The vessels ranged in size from 14- to 35-feet in length, and consisted of aluminum, fiberglass and wooden hulled recreational and fishing vessels

An abandoned vessel in the Laguna Madre.

The Scope of Work for the project required removal and proper disposal of the vessels and all associated debris, per GLO standard operating procedures. Special attention was given to the protection of sea grass meadows, and damage to these unique subtropical habitats was avoided. Vessel removals were coordinated with the GLO – Asset Management Corpus Christi office to ensure protection of natural resources. Notification and coordination between Callan Marine and the OSPR Region 3 office was required before commencement of any removal operations. GLO – OSPR personnel monitored vessel removal operations and were prepared to respond to any discharge of oil that may have resulted from the removals, while the GLO Asset Management Division coordinated and monitored coastal habitat issues and preservation. Once the removal operations were completed GLO – OSPR personnel patrolled the area to verify the complete removal of the vessels and associated debris. Removal and disposal of the vessels and all associated debris was conducted in accordance with all applicable Federal, State, and local laws, rules, regulations, statutes, and ordinances.

The GLO Derelict Vessel and Structure Program has proven itself to be invaluable for the removal of steel structures, and vessels from coastal waters of the State of Texas, making our waterways cleaner and safer for commercial, pleasure, and industry travel along the coast.

GLO Conducts Port Mansfield Exercise

For three days in October, 2015, General Land Office Oil Spill Prevention & Response (GLO-OSPR) personnel based in Port Lavaca, Corpus Christi, Brownsville, and Austin met in Port Mansfield to conduct oil spill response related field training. As oil spills can happen at any time, it is important for OSPR staff to stay sharp and proficient in the use of state-owned spill response equipment. The multipoint training exercise included annual re-qualifications on GLO boats, an interoperability exercise to test the ability of the GLO to communicate both internally and with partners in a remote location, GLO spill response equipment deployment and training, and a refresher on spill response basics and the role of GLO Response Officers (ROs) during spill response.

Jay Veselka, Raymond Oliveira, Steve Buschang and Mike Janskowski.

The GLO has vessels ranging from air boats that are ideal for shoreline assessments, small propeller boats for use in bays, and larger boats that give the GLO the ability to assess and respond offshore. Every year, ROs undergo an operations refresher for all GLO vessels to ensure appropriate skill levels are maintained. The afternoon of the first day consisted of vessel training.

On day two, ROs were assigned to teams and provided with a boat. Exercise controllers gave each team a Geographic Response Plan (GRP) in the form of an ICS 204 form. Each GRP identifies an environmentally sensitive area located within the nearby Laguna Atascosa National Wildlife Refuge (LANWR) that would be a priority to protect in the event of a spill. Each GRP provides site information such as location, nearest boat ramp, contact numbers, specific protection areas, and photographs.

ROs used GLO-owned boom and skimmers to complete the objectives of the GRPs provided, noting deployment times and efficiency of the strategies provided. One GRP focused on the entrance of El Realito Bay and the other GRP focused on the entrance of Rincon Bueno Vista, both highly sensitive areas located within the LANWR.

1,000 feet of boom was deployed.

The GLO mobile Command Post is a 35-foot long communications trailer outfitted with satellite that can provide internet and phone capabilities in remote areas where conventional cellular systems are limited. The Command Post also provides access to two cellular networks and has radios with UHF, VHF, 700 Mhz, and 800 Mhz interoperable capabilities that meet statewide standards for response to any natural disasters. The Command Post is also equipped with satellite TV to access real time news and weather. The trailer served as the Incident Command Post (ICP) for the exercise.

Incident Command successfully injected deflection booming objectives to the Division Supervisors with the intentions of testing both the ROs and communications capabilities of the Command Post, which was located 15 miles from the booming operations being conducted by field personnel. Communications between GLO and LANWR were also successful.

Exercises such as the Port Mansfield training are essential in maintaining the level of excellence that has become expected of the program throughout the state.

