F I N A L

K-Sea T/B DBL 152 Incident

REVISED LONG-TERM MONITORING PLAN

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1.0 INTRODUCTION

This document represents Revision No. 1 of the Long-Term Monitoring Plan (LTMP) developed by the Environmental Unit (EU) for the T/B DBL 152 incident. The initial version of the LTMP was submitted to the Unified Command (UC) on 26 DEC 2005 and approved the following day. At a meeting on 12 JAN 2006 with the Captain of the Port and other stakeholders, the EU was asked to update the original LTMP to reflect new information and submit a revised LTMP to the UC for approval. Revisions contained herein: (1) incorporate additional items added to the scope of long-term monitoring since the 26 DEC 2006 LTMP submission; or (2) present alternative methods for accomplishing previously stated objectives. These changes have been integrated into the original text. Therefore, information and guidance provided in this document supercedes the original LTMP.

1.1 Objectives

The LTMP was designed to accomplish the following objectives:

- Track the movement and monitor the fate of residual, non-recovered submerged oil from the DBL 152 with respect to:
    - The general extent of the submerged oil field (SOF) to the degree it still exists; and
    - Dispersion of oil in selected higher-concentration patches (e.g., pooled or matted oil) at known locations that was not recovered prior to suspending oil recovery operations in mid-January 2006.
- Provide information that can be used for advance warning of potential impacts to Gulf Coast shorelines and other sensitive areas (e.g., Flower Garden Banks National Marine Sanctuary).
- Evaluate the need to maintain or modify the U.S. Coast Guard (USCG) safety zone and National Oceanic and Atmospheric Administration (NOAA) fisheries advisory put in place to minimize potential impacts to commercial shrimping interests from fouling of gear and/or catch.

[1] Final draft submitted to Unified Command 22 FEB 06 (Revised LTM Plan Draft 2-22-06.pdf). TGLO approval received 23 FEB 06. USCG approval with minor comments received 2 MAR 06. The final draft, though not reissued as "final", guided field operations for LTM beginning 16 MAR 06. The plan was "finalized" on 28 NOV 06 at the request of the USCG MSU Port Arthur. Any changes to the final draft version are noted in the text.

1.2 Submerged Oil Migration

Information on the movement of submerged oil from the DBL 152 (the "barge") collected to date indicates that submerged oil does appear to be migrating slowly from the location where the barge capsized. Based on the results of submerged oil delineation efforts using VSORS, vertical snare samplers, snare-filled crab pots and ROVs beginning 18 NOV 2005, the general location and movement of the oil can be described as follows:

Migration of submerged oil is generally to the west and west-northwest. There is no indication of oil migrating to the east of the barge, and no significant quantities of oil have been observed much beyond 0.5 nm north or south of the center line of the west-northwestward trending submerged oil field.

By 11 DEC 2005, the heaviest oil was observed within a narrow band up to 2.25 nm west of the barge, with moderate oil extending to 3.75 nm. No oil was observed beyond 5 nm west of the barge by that date. On 14 DEC 2005 a single crab pot with heavy oiling was observed 5 nm due west.

Crab pots at 15-18 nm west of the barge were clean as of 2 JAN 06. Trace oiling of these crab pots was suspected on 10 JAN 06, but subsequent monitoring at this location on 11 and 31 JAN 06 revealed no oil. As of 31 JAN 06, no oil was observed on crab pot samplers deployed 7 and 8 nm miles west of the barge.

Beginning on 22 DEC 06, submerged oil identification was performed using remotely operated vehicles (ROVs). Approximately 80 ROV surveys have been conducted to date mostly west and west-northwest of the barge in locations where submerged oil was previously identified using alternative methods. ROV surveys were unable to locate oil at some locations where oil was previously found using VSORS, confirming the continued migration and dispersion of the oil. However, ROV surveys have confirmed the general footprint of oil established by the VSORS, which extends approximately 5 nm to the west of the barge. To date, no recoverable oil has been identified beyond 3 nm to the west-northwest of the barge site.

