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December 21, 2005

2130-05-20244
2120-052-2935

National Marine Fisheries Service Northeast Region
Protected Resources Division
One Blackburn Drive
Gloucester, MA 01930
Attention: Pasquale Scida

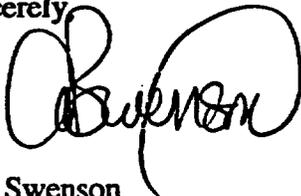
Dear Mr. Scida:

Subject: OYSTER CREEK GENERATING STATION (OCGS)
DOCKET NO. 50-219
ANNUAL SEA TURTLE INCIDENTAL TAKE REPORT - 2005

Enclosed is a copy of the 2005 Annual Sea Turtle Incidental Take Report for the Oyster Creek Generating Station. The report is submitted in accordance with Condition 10 of the Incidental Take Statement of the OCGS Endangered Species Act Biological Opinion.

If you have any questions concerning this submittal, please contact Ms. Kathy Barnes, Sr. Regulatory Specialist at 609-971-4970 or Mr. Malcolm Browne, Environmental Specialist, at 609-971-4124.

Sincerely,



Bud Swenson
Vice President
Oyster Creek

BS/DF

Enclosure

cc: NRC Document Control Desk
Administrator, Region I
NRC Project Manager
Senior Resident Inspector

JE25

ANNUAL REPORT OF SEA TURTLE INCIDENTAL TAKES - 2005

OYSTER CREEK GENERATING STATION

LICENSE NO. DPR-16

DOCKET NO. 50-219

Prepared by:

AMERGEN ENERGY COMPANY

December 2005

Introduction

The Annual Report of Sea Turtle Incidental Takes provides a summary of the incidental takes of all species of sea turtles at the Oyster Creek Generating Station (OCGS) during the past year. The report is required by Condition 10 of the Incidental Take Statement of the OCGS Endangered Species Act, Section 7 Consultation, Biological Opinion. This report covers all incidental takes which occurred during 2005.

Incidental Take Reports documenting the circumstances of incidental takes of sea turtles are completed following any OCGS sea turtle incidental take and are provided to NMFS and USNRC. Incident reports concerning the taking of endangered sea turtles entitled "Sea Turtle Incidental Take Report 2005-1 and 2005-2" are provided as Attachments I and II, respectively. The circumstances surrounding the two incidental takes that occurred during 2005 are summarized below. In both cases the incidental takes were reported to the Nuclear Regulatory Commission and the National Marine Fisheries Service within 24 hours of the incidental take. Inspections and cleaning of cooling water intake trash bars continue to be conducted in accordance with Conditions 1 and 4 of the Incidental Take Statement.

Annual Summary of Sea Turtle Incidental Takes – 2005

INCIDENTAL TAKE OF JULY 4, 2005

At approximately 9:05 AM on Monday July 4, 2005, an OCGS Operator performing a routine cleaning of the trash racks noticed a sea turtle among the vegetation, seaweed and debris removed from Bay # 4 of the dilution water intake structure. The turtle was retrieved as gently as possible using only a dipnet. It appeared to be dead and slightly decomposed, indicating that it may have died several hours or more prior to collection. In accordance with OCGS procedures, Operators initiated resuscitation of the sea turtle but were unable to revive it. The Marine Mammal Stranding Center representative who took custody of the turtle confirmed it to be a juvenile Kemp's ridley sea turtle (Lepidochelys kempfi). The water temperature at the time of the incidental take was approximately 24.3°C (75.8°F) and the OCGS was operating at 100 percent power with four circulating water pumps and two dilution pumps in operation. Although it is impossible to say precisely how long the turtle had been on the trash bars prior to removal, the dilution water trash racks had been inspected earlier the same day at approximately 5:00 AM. The turtle was not observed during that trash rack inspection and cleaning.

The turtle measured 23.2 cm (9.1 in) carapace length straight line and weighed 1.4 kg (3.0 lb). The turtle exhibited some severe slice wounds including a partially crushed and sliced skull as well as a sliced carapace, most probably the result of a boat propeller collision. Some small scrapes were observed on the ventral surface of the carapace. It was not possible to determine definitively whether the turtle had died prior to arriving at OCGS or as a result of interaction with the OCGS intake. No tags were present on the turtle when taken. USNRC and NMFS personnel were notified of the incidental take within 24 hours.