The GLO team.

You Deserve to be Recognized! Submit Your Nomination for the 2015 OSPRA Environmental Excellence Award

Since 1996, the Texas General Land Office (GLO) has honored others that make significant contributions to the protection and preservation of our Texas Coast. The OSPRA Award recognizes individuals, small and/or large organizations representing all sectors of Texas coastal industries that make significant contributions to environmental protection. Successful nominees must showcase their best practices to preserve the clean and natural beauty of the coast from January 1, 2015 to December 31, 2015.

Nominees include Government, Education, Industry, Nonprofit Groups, Public Agencies, Vessel Operators, Oil Handling Facilities, Contractors, Consultants, Spill Response Organizations, Suppliers, Marinas, Shipyards, Educational Organizations or Institutions, Research Organizations, Spill Response Cooperatives and other organizations that meet the award criteria.

Winners of this year's prestigious OSPRA Award will be chosen by a panel appointed by the GLO. Awards will be presented to the winner's at a venue of their choice and include media coverage, industry press releases, social media announcements and numerous opportunities for publicity and public recognition.

Application and award criteria are available via our website at glo.texas.gov/oilspill or can be mailed directly to you.

Deadline to submit an application is May 12, 2016

For more information please contact Debbie Saenz at 512-475-1466 or debbie.saenz@glo.texas.gov

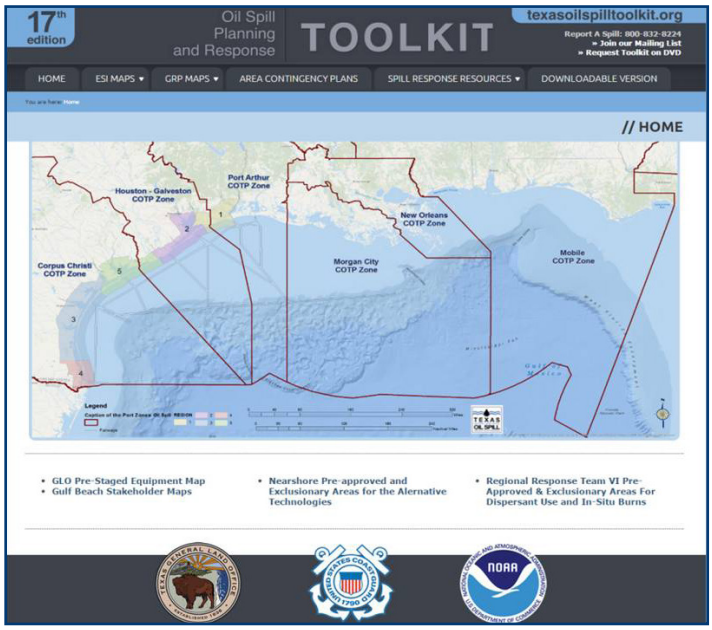
Latest Texas Coastal Oil Spill Planning and Response Atlas and Toolkit Now Available!

Abraham Lincoln once said "Give me six hours to chop down a tree and I'll spend the first four sharpening the axe". The Texas General Land Office knows that planning is vital, and now the GLO is proud to announce the 17th Edition, 2015 Coastal Oil Spill Toolkit, the ultimate oil spill planning and preparation resource!

The Toolkit is the one-stop-shop resource used by local, state and federal agencies, as well as industry, to ensure a coordinated response to oil spills. It provides all this information in a single, easy to use, stand alone format. The Toolkit's objective is to identify all existing vulnerable and sensitive natural resources, as well as socioeconomic and human-use features like water intakes, boat ramp, access points and heliports. The Toolkit includes tools and documents such as stakeholder maps, Priority Protection Areas (PPA), pre-approval area maps, and approved plans such as the National Contingency Plan and Area Committee Plans from the Rio Grande to the Florida Panhandle, Regional Response Team (RRT) documents and guidance, site specific response plans, job aids and manuals, checklists and guidance documents and much, much more!