1.3 LTMP Implementation

Portions of the original LTMP were implemented beginning on 1 JAN 2006, at which time the western array of sampling devices (see Section 2.1.2 below) was deployed 13-14 nm west of the barge location. Deployment of the northern, southern and eastern arrays was postponed pending completion of additional ROV surveys.

Samplers 13 nm west of the barge were checked on 7 JAN 2006. No oil was observed. On 10 JAN 2006, only 3 of 14 sampling devices (21%) could be located; the remainder were presumed lost or stolen. In fact, the crew of the *Lady Anna* reported witnessing theft of sampling gear from the western array in broad daylight on or about 7 JAN 2006.

Following a meeting with the Captain of the Port and other stakeholders on 12 JAN 2006, oil recovery operations were suspended over the winter due to continued weather-related inefficiencies. The need to reinitiate oil recovery once weather improves will be assessed in the Spring of 2006 (date to be determined) based on the continued break-up and dispersion of oil mats over the winter.

Deployment of the northern, southern and eastern arrays of sampling devices was postponed several times due to weather. These samplers were eventually deployed on 31 JAN 2006.

A map showing the location of LTM samplers deployed as of 31 JAN 2006 is attached (Figure 1).

2.0 MONITORING APPROACHES & METHODS

2.1 General Extent of the Submerged Oil Field

The term "submerged oil field" (SOF) is used throughout the LTMP to describe the area of seafloor containing submerged oil from the DBL 152. It is believe that when the barge capsized on 14 NOV 2005 significant amounts of oil were released in a relatively short time period and sank to the bottom forming large, discrete mats or pools of oil. Initial field observations support this hypothesis. These accumulations remained in place until a series of storms in late-November mobilized the oil causing oil large oil mats to break up into smaller pieces that then distributed over a larger area. This pattern of periodic remobilization during storm events has been repeated several times since the incident occurred and is expected to continue in the future. Based on ROV visual surveys, it is known that the distribution of oil within the SOF ranges from relatively large, discrete areas containing matted or pooled oil (so called higher concentration areas) to smaller, more widely scattered oil globules. However, the exact composition of the SOF is difficult to ascertain using current assessment methods. In addition, the SOF is dynamic and its composition continues to change. In general, it is expected that larger accumulations of oil will continue to break up over time and disperse over a relatively larger area as smaller and smaller oil globules.

The general extent and movement of the SOF will be monitored by deploying several arrays of sampling devices (see Section 2.1.1 below for description) designed to detect the presence of oil moving along or just above (within 1 m) the seafloor and within the water column. Because it is impractical to continuously monitor the entire area through which residual submerged oil may move, the monitoring approach is based on the concept of establishing and maintaining a clean (e.g., unoiled) perimeter just beyond the outermost edges of the SOF. However, since the location of the SOF is not likely to remain static, it will be necessary to periodically reposition or add sampling devices. An adaptive management approach will therefore be used to reconfigure the sampling array based on real-time evaluation of monitoring results by the field crew based on general guidance presented in this plan.

Specific details of the long-term monitoring are discussed below.

2.1.1 Sampling Device

The sampling device for long-term monitoring is very similar to the snare-filled crab pots used previously on this incident to detect submerged oil. Each LTM sampler consists of two crab pots attached one on top of the other, with the bottom pot being weighted to maintain an upright position. Each pot is loosely filled with white (first-run) snare. The crab pots will be rigged as shown in Figure 2. Any new pots placed into service under this revised LTMP will be modified to ensure that marine life cannot become trapped

inside. [Note: the addition of the preceding sentence is the only substantive modification to the draft plan submitted on 22 FEB 06.]

