



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

October 12, 2006

Operations Division
Technical Support Branch

Dr. Roy Crabtree
Regional Director
National Marine Fisheries Service
Southeast Regional Office
263 13th Avenue, South
St. Petersburg, Florida 33701

Dear Dr. Crabtree:

The U.S. Army Corps of Engineers, New Orleans District, is forwarding an Endangered Species Report for hopper dredge channel maintenance of the Calcasieu River, Louisiana, bar channel conducted during Fiscal Year (FY) 2006. This will fulfill requirements of the Incidental Take Statement " for sea turtle takes resulting from Hopper Dredging activities" dated November 19, 2003. Under contract W912P8-05-D-0005, the dredge ATCHAFALAYA performed maintenance dredging between June 14, 2006, and July 17, 2006 and the dredge COLUMBIA performed maintenance dredging between August 16, 2006, and September 13, 2006.

This report is intended to assist your office in the continued review of hopper dredge activities in the New Orleans District, to complement FY 1995-2005 reports previously transmitted to your office, and to fulfill the reporting requirement for the New Orleans District's dredging in the Calcasieu bar channel with the contract dredges ATCHAFALAYA and COLUMBIA. If you have questions regarding this report, please contact Mr. Edward Creef at (504) 862-2521.

Sincerely,

A handwritten signature in black ink that reads "Linda G. Mathies".

Linda G. Mathies
Chief, Environmental Function

Enclosure

Project Report
ENDANGERED SPECIES MONITORING
Calcasieu River
Bar Channel
Maintenance Dredging
06-2-Calc

Operations Technical Support Branch
US Army Corps of Engineers
New Orleans District
504-862-2521

INTRODUCTION

This report is submitted in fulfillment of requirements of the Endangered Species Act (ESA) and the Section 7 Consultation - Biological Opinion concerning Dredging of Gulf of Mexico Navigation' Channels and Sand Mining ("Borrow") Areas Using Hopper Dredges by U.S. Army Corps of Engineers Galveston, New Orleans, Mobile, and Jacksonville Districts (Consultation Number F/SER/2000/01287) dated November 19, 2003, and revised on June 24, 2005. The U.S. Army Corps of Engineers, New Orleans District (MVN) submits this report, in compliance with reasonable and prudent measure No. 9 – Reporting, summarizing the results of Fiscal Year (FY) 2006 maintenance dredging of the Calcasieu River, Louisiana, bar channel by hopper dredges.

Contract W912P8-05-D-0005 was awarded on November 19, 2004, to Sunset Marine, LLC/B+B Dredging Company. The hopper dredge ATCHAFALAYA performed maintenance dredging in the Calcasieu River bar channel Mile –2.1 to Mile –5.1 reach from June 14, 2006, through July 17, 2006 (Figure 1). The ATCHAFALAYA was relocated from the Calcasieu bar channel to the U.S. Army Corps of Engineers, Galveston District on July 18, 2006, to perform maintenance dredging under a different contract. The hopper dredge COLUMBIA replaced the ATCHAFALAYA for the remainder of work performed on the Calcasieu River bar channel under this contract. The COLUMBIA performed maintenance dredging in the Calcasieu River bar channel Mile –2.1 to Mile –5.1 reach from August 16, 2006, through September 13, 2006.

TURTLE MONITORING PROGRAM

A result of the ESA consultation process was the requirement to document turtle takes by hopper dredges. Turtle monitoring activities were conducted aboard the ATCHAFALAYA and COLUMBIA hopper dredges throughout this Calcasieu River bar channel maintenance work.

Screen & Deflector Configurations

In order to accomplish this task, before dredging operations commenced, both hopper dredges were equipped such that all inflows and/or overflows would be screened. Both hopper dredges were equipped with inflow screening, with a mesh size of 4-inches by 4-inches, that intercepted 100 percent of the material entering the hopper bins. The configuration and location of inflow screens were unique to each hopper dredge due to dredge construction differences. Draghead deflectors also were deployed to deflect any turtles that may happen to be in, or near, the path of the draghead during excavation. The design of the deflectors is such that a sediment riffle is created ahead of the draghead, cushioning any contact with turtles thereby minimizing injuries.