The Toolkit is updated annually in DVD and Flashdrive format and continually throughout the year in its on-line version. It is available on-line at http://www.glo.texas.gov/ost/. This year we have produced 2,500 hard copy Toolkits are also produced in DVD and Flashdrive format and distributed free for the asking at http://www.glo.texas.gov/ost/toolkit-request/index.html.

A download version is available with continually updated versions available throughout the year at http://www.glo.texas.gov/ost/toolkit-request/index.html



SRO II Craig Cook Earns Distinguished Service Award

Senior Response Officer II Craig Cook was awarded the Oil Spill Program Distinguished Service award at the Oil Spill Training Academy this February for outstanding performance in developing and leading the innovative Vessel Turn-In Program (VTIP).

Recognizing the risks abandoned and derelict vessels present, Senior Response Officer II Craig Cook put together a team that included the General Land Office Oil Spill Program, Texas Parks and Wildlife and Galveston County. They developed a pilot project that would address the persistent abandoned vessel problem in the County. The partnership resulted in the Vessel Turn-In Program, or VTIP.

Each of the three partners made substantial contributions to the program's success. Galveston County promoted the event and utilized county equipment at a county park staging area to crush the vessels and transport them to the landfill. The GLO Oil Spill Program funded the removal and disposal of the pollutants in the vessels. TPWD developed the protocol for VTIP and helped streamline processes to clear the vessels prior to destruction.

Overall, 25 vessels were processed for disposal, which resulted in a cost savings of just over $95,000. The event was also an excellent public outreach and education opportunity for the residents of Galveston County. Another VTIP event held with the City of Galveston resulted in 14 vessels being removed.

Oil Spill Prevention and Response Deputy Director Greg Pollock presents the Distinguished Service award to Senior Response Officer Craig Cook.

The VTIP program is a fantastic example of using our respective strengths to solve a problem.

Find the GLO on Facebook, Twitter and Instagram!

Beach Patrol Provides Results

When most people think of an oil spill, Deep Water Horizon comes to mind with images of oil washing up on impacted tourist beaches. Others may remember *The Eagle Otome* which shut down the Sabine Neches Waterway in Port Arthur in 2005 while still others have images of the Texas City "Y" spill and its impact on the people of Galveston in 2014.

But, what happens when there is an oil spill and no one is around?

The Texas General Land Office Oil Spill Prevention and Response Region 1 office in Nederland is responsible for vast remote areas in Jefferson, Orange and Chambers counties. One such area is the 20-mile stretch between Sabine Pass and High Island known as McFaddin Beach.

To the north of the beach is McFaddin National Wildlife Refuge, a coastal prairie and marsh with 58,861.43 acres of fish and wildlife habitat. Alligators, waterfowl, muskrats, river otters, bobcats, flounder, red drum and a host of other creatures have thrived in the remote refuge.

The morning of Tuesday, March 22, 2016 was a cool 65 degrees. The skies were overcast with southward winds of 15 to 20 knots. At the beach, the seas were three to six feet. JT Ewing, Region 1 Manager, decided it was a good day to lead three new Response Officers on a field training patrol along McFaddin Beach. Ewing along with Eric Robertson, Kevin Landry and Mark Underhill headed west along the beach in four wheel drive off road utility vehicles (UTVs).

Riding in the soft sand above the high water mark the team made slow progress in search for anything unusual when Ewing suddenly shouted, "turn around!" His teammates turn the vehicles along with their heads in search for what they had missed. "There", he pointed, 25 yards up on the beach was a large tan square tan "pillow" that was almost indistinguishable from the sand. Parking the UTVs they walked to close the last 20 yards. As they neared, the smells of diesel filled the air and then, beside the 8-foot by 8-foot pillow were red stains. "Yep", said Ewing, "just what I thought, it's a marine fuel bladder ... seen them before." Six less experienced eyes had completely missed the bladder.