A snare-filled cylinder (1 m high x 0.25 m in diameter) constructed of wire mesh will be suspended from the float to monitor for the presence of oil in the mid-water column. A cylindrical eel pot could also be used. The mid-column sampler will be positioned at ½ the water depth. The bottom end will be weighted slightly to ensure the device remains vertical.

Each sampling device will be labeled with a unique identification code to facilitate data management.

2.1.2 Initial Configuration of Sampling Arrays

The initial configuration proposed in the original LTMP consisted of 30 sampling devices arranged in four (4) arrays: northern, southern, eastern and western. Each array consisted of two rows of sampling devices -- an inner row and an outer row. The inner row was to be located just beyond the leading edge of the SOF; the outer row was to be located some distance farther out. The inner and outer rows were to be positioned to spatially "bound" the perimeter of the SOF. The intent was to position the outer rows far enough beyond the leading edge so that it would not be oiled between monitoring events based on the estimated rate of oil movement.

Sampling intensity will be greatest immediately west of the SOF in the direction of observed oil movement. Sampling intensity will be less to the north, south and east of the SOF.

The configuration of the sampling arrays presented in the original LTMP was modified slightly at the time of implementation. The modified sampling configuration consisting of 35 LTM samplers is described below and was illustrated in Figure 1.

Northern, Southern & Eastern Arrays: Samplers in the northern, southern and eastern arrays collectively form a reverse "C" around the former barge site. The inner rows consist of 7 samplers placed at approximately 2 nm intervals 1 to 1½ nm out from the anticipated edge of the SOF. The outer rows consist of 9 additional samplers placed 1 nm farther out from the inner rows. Outer row samplers are also spaced at 2 nm intervals and are offset from inner row samplers by 1 nm to create a staggered arrangement (e.g., zigzag pattern) to minimize gaps.

Western Array: The western array consists of 4 north-south rows of samplers arranged in 2 pairs of 4 and 5 samplers each. The first and second sampler rows (innermost pair) are located 7 and 8 nm west of the former barge location. The third and fourth sampler rows (outermost pair) are located 15 and 18 nm west of the barge site. Within each row, samplers are spaced at 1 nm intervals. Samplers in each pair are offset by ½ nm to minimize gaps.

Target locations for sampler deployment will be determined using GIS mapping and then uploaded to a GPS unit aboard the monitoring vessel to facilitate navigation to the drop point.

2.1.3 Procedure for Checking & Repositioning Samplers

The sampling design is intended to eliminate (potentially) the need to check all samplers during each monitoring event depending on the results. Samplers with the highest probability of oiling between monitoring events will receive the highest priority for checking.

Depending on which samplers indicate oiling, it may be necessary to reposition the samplers. For purposes of this plan, repositioning of samplers will be triggered by the presence of oil on snares in greater than trace amounts, as indicated by oil droplets more than 2 cm in diameter (e.g., penny-sized) covering 10 percent or more of the snare.

Specific procedures for checking and repositioning samplers are outlined below:

Northern, Southern & Eastern Arrays: If inner row samplers are unoiled, indicating that submerged oil has not reached these locations, then the corresponding outer ring samplers will not be checked and no samplers will be repositioned. Any missing inner ring samplers will be replaced. If time allows, outer ring samplers will be located to ensure they are still present and may be lifted to check their overall condition. Missing outer ring samplers will be replaced as needed.

If any inner row samplers are oiled, the inner row samplers from that array will be retrieved, photographed, sampled, refilled with clean snare and redeployed 1 nm beyond the corresponding outer row. The outer row samplers will then be checked to determine the extent of submerged oil movement.

Western Array: The second row of samplers closest to the barge site will be checked first, followed by the first row. If both these rows of samplers are unoiled, the outermost rows of samplers will not be checked and no samplers will be repositioned.

If any of the first row samplers exceed trace oiling, but the second row samplers are all unoiled or show trace oiling only, samplers will be repositioned as follows:

- All samplers from the first row will be retrieved, evaluated, refilled with clean snare (if needed) and redeployed 2 nm west of their original position (1 nm west of the second row). However, no samplers will be deployed in the shipping fairway.