Hopper Dredge ATCHAFALAYA

Inflow screening used in this work was maintained at 100 percent effectiveness. Plugging of the inflow screens and inflow box was common due to the mud composition of shoal material being dredged.

The ATCHAFALAYA employed a single draghead (Modified California type) throughout its work. Although no major problems with deflector operating conditions were experienced during the ATCHAFALAYA's work, paint tests to determine if its draghead deflector was achieving a penetration depth of at least 6 inches in order to effectively move sea turtles resting on, or partially buried within, bottom sediments of the Calcasieu River bar channel away from the draghead were not performed.

Hopper Dredge COLUMBIA

Inflow screening used in this work was maintained at 100 percent effectiveness. Plugging of the inflow screens and inflow box was common due to the mud composition of shoal material being dredged.

The COLUMBIA employed a single draghead (unidentified type) throughout its work. A hopper dredge sea turtle protection measures inspection training course, taught by Glynn Banks, was performed for MVN personnel on the COLUMBIA on August 23, 2006. During this training class, it was noted that the installed sea turtle deflector could move vertically if the draghead unexpectedly encountered firmer bottom sediments than had been experienced in the Calcasieu River bar channel. The draghead deflector's configuration was essentially not of a "rigid" design. The deflector was suspended on the front of the draghead by chains instead of having a mechanical "stop" structure that would prevent the deflector from riding up in front if the draghead encountered firmer bottom sediments than expected. This "riding up" action of the deflector would negate its protective function of deflecting sea turtles present in front of the draghead. A mechanical fix to this problem was in place by the next day (Figure 2).

Paint tests to determine if the COLUMBIA's draghead deflector was achieving a penetration depth of at least 6 inches in order to effectively move sea turtles resting on, or partially buried within, bottom sediments of the Calcasieu River bar channel away from the draghead were performed on August 16, August 23, and September 11, 2006. Results of each paint test indicated that the draghead deflector was performing properly for work in this channel.

Observers

Around-the-clock monitoring by National Marine Fisheries Service-approved sea turtle observers/inspectors was conducted to identify any turtles or turtle parts that were caught on these screens. East Coast Observers, Inc. (ECO), under subcontract to Sunset Marine, LLC/B+B Dredging Company, provided observers for this work. The observers inspected and cleaned all

inflow screening at the end of each load. Dragheads and deflectors were also inspected immediately after each load, and dredge personnel were informed if repairs were necessary. Data sheets were completed daily, detailing all biological samples and debris found in the screening and dragheads. The observers also recorded the start, end, and discharge times for each load, the specific location of the dredging area, the type of material being dredged, weather, tide and water temperature data, the condition of the screening, and any other pertinent information.

ECO observers on the ATCHAFALAYA were Rebecca Ortman, Michelle Hardee, and Dave Mann. ECO observers on the COLUMBIA were Charlotte Lanning, Michelle Hardee, Martin Garcia, and Jennifer Scott.

In 2003, and previous years, the National Marine Fisheries Service determined that listed whales are unlikely to be adversely affected by hopper dredging in the Gulf of Mexico. As a result, endangered species monitors for whales, bridge observers, were not required for this contract. A bridge watch for sea turtles and marine mammals was maintained during all daylight hours, except when the observer was off the bridge, cleaning and inspecting the screens and dragheads. All sightings of sea turtles and cetaceans were recorded in a bridge watch logbook.

Throughout the maintenance event, dredging operations were conducted following the items listed in reasonable and prudent measures 4 through 8. This included advising the Contractor of the potential presence of sea turtles in the navigation channel and reporting and operating requirements.