The turtle was taken to the MMSC in Brigantine, NJ during the early afternoon on July 4, 2005. At the MMSC, the turtle was examined, photographed and measured and a necropsy was performed. MMSC personnel indicated that the necropsy indicated that the turtle was an immature male with no digesta present in the esophagus or small intestine. The necropsy indicated the cause of death may have been the result of a prop or skeg wound. The turtle was buried by MMSC personnel at Brigantine, NJ.

INCIDENTAL TAKE OF AUGUST 5, 2005

At approximately 5:00 AM on Friday August 5, 2005, an OCGS operator performing a routine cleaning of the trash racks noticed a live sea turtle swimming below the water surface within Bay # 4 of the dilution water intake structure. The operator retrieved the turtle as gently as possible. The turtle appeared to be alive and moving about normally but a wound to a portion of the

left front flipper was apparent. The injury indicated a previous entanglement with a line or net. The Marine Mammal Stranding Center representative who took custody of the turtle the same morning confirmed it to be a juvenile Kemp's ridley sea turtle (Lepidochelys kempi). The water temperature at the time of the incidental take was approximately 28.2°C (82.7°F) and the OCGS was operating at 100 percent power with four circulating water pumps and two dilution pumps in operation. Although it is impossible to say precisely how long the turtle had been on the trash bars prior to removal, the dilution water trash racks had been inspected only about one hour earlier the same day at approximately 4:00 AM. The turtle was not observed during that inspection.

The turtle measured 23.6 cm (9.3 in) carapace length straight line and weighed 1.9 kg (4.2 lb). The turtle exhibited the previously mentioned wound to the left front flipper. However, the turtle appeared to be in good health and moving about normally after its gentle retrieval from the water at OCGS. No external tags were present on the turtle when taken. USNRC and NMFS personnel were notified of the incidental take within 24 hours.

The turtle was taken to the MMSC in Brigantine, NJ during the morning of August 5, 2005. At the MMSC, the turtle was examined, photographed and held to ensure it was feeding well. The turtle was transferred August 6, 2005 to the Karen Beasley Sea Turtle Rescue and Rehabilitation Center in Topsail Island, NC for further rehabilitation. The turtle was again transferred August 12, 2005 to the North Carolina State Veterinary School, where amputation of the turtle's left front flipper was performed.

Comparison of Annual Sea Turtle Incidental Takes With Prior Years

Regarding trends in the number of incidental sea turtle takes at the OCGS, two incidental takes occurred during 2005 which is similar to the longterm average of slightly over two incidental takes per year recorded over the last decade. However, the annual abundance of sea turtles in this vicinity appears to be highly variable, unpredictable, and unrelated to the operation of the OCGS. There are several factors that may influence the number of sea turtle incidental takes which occur at the OCGS. Barnegat Inlet, the only tidal inlet in the vicinity of Oyster Creek, which provides access to Barnegat Bay from the Atlantic Ocean, was deepened during dredging operations in the early 1990's. Completion of the Barnegat Inlet dredging operation resulted in an increase in the tidal prism, or volume of water entering and exiting the inlet on a single tidal cycle, as well as a slightly greater tidal range at Oyster Creek. The deepening of Barnegat Inlet and associated waterway channels was completed immediately prior to 1992, when incidental takes of sea turtles began to occur at OCGS, and may partially explain the occurrence of the turtles.