The fuel bladder was bottom side up, thus hiding the fill valve and labeling. The physical description allowed it to be identified as a Petro-Flex brand. These rubberized fabric bladder tanks are available in standard and custom sizes and volumes for offshore boats. They are advertised to store Gasoline, Gasoline/Ethanol Blends, Diesel, Bio-Diesel, 100% Ethanol and Bilge Fluids. Somehow, this one washed ashore and was leaking red dye diesel (by law, this dyed fuel is only for use in off-road vehicles, boats, farm tractors, heavy construction equipment, and generators) threatening a dynamic and sensitive ecosystem.

Pumping diesel into containers.

The team ended the patrol early to make required notifications to the General Land Office Spill Line, the National Response Center Spill Line, the McFaddin National Wildlife Refuge and U.S. Coast Guard Marine Safety Unit (MSU) in Port Arthur. Working response partners raced to formulate the proper response strategy, which would start the following morning.

Emptying the fuel bladder with a diaphram pump.

By the time they had returned to the Region 1 office Ron Gaspard, one of two Senior Response Officers, had coordinated the response with various officials at MSU Port Arthur. As the spill was on federal refuge property, it was decided MSU Port Arthur would lead the federal response to the oil spill and fund the cleanup in accordance with the Oil Pollution Act of 1990 (OPA).

If the bladder was completely breached an unknown amount of diesel could be released into the sensitive environment, causing catastrophic damage and triggering huge cleanup costs and related damages. MSU Port Arthur selected OMI Environmental Solutions (formerly Oil Mop) as the contracted discharge cleanup organization to take the challenge.

On Wednesday at 7:00 a.m. a coastal small craft advisory went into effect as the team met along the beach. Petty Officer Paul Sanders was the federal on-scene coordinator's representative for MSU Port Arthur. He was joined by Ensign Christine Melancon. James (JR) Howart, Darren Ford and Jessie Pelt made up the experienced OMI team.

They were outfitted with two UTVs and two trailers with a diaphragm pump, air compressor and steel storage drums for the diesel and waste. Following a safety briefing, all began the five mile journey west to the spill site. Once there, a small slit was made in the bladder and a suction tube inserted. By 10:00, nine drums had been filled with 40 gallons each and transported over the sand back to the main staging area.

The empty bladder was then folded and inserted into a drum while absorbent pads were used to clean small pools of diesel. The main task accomplished, everyone now looked at the diesel stained depression in the packed sand and wondered, what now? JT spoke up first, "use the pump to fill it with water from the marsh".

As the water level increased, small droplets of diesel rose to the surface where absorbent pads could be used to remove it. In time, some three additional gallons of diesel were recovered using this method. As local rain was forecast for later that evening, absorbent boom was placed and anchored around the depression. As an added precaution, a sump trench was dug on the Gulf side of the depression and it too was filled with absorbent boom to capture any diesel that may migrate from the site.

Later research suggested the marine fuel bladder may have been driven ashore during a coastal flood advisory on March 8, 2016. Overall, over 300 gallons of diesel were successfully removed from the beach and proved once again, when it comes to oil spill response, diligence, timely intervention and experience can avert potential disaster.

Phillips 66 Field Shake Test

In December, 2015 the Texas General Land Office Oil Spill Prevention and Response Region 1 Senior Response Officers met with key employees of Phillips 66 in Nederland, American Pollution Control (AMPOL) and U.S. Coast Guard Marine Safety Office in Port Arthur (MSU PA).

Phillips 66 operates a crude oil transport pipeline on the Neches River in Nederland, Texas. Locally (as well as nationally), they are recognized for conducting business in a manner that protects the environment by respecting air, water and land resources and they are currently proactively hydro-cleaning their two-tiered concrete dock on the waterfront.

AMPOL, a Region 1 certified Discharge Cleanup Organization, is Phillips 66's primary contractor for oil spill response, tank cleaning, confined space entry services, hazardous material (HAZ-MAT) emergency cleanup, and soil remediation. AMPOL would be leading the hydo-cleaning operation.