- No samplers from the third or fourth row will be repositioned unless the second row advances to within less than 2 nm. If this occurs, the third and fourth rows will be repositioned 1 nm farther west in order to maintain a minimum separation of 2 nm between the second and third row.

- Based on future monitoring results, the fourth row of the western array may be eliminated.

This "leap-frogging" maneuver will move all or some rows of the western array 1 nm to the west each redeployment. The former second row will now become the first row and so on.

If any second row samplers also exceed trace oiling, samplers will be repositioned as follows:

- All samplers from both the first and second row will be retrieved, evaluated and refilled with clean snare (if needed). A new first row will be established west of the shipping fairway (Column 79 of Figure 3), with the new second row 1 nm to the west (Column 81).

- Third and fourth row samplers will be retrieved to verify they are unoiled. If clean, they will be redeployed in the same position.

- If the second row is moved to within less than 2 nm or the third row, the third row (and possibly fourth row) will be repositioned 1 nm to the west to maintain the 2 nm separation between the second and third rows.

If the entire western array becomes situated west of the shipping fairway, samplers will be repositioned as follows if oiling of both the first and second rows exceeds trace levels:

- All samplers from both the first and second row will be retrieved, evaluated and refilled with clean snare (if needed).

- Third row samplers will be retrieved to verify they are unoiled. If clean, they will be redeployed in the same position and will become the new first row of the western array.

- A second row of 4 samplers will be deployed 1 nm to the west with a ½ nm offset to create a staggered pattern.

- New third row of 5 samplers will be deployed 3 nm west of the first row. A fourth row will only be deployed if there is concern that oil may migrate past the third row in the interim between monitoring events.

The following general considerations will be adhered to during the course of LTM:

- As the western sampling array moves away from the former barge location, additional samplers will be added to east-west trending inner and outer rows at 2 nm intervals as needed.

- Additional samplers will be added to the north and/or south ends of the western array rows as needed if results indicate that the SOF is widening. It may also be necessary to increase the spacing between samplers within individual rows to ensure that the number of samplers to be checked each time remains manageable.

- During each retrieval, snare material will be inspected to determine if silt, marine growth, etc. could be inhibiting oil adhesion thereby reducing the sampling efficiency of the device. If this is determined to be the case, old sorbent material will be replaced with fresh snare.

- Sampling devices will be monitored for fouling by marine growth (e.g., barnacles, algae), which lead to reduced water flow through the traps, weighing down of

buoys and/or mid-column samplers to the point where they sink, and or increase in total weigh beyond the hoisting capacity of the line. If fouling becomes problematic, marine growth will be removed, new samplers deployed, and/or traps and buoys will be treated with anti-fouling paint by an appropriately licensed individual.

- It is recognized that some modifications to this plan may be needed based on findings or unanticipated conditions in the field at the time of inspections.

In the unlikely event that both the inner and outermost rows of either the western array or the northern, southern and eastern arrays are oiled, it will be necessary to relocate the leading edges of the SOF. This will be accomplished using V-SORS Light trawls. V-SORS Light sampling gear consists of 2-3 bundled, heavy link chains approximately 10 feet in length to which three (3) sorbent snare pom-poms are attached. These devices are deployed and retrieved over the side of the vessel by hand and are towed at a speed of less than 4 knots. Depending on the area, V-SORS Light trawls will be conducted along either east-west or north-south transects (perpendicular to the anticipated direction of movement) stepping out in 1 nm increments from areas known to contain submerged oil until no oil is encountered. At that point, the sampling array(s) will be reestablished at the nearest clean grid nodes consistent with the current configuration. Additional samplers will be added as necessary and/or the interval between samplers extended to maintain a manageable number. V-SORS Light devices will be recovered at ½ to 1 nm intervals and evaluated for oil according to previously used procedures.