DREDGING

On June 14, 2006, the ATCHAFALAYA began work in the Mile -2.1 to Mile -5.1 bar channel reach. The required depth of dredging was -43 feet Mean Low Gulf (MLG) and the dredging width was 800 feet (full cut). Depth and width dimensions remained the same when the COLUMBIA resumed the maintenance dredging operation for the Mile -2.1 to Mile -5.1 bar channel reach on August 16, 2006. All work was performed in either the agitation mode, or in the dredge and haul mode with disposal into the ocean dredged material disposal site (ODMDS).

ATCHAFALAYA

The ATCHAFALAYA began its work in the Calcasieu River bar channel on June 14, 2006, and finished on July 17, 2006. During this period, the dredge worked a total of 33 days between bar channel miles -2.1 and -5.1 and collected a total of 462 loads of dredged material. The ATCHAFALAYA excavated a total of 1,455,138 CY of material from this project (887,080 CY by agitation method and 568,058 CY by dredge and haul method).

During the ATCHAFALAYA's maintenance work there were no documented incidental sea turtle takes. An old sea turtle vertebral bone was recovered from the in-flow screens on June 18, 2006. This was not considered to be an incidental take resulting from the ATCHAFALAYA's

FY 06 activities in the Calcasieu River bar channel. Throughout the dredging work, both biological and non-biological debris were recovered from the screens. Biological material consisted only of seagrass and wood. Non-biological debris included plastic, line, metal, netting, rubber, rope, and assorted trash. Copies of the Endangered Species Observer Program Daily Reports are provided on the attached compact disk.

No sightings of sea turtles were reported.

Below mid-depth water temperatures were not measured. Surface water temperatures were measured on all but two days when the hopper dredge was working. Surface water temperatures ranged from a low of 80° F (26.7°C) to a high of 85° F (29.4°C).

COLUMBIA

The COLUMBIA began its work in the Calcasieu River bar channel on August 16, 2006, and finished on September 13, 2006. During this period, the dredge worked a total of 29 days between bar channel miles -2.1 and -5.1 and collected a total of 374 loads of dredged material. The COLUMBIA excavated a total of 1,173,681 CY of material from this project (136,950 CY by agitation method and 1,036,731 CY by dredge and haul method).

An incidental take of a Kemp's ridley sea turtle occurred on September 10, 2006, between 1557 and 1641 hours during load number 799 for this project (Figures 3 and 4). A subsequent draghead deflector paint test performed the following day revealed that the deflector's configuration for working in the Calcasieu River bar channel was still maintaining at least a 6 inch penetration depth.

Throughout the dredging work, both biological and non-biological debris were recovered from the screens. Biological material was sparse and included wood, seagrass, blue crabs, shrimp, catfish and oyster shells. Non-biological material included trash, plastic, metal, rope, line, rubber, and rocks. Copies of the Endangered Species Observer Program Daily Reports are provided on the attached compact disk.

A Kemp's ridley was sighted on August 22, 2006 at about 1440 hours.

Below mid-depth water temperatures were not measured. Surface water temperatures were measured on all but six days when the hopper dredge was working. Surface water temperatures ranged from a low of 87.0° F (30.5°C) to a high of 92.0° F (33.3°C).

SEA TURTLE RELOCATION TRAWLING

Sea turtle relocation trawling was not performed for this maintenance work from in the Calcasieu River bar channel.