AMPOL's oil spill prevention preparation included protecting the waterway at Phillips 66's dock area with primary and secondary defenses. The primary defense curtained off works areas with vertical walls of polyethylene plastic sheeting and the secondary defense deployed barrier and sorbent boom surrounding the dock area.

Should workers discover any stubborn oil deposits while hydro-cleaning, Phillips 66's and AMPOL's environmental plans called for the deposits to be treated with a surface washing agent; liquid products designed to make it easier to remove oil from surfaces and structures that have been oiled so that they don't become "secondary sources" of pollution.

More than thirty-three surface washing agents, including so called "Miscellaneous Oil Spill Control Agents" are currently listed on the National Contingency Plan Product Schedule, an EPA list of products that have met basic requirements for being used in an oil spill. Surface washing agents contain surfactants, solvents, and/or other additives that soften and lift oil off the surface.

In industry, there are two main types. First are "lift and float" products which work by lifting oil from the surface so it floats on the water as a slick which then may be recovered. Should any oil get past the primary defenses, the containment boom and sorbents boom collect and recover the oil. AMPOL ordered a lift and float agent we'll call "PRODUCT A-1." "Lift and disperse" products act like detergents to lift oil off surfaces, break it into fine droplets (emulsify), and disperse it into the water. This class of products would not be appropriate in this application.

On Thursday December 10, 2015, an alert Petty Officer with MSU PA's Incident Management Division (IMD) inspected AMPOLs' supply of PRODUCT A-1, and found a properly labeled opaque 5 gallon plastic container. Upon review of the product's Safety Data Sheet (SDS), the product appeared slightly darker than as described in the SDS. Chief Warrant Officer (CWO) Matt Tilimon, MSU PA's Assistant Chief, was immediately notified and in response asked for a meeting with the strategic partners the following morning.

CWO Matt Tillman, JT Ewing and Tim Dumesnil compare the samples.

Friday morning, JT Ewing, Region 1 Area Manager, and Johnny Darcey, Senior Response Officer, met with CWO Tiliman, along with AMPOL's Texas Operations Manager Tim Dumesnil and Phillip 66's Maintenance Supervisor Wally Hollar. Everyone agreed, PRODUCT A-1, smelled and felt as described in the SDS, but it was slightly darker than expected. With the assistance of Johnny Darcey they would apply a technique used to train oil spill responders; they would conduct a series of "Field Shake Test" for the strategic partners.

Using a one ounce sample jar, equal parts (30 ml) of AMPOL's supply of PRODUCT A-1, dark Arabian crude oil and "Instant Ocean" solution (osmosed fresh water with all important major and minor trace elements found in the open ocean) were poured into the jar. A second sample ("PRODUCT A-2") was produce in the same fashion using a different control sample of PRODUCT A-1, dark Arabian crude oil and "Instant Ocean" solution.

Both samples were shaken for 20 seconds and left to rest. While PRODUCT A-1 and PRODUCT A-2 samples were resting, JT and Johnny prepared similar samples using two different lifting and floating products ('PRODUCT B AND C") found on the EPA list of products.

Within fifteen minutes, it was clear PRODUCTS A-2, B and C were beginning to lift and float the Arabian crude oil leaving clear Instant Ocean visible in the bottom of the sample jar. At the end of thirty minutes all agreed PRODUCTS A-2, B and C successfully lifted and floated the Arabian crude oil. PRODUCT A-1 did not.

All the samples were transported to the Region 1 office in Nederland for further study while AMPOL made arrangements to obtain a new supply of a lifting and floating product.

What caused the problem with PRODUCT A-1? No one could say for sure. All the strategic partners were now certain that if the supply of PRODUCT A-1 was needed, it would not have worked as designed. Once again, when it comes to oil spill prevention and response .... teamwork and experience counts.

Product A-1 is the second from the left.

Phillips 66's waterfront dock on the Neches River in Nederland.