2.1.4 Alternative Methods

As mentioned previously, a high rate of gear loss due to theft, drifting, vessel fouling, etc. was experienced during an initial LTM deployment in early January. Gear loss not only results in additional expense, but loss of important data, as well. If LTM efforts continue to suffer from excessive gear loss, use of alternative methods may be necessary to accomplish plan objectives.

If gear loss continues to be problematic, perimeter monitoring efforts will transition from using LTM crab pot-type samplers to using V-SORS Light trawls instead. Trawls would be conducted using the same spatial configuration prescribed above. Grid points established for LTM samplers would serve as the starting and ending points for V-SORS Light transects. The V-SORS Light trawling pattern would be reconfigured based on the same adaptive management guidelines employed for the original sampling devices.

Switching from LTM crab pot samplers to V-SORS Light trawls will increase the spatial integration of sampling, but will decrease the temporal integration. In addition, V-SORS Light trawls will not provide information about oil in the mid-water column. However, information to date has not indicated the presence of oil in the mid-water column or above the bottom. Based on consideration of other available methods for reducing gear loss (e.g., ROV surveys, acoustically deployed buoys, "pingers", diver retrieval), V-SORS Light trawls were determined to be the next best alternative after stationary samplers for accomplishing plan objectives.

The decision to transition to V-SORS Light trawls will be based on future gear loss and the number of extra LTM samplers currently constructed. If the number of currently available LTM samplers is insufficient to maintain the complete sampling array, use of

crab pot samplers will be discontinued. V-SORS Light trawls will be instituted beginning with the next scheduled monitoring event, at which time all remaining LTM samplers will be retrieved. This will entail a complete transition from one method to another, which is intended to avoid potential difficulties in data interpretation stemming from mixed data types. The UC and other stakeholders will be notified of the transition to V-SORS Light trawls in advance.

2.2 Higher-Concentration Oil Patches

ROV surveys conducted in support of oil recovery operations identified several discrete areas containing pooled or matted oil at relatively higher concentrations than surrounding areas. Oil was removed from some of these locations by diver-directed pumping prior to suspending recovery operations on 12 JAN 2006. However, recovery operations were suspended before oil could be recovered from at least four (4) higher-concentration oil patches located west-northwest of the former barge site (see Figure 1). One or more of these patches would have been left as a "set-aside" to monitor the continued break up and dispersion of higher-concentration even if oil recovery operations had continued longer.

Monitoring of known higher-concentration oil patches provides an opportunity to understand and document the movement and dispersion of pooled or matted oil through time, especially over the winter heavy-weather period when the potential for dispersion is highest. It is hoped that this monitoring information can be used to validate the conceptual model of oil movement developed by the NOAA Scientific Support Team and other members of the EU. These mechanisms were described in NOAA's technical paper entitled "Long-Term Transport of Oil from T/B DBL-152" dated 20 DEC 2005 as well as various presentations to the UC and Regional Response Team.

If one assumes that oil behavior in higher-concentration patches selected for long-term monitoring is representative, then these results can be extrapolated to similar areas that may exist but were not identified during ROV surveys. Therefore, if pooled or matted oil is observed to break-up and disperse as predicted, then the same can be assumed for any undiscovered higher-concentration oil patches. Such a finding may influence the need to resume ROV surveys in the Spring of 2006 to identify additional areas containing "recoverable" oil.

Monitoring of higher-concentration oil patches will be accomplished by visually observing the condition (e.g., percent cover, particle size, thickness, etc.) of oil on the bottom at the four (4) locations where non-recovered oil is known to exist. Higher-concentration oil patches will be monitored through repeated observations of the same locations through time. Oil patch monitoring will be attempted during each LTM deployment, but may be more weather-dependent than monitoring conducted via crab pot or V-SORS Light trawls.

Visual observations will be made using one or more of the following methods: drop camera; towed video; divers; ROV and/or autonomous time-lapse underwater videography. Drop camera and towed video methodologies will be tried first due to greater technical flexibility and cost-effectiveness.