DISCUSSION

A Kemp's ridley sea turtle was incidentally taken on September 10, 2006, by the COLUMBIA (Attachment 1). An analysis of the silent inspector data for Load 799, when the sea turtle was taken, indicate that the COLUMBIA's draghead was lifted off of the channel bottom on two separate occasions during this load. When the dragheads were lifted off of the channel bottom and remained suspended in the water column to a depth of about 25 feet for both occasions, draghead pump suction velocity was reduced significantly. During these two occasions when the draghead was lifted off of the channel bottom, draghead pump suction velocity was reduced from an average of 20 feet/second during contact with the channel bottom to about 1-2 feet/second and 10 feet/second, respectively. Because no studies have been performed to specifically address the relationship between draghead suction velocity when dragheads are suspended in the water column and the likelihood of entraining sea turtles occurring in the immediate vicinity of suspended dragheads, it is impossible to ascertain if a draghead suction velocity of 10 feet/second is sufficient to result in entrainment of a sea turtle while the draghead is suspended in the water column and not resting firmly on the channel bottom.

A Kemp's ridley sea turtle was sighted in the channel by observers on August 22, 2006. An old sea turtle vertebral bone was recovered from the ATCHAFALAYA's in-flow screens on June 18, 2006.

Surface water temperatures during this work were relatively stable with little to no variation and remained well within the range of sea turtle tolerances (with 80° F (26.7°C) being the lower limit threshold).

SEA TURTLE STRANDING AND SALVAGE NETWORK

Throughout this hopper dredging work, coordination was conducted with the Sea Turtle Stranding and Salvage Network. There were no reports of stranded turtles that bore injuries consistent with a potential encounter with a hopper dredge.

SUMMARY

Two hopper dredges, the ATCHAFALAYA and the COLUMBIA, were employed in this Calcasieu River bar channel maintenance effort between June 14, 2006, and September 13, 2006. Relocation trawling was not required during this maintenance dredging work. A Kemp's ridley sea turtle was incidentally taken and another Kemp's ridley sea turtle was sighted in the channel during this work. Water temperatures were within the range of sea turtle tolerances.