It is likely that the local variability of sea turtle abundance is also related to biological factors including the abundance of organisms on which sea turtles prefer to feed, such as blue crabs, horseshoe crabs, and calico crabs. Blue crabs have been particularly abundant in Barnegat Bay in recent years, in contrast to other coastal bays along the Atlantic coast such as Chesapeake Bay. Physical factors, such as an oceanic front or an oceanic gyre occurring unusually close to Barnegat Inlet, may also play a part in the prevalence of sea turtles near Oyster Creek because oceanic fronts have been shown to be used as a migratory and forage habitat by sea turtles (Polovina et al, 2000). Experience has also shown that the passage of a severe storm or pressure system near Barnegat Inlet can cause major increases in winds, waves, tides and tidal prism in shallow estuarine waters such as Barnegat Bay. These events could increase the likelihood of slowly swimming organisms such as sea turtles occurring in the estuary. Despite the record number of named tropical storms and hurricanes that occurred during 2005, few major tropical storms occurred along the local portion of the Atlantic coast which could have caused sea turtles to seek or remain within shallow estuarine areas such as Barnegat Bay for longer periods of time than normal.

Many years of environmental sampling conducted near the OCGS have repeatedly demonstrated that the abundance of various marine organisms can vary considerably from year to year, often by orders of magnitude. This is particularly true for seasonal migrants, whose abundance in Barnegat Bay is highly dependent upon physical and biological factors along the migratory route. Therefore, the observed annual variation in sea turtle incidental takes at the OCGS from a minimum of zero to a maximum of eight per year is not considered particularly significant. The ultimate goal of the considerable effort being put forward at the OCGS for the protection of sea turtles is to protect the turtles that do arrive at the plant, and to release as many turtles as possible to safety. The OCGS program for

the protection of threatened and endangered sea turtles can be considered to be quite successful because most of the sea turtles incidentally captured at OCGS since 1992 have subsequently been released alive and well, to the Atlantic Ocean in locations free from potential cold-shock, due to the efforts of OCGS personnel.

The two incidental takes of Kemp's ridley turtles during 2005 at the OCGS did not exceed the Incidental Take Statement (ITS) limit, which was recently increased to a maximum of eight Kemp's ridleys per year with no more than four lethal takes per year. The one lethal Kemp's ridley take at the OCGS during 2005 was determined by necropsy to have most likely been the result of a collision with a boat. This is a particularly plausible explanation given that the turtle was taken on July 4, which is typically the date of heaviest recreational boat traffic in Barnegat Bay near the OCGS.

References

Polovina, J.J., D.R. Kobayashi, D.M. Ellis, M.P. Seki, and G.H. Balazs. 2000. Turtles on the edge: Movement of loggerhead turtles (*Caretta caretta*) along oceanic fronts in the central North Pacific, 1997-1998. *Fish. Oceanogr.*, 9: 71-82.

ATTACHMENT I

**SEA TURTLE INCIDENTAL TAKE REPORT
2005-1**

OYSTER CREEK GENERATING STATION

Sea Turtle Incidental Take Report 2005-1

At approximately 0905 hours on Monday July 4, 2005, an Oyster Creek Generating Station (OCGS) operator performing a routine cleaning of the trash racks noticed a sea turtle among the aquatic vegetation, seaweed and debris accumulated within Bay # 1 of the dilution water intake structure. The operator retrieved the turtle as gently as possible using only a dipnet. The turtle appeared to be dead and slightly decomposed, indicating that it may have died several hours or more prior to collection. The Marine Mammal Stranding Center representative who took custody of the turtle the same morning confirmed it to be a juvenile Kemp's ridley sea turtle (Lepidochelys kempi). The water temperature at the time of the incidental take was approximately 75.8 F (24.3 C) and OCGS was in operation at 100% power with four circulating water pumps and two dilution pumps in operation. Although it is impossible to say precisely how long the turtle had been near the dilution structure prior to removal, the dilution water trash racks and intake bays had been inspected just a few hours earlier the same day at approximately 0500 hours. The turtle was not observed during that inspection and cleaning.

The turtle measured 9.1 in (23.2 cm) carapace length straight line and weighed 3 lb (1.4 kg). The turtle exhibited severe slice wounds including a partially crushed and sliced skull as well as a sliced carapace, most probably the result of a boat propeller collision. Some small scrapes were observed on the ventral surface of the carapace. It was not possible to determine exactly when or how the turtle had died prior to arriving at OCGS. However, because of the nature of its wounds prior to its gentle retrieval from the water at OCGS, its death did not appear to have been a result of interaction with the OCGS intake. No tags were present on the turtle when captured. USNRC and NMFS personnel were notified of the capture within 24 hours on July 4, 2005.