2.3 Potential Impacts to Commercial Shrimping

The presence of oil on the seafloor in areas surrounding the incident poses a potential threat to commercial fishing interests, particularly commercial shrimpers. Both shrimp nets and other gear, as well as catch could be fouled with oil if trawling is conducted in areas containing significant concentrations of submerged oil.

Since the incident, a 10 nm (east-west) by 8 nm (north-south) safety zone established by the USCG has been in effect around the accident site to minimize interference with salvage and cleanup operations by unauthorized vessel traffic. During this time no fishing vessels were allowed within the safety zone. A NOAA Fishery Bulletin issued by the Southeast Regional Office on 22 DEC 2005 warned fishermen of the fouling potential and recommended they exercise caution in the area.

The Fishery Bulletin also indicated the safety zone would be opened and fishing vessels would be allowed to re-enter the area upon completion of salvage and recovery operations. At the 12 JAN 2006 meeting with the Captain of the Port and other stakeholders, the attendees, including members of the EU, decided to keep the safety zone in effect, though with potentially reduced dimensions. The goal of leaving the safety zone in effect is to lessen the potential of commercial shrimpers encountering oil and fouling their gear and/or catch. The safety zone will remain in effect at least over the winter until the fate of higher-concentration oil accumulations is better understood.

When weather improves in the spring, the need to maintain or modify the safety zone and corresponding fishery advisory will be reevaluated. The potential for fouling of gear and/or catch will be evaluated by conducting a series of shrimp net trawls. If nets and/or catch are experiencing significant fouling at that time, it may be necessary to maintain the safety zone to minimize commercial shrimping impacts. Alternatively, lack of significant fouling may signal that the safety zone is no longer needed.

Since the nature and extent of submerged oil is expected to continue changing over the winter, a specific plan for conducting shrimp net trawls will be developed closer to spring prior to conducting the tests. This plan will be based on the latest long-term monitoring data gained over the winter and reflect the most-current understanding of submerged oil fate and transport. A shrimp net plan will be submitted to the UC for review and approval prior to conducting any field activities. The timing of this work is weather-dependent. NOAA is currently investigating when seasonal weather patterns are likely to change and provide longer, more reliable periods of favorable weather.

3.0 Data Acquisition & Management

Actual deployment and retrieval locations of sampling devices will be recorded with GPS. Upon retrieval, the mid-water column and benthic components of each sampling device will be visually inspected for the presence of oil and documented photographically. Degree of oiling will be qualitatively assessed according to the standards previously established for this incident. The submerged oil assessment job aid created for the V-SORS confirmation sampling may also be used. Data will be recorded on standardized data sheets. Samples of oiled snare from both the mid-water column and benthic sampler components will be collected for potential fingerprinting analysis. These samples will be stored on wet ice or under refrigeration until shipped to the lab for archiving. All monitoring data will be entered into an electronic database to

facilitate data management, manipulation and analysis. Monitoring results will also be mapped using GIS.

4.0 FREQUENCY & DURATION OF MONITORING

The Texas General Land Office (TGLO) requested that long-term monitoring be performed for at least one year to track the movement and behavior of submerged oil during all four seasons. At present, it is difficult to determine the need for or utility of continuing long-term monitoring over this entire time frame. Therefore, consistent with the adaptive management approach, the frequency, duration and scope of long-term monitoring will be reviewed quarterly.

Initially, monitoring of the SOF perimeter and higher-concentration oil patches will be checked twice per month (bi-monthly). The need to continue bi-monthly monitoring will be reevaluated by the stakeholders at the end of the first quarter (2006). Factors to be considered in determining the on-going need for long-term monitoring include, but are not necessarily limited to, direction and rate of oil movement (e.g., onshore vs. offshore), degree of oiling/droplet size and percent cover, physical and chemical weathering, practical and logistical considerations, and the value of monitoring data relative to cost.