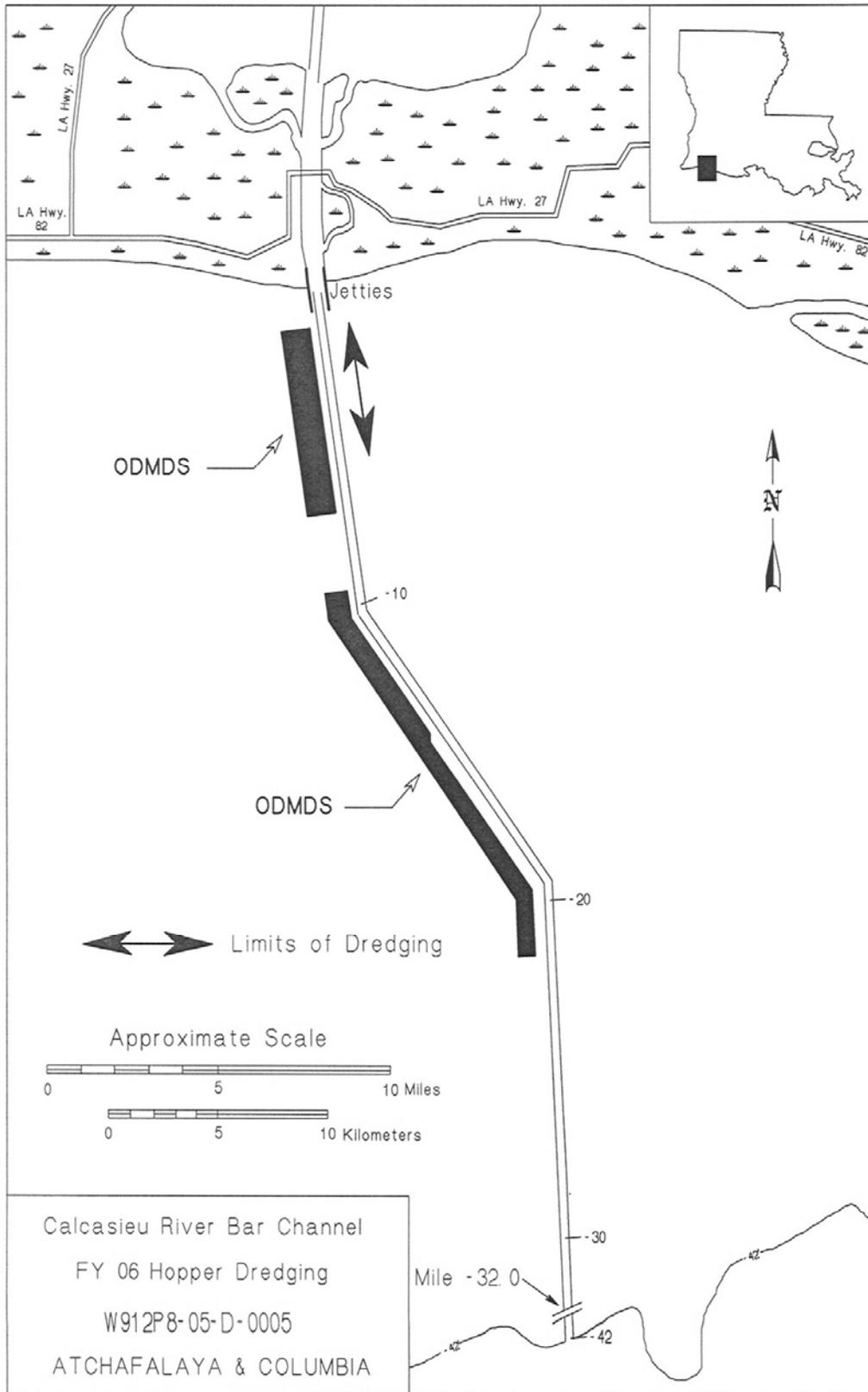


Figure 1



Figure 2. COLUMBIA draghead deflector modification.



Figure 3. Kemp's ridley sea turtle take on 10 September 2006.



Figure 4. Kemp's ridley sea turtle take on 10 September 2006.

ENDANGERED SPECIES OBSERVER PROGRAM
SEA TURTLE INCIDENTAL TAKE DATA FORM

USACE DISTRICT: NEW ORLEANS

PROJECT NAME: CALCASIEU BAR RENTAL

DREDGE NAME: M/V COLUMBIA

DATE: 10 SEP 06

Time turtle take recovered (24hr): 1641 Turtle take # for project: 1

LOAD #: 799

Times (24hrs): Start 1557 End 1641 Load start date 10SEP06

SPECIES OF TURTLE TAKE: Unknown Loggerhead Green Kemp's ridley Hawksbill Leatherback

Channel location of take: Latitude _____ Longitude _____

Other location / Channel description (e.g. buoy markers, landmarks): _____

Location take recovered on dredge: FOUND IN LANDER.

Number of dragheads in use at time of incident: 1 Draghead deflector? YES NO

Condition of deflector: GOOD Condition of screening: _____

Beaufort Sea State: 0 1 2 3 4 5 6 7 8 9 10 11 12

AIR TEMP: 85 °C/F (°F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))

WATER TEMP: Surface 88 °C/F Column (mid-depth) _____ °C/F Bottom _____ °C/F

Condition of specimen: Fresh dead - Fractured carapace and
Plastron - Fully intact Juvenile

0 = Alive; 1 = Fresh dead; 2 = Moderately decomposed; 3 = Severely decomposed; 4 = skeleton/old bone; 5 = undetermined

Sex: M F UN How determined? _____ Age class: Juv Sub-Adult Adult UN

Measurements: Circle units

Plastron Length: _____ cm/in Head Width: _____ cm/in

Carapace Straight Length: _____ cm/in Plastron Width: _____ cm/in

Carapace Curved Length: 38.1 cm/in Carapace Straight Width: _____ cm/in

Carapace Curved Width: _____ cm/in

Measurement/description of part: _____

Genetic samples taken: YES NO Photos taken: YES NO

Turtle tagged?: YES NO Tag type: _____ Tag #: _____ Tag date: _____

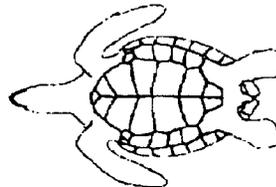
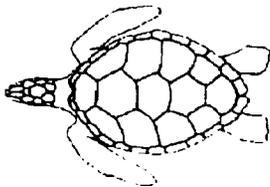
Final disposition of specimen: DISPOSED OF AT SEA

Comments: _____

Load data form attached: YES NO Dredge load log attached: YES NO

Observer's name Jennifer Scott

Use diagrams below to illustrate specimen/part recovered:



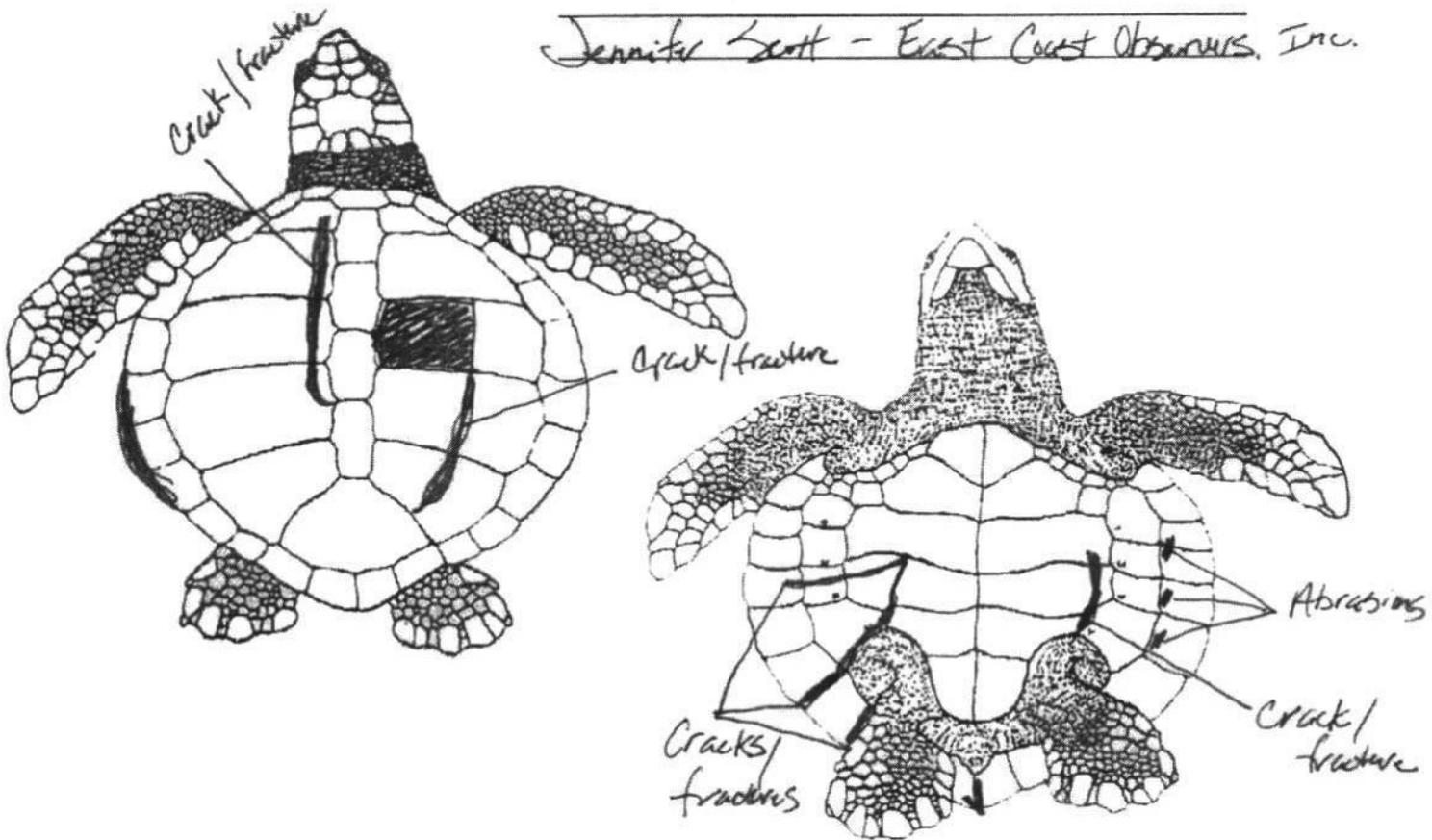
Kemp's Ridley (*Lepidochelys kempii*)