The responsible party may elect to conduct additional surveys at locations not specified in the LTMP using any of the methods mentioned herein to visually or otherwise asses oil remaining on the seafloor. If performed, the results of these or similar surveys will be used along with other monitoring data to determine the need for continued monitoring. Videos and results of these surveys will be shared with the EU and UC.

If monitoring results indicate slow movement of submerged oil and/or continued break-up and dispersion of higher-concentration pooled or matted oil, the frequency of monitoring may be reduced or the program may be terminated. Such conditions are likely to represent a significant reduction in the risk of impacts to shorelines or other sensitive resources and commercial fishing interests. Once the risk to these resources/stakeholders has decreased, the value of additional monitoring also diminishes.

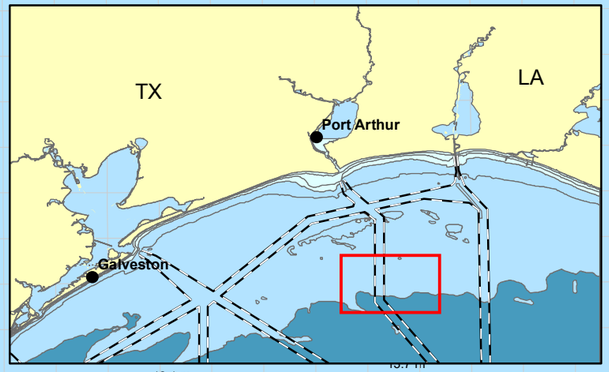
5.0 ANCILLARY DATA COLLECTION

In addition to tending the arrays of LTM crab pot sampling devices, meteorological and oceanographic data reported by various sources will be compiled during the course of long-term monitoring. Data sources will include the TABS Buoy A2 deployed near the former barge location (for as long as it remains deployed), as well as other TABS buoys and National Data Buoy Center assets in the western Gulf of Mexico. Of key importance are the near-bottom and mid-water column current direction and velocity data provided by the Acoustic Doppler Current Profiler (ADCP) aboard the TABS A2 buoy. Information on sea state (wave height & dominant and average wave period) will be obtained from NDBC Station 42035 located 22 nm east of Galveston, TX and Station 42019 located 60 nm south of Freeport, TX. These ancillary data will be used to help better understand and potentially predict the movement of submerged oil in response to various environmental factors. The utility of ancillary data compilation and need to maintain the TABS A2 Buoy at its present location will be revisited periodically.

6.0 REPORTING

Long-term monitoring results will be reported bi-monthly and quarterly to the Responsible Party, NOAA, the UC, and other state or federal Trustees involved in this incident. Summarized results including maps showing submerged oil locations and sampler repositioning, summary tables, a brief narrative and any other relevant information will be distributed by email following each bi-monthly monitoring event. In addition, quarterly status reports providing more detailed discussion of long-term monitoring results will also be submitted. Any proposed changes to the scope, frequency or duration of long-term monitoring will be addressed in quarterly status reports. In-person meetings or conference calls to discuss monitoring results will be scheduled on an as-needed basis.

Figure 1. LTM Sampler Deployment Locations as of 31 JAN 2006



I85 J91 K85 L91 M85 N91 O85 P91 Q-85
I69 J71 K69 L71 M69 N71 O69 P71 Q69
I65 K63 Q63 S65
I61 I57 J53 K59 L55 N53 N50 Q59 Q55 S61 S57 S53
DBL -152

Legend

- Former DBL-152 Location
- Major Shipping Fairway
- Long-Term Oil Mat Monitoring Location

LTM Locations

- Sampler Location as of 01/31/2006

0 2.5 5
Nautical Miles

Map Document: (J:\Arcview\Sabine Pass\Projects\Long term monitoring Locations 1-31-06.mxd)

Figure 2. LTM Crab Pot-Type Sampling Device