Shade areas of turtle that are missing; sketch cracks and lacerations

Comments: Deep, penetrating fractures through
Carapace & plastron. (R) half of
third marginal scute missing.
All extremities intact. This is
a juvenile ridley - sex undetermined.

- Load # 799 @ 1641 hrs -
found in lander upon
inspection

Jennifer Scott - East Coast Observers, Inc.



Diagrams by Tom McFarland

LOAD DATA FORM

USACE DISTRICT: New Orleans, LA
 CONTRACT # W912P8-05-D-0005 Task Order 3 Maintenance X/New Work Project start date 5/25/06
 PROJECT NAME: Calcasieu Bar Rental DREDGE NAME: M/V Columbia
 DREDGE FIRM: B + B Dredging
 LOAD #: 799 LOAD start date 10 Sept 2006 Times (24hrs): Start 1557 End 1641

Condition of screening: Port Good Starboard N/A Overflow N/A

Number of dragheads in use: 1 Type of draghead used: Standard TED Size of draghead: 6'
 Draghead deflector? YES X NO Condition of deflector: Good

Type of material dredged: Mud
 Weather conditions: Cloudy

Tidal stage (CIRCLE ONE): Slack Rising High Falling Low Unknown

Beaufort Sea States (Winds/Wave Height) (Circle One)
 0 = <1 knot / 0ft 3 = 7 - 10 knot/ 2 ft 6 = 22 - 27 knot/ 10 ft 9 = 41 - 47 knot/ 23 ft 12 = >63 knot/ 45 ft
 1 = 1 - 3 knot/ 0.25 ft 4 = 11 - 16 knot/ 4 ft 7 = 28 - 33 knot/ 14 ft 10 = 48 - 55 knot/ 29 ft
 2 = 4 - 6 knot/ 0.5 ft 5 = 17 - 21 knot/ 6 ft 8 = 34 - 40 knot/ 18 ft 11 = 56 - 63 knot/ 37 ft

Waves 2 Wind (speed & direction) SW @ 5-10K

AIR TEMP: 85 °C / °F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))

WATER TEMP: Surface 82 °C / °F Column (mid-depth) °C / °F Bottom °C / °F

SCREEN TYPE X Inflow screening: None 25% 50% 75% 100%
N/A Overflow screening: None 25% 50% 75% 100%
N/A Other screening: None 25% 50% 75% 100%

PORT SCREEN CONTENTS: Kemp's ridley - trash / debris

STARBOARD SCREEN CONTENTS: N/A

Estimate number entrained on this load for the following:
 Sturgeon (any species)
 Shark (any species)
 Horseshoe crab
 Blue crab

TURTLE OR TURTLE PARTS PRESENT THIS LOAD: YES X NO
 SPECIES OF TURTLE TAKE: Unknown Loggerhead Green Kemp's ridley Hawksbill Leatherback

Comments: Juvenile Kemp's ridley take

Number observers used / 24 hrs: 2 % Monitoring / 24 hrs: None 25% 50% 75% 100%

Observer's name: Jennifer Scott Observer firm: ECO, Inc.
 Observer's signature: J. Scott