The turtle was taken to the Marine Mammal Stranding Center (MMSC) in Brigantine, NJ during the early afternoon of July 4, 2005. At the MMSC, the turtle was examined, measured and a necropsy performed. The turtle was buried by MMSC personnel in Brigantine, NJ.

SEA TURTLE STRANDING AND SALVAGE NETWORK - STRANDING REPORT

OBSERVER'S NAME / ADDRESS / PHONE:
 First Brandi M.I. Last Biehl
 Affiliation Marine Mammal Stranding Center
 Address PO Box 773, 3625 Brigantine Blvd., Brigantine, NJ 08203
 Area code/Phone number (609) 266-0538

STRANDING DATE:
 Year 20 05 Month 07 Day 04
 Turtle number by day 01
 Field ID # MMSC-05-142
 Coordinator must be notified within 24 hrs; this was done by phone (609)266-0538
 email fax

SPECIES: (check one)
 CC = Loggerhead
 CM = Green
 DC = Leatherback
 EI = Hawksbill
 LK = Kemp's Ridley
 LO = Olive Ridley
 UN = Unidentified
 Check Unidentified if not positive. Do Not Guess.

Carcass necropsied? Yes No
 Photos taken? Yes No
 Species verified by coordinator?
 Yes No

SEX:
 Undetermined
 Female Male
 Does tail extend beyond carapace?
 Yes; how far? _____ cm / in
 No
 How was sex determined?
 Necropsy
 Tail length (adult only)

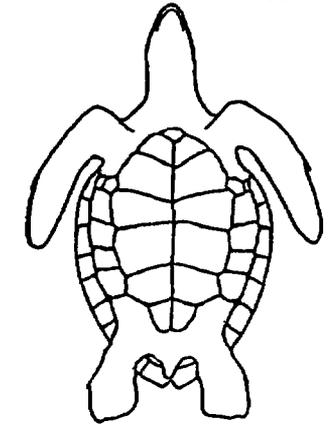
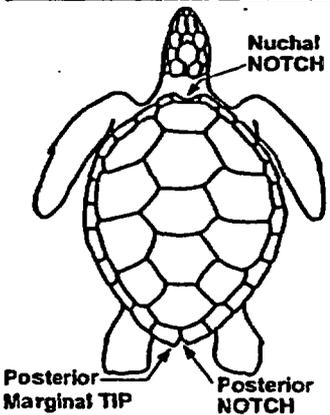
STRANDING LOCATION: Offshore (Atlantic or Gulf beach) Inshore (bay, river, sound, inlet, etc.)
 State NJ County Ocean
 Descriptive location (be specific) Forked River, Oyster Creek Nuclear Power Plant, impinging on water intake grating.
 Latitude 39° 48.85' N Longitude 74° 12.42' W

CONDITION: (check one)
 0 = Alive
 1 = Fresh dead
 2 = Moderately decomposed
 3 = Severely decomposed
 4 = Dried carcass
 5 = Skeleton, bones only

FINAL DISPOSITION: (check)
 1 = Left on beach where found; painted? Yes* No
 2 = Buried: on beach / off beach; carcass painted before buried? Yes* No
 3 = Salvaged: all / part(s), what/why? _____
 Muscle for Genetics (NMFS)
 4 = Pulled up on beach/dune; painted? Yes* No
 6 = Alive, released
 7 = Alive, taken to rehab. facility, where? _____
 8 = Left floating, not recovered; painted? Yes* No
 9 = Disposition unknown, explain _____
 *If painted, what color? _____

TAGS: Contact coordinator before disposing of any tagged animal!!
 Checked for flipper tags? Yes No
 Check all 4 flippers. If found, record tag number(s) / tag location / return address
None found
 PIT tag scan? Yes No
 If found, record number / tag location
None found
 Coded wire tag scan? Yes No
 If positive response, record location (flipper)
 Checked for living tag? Yes No
 If found, record location (scute number & side)
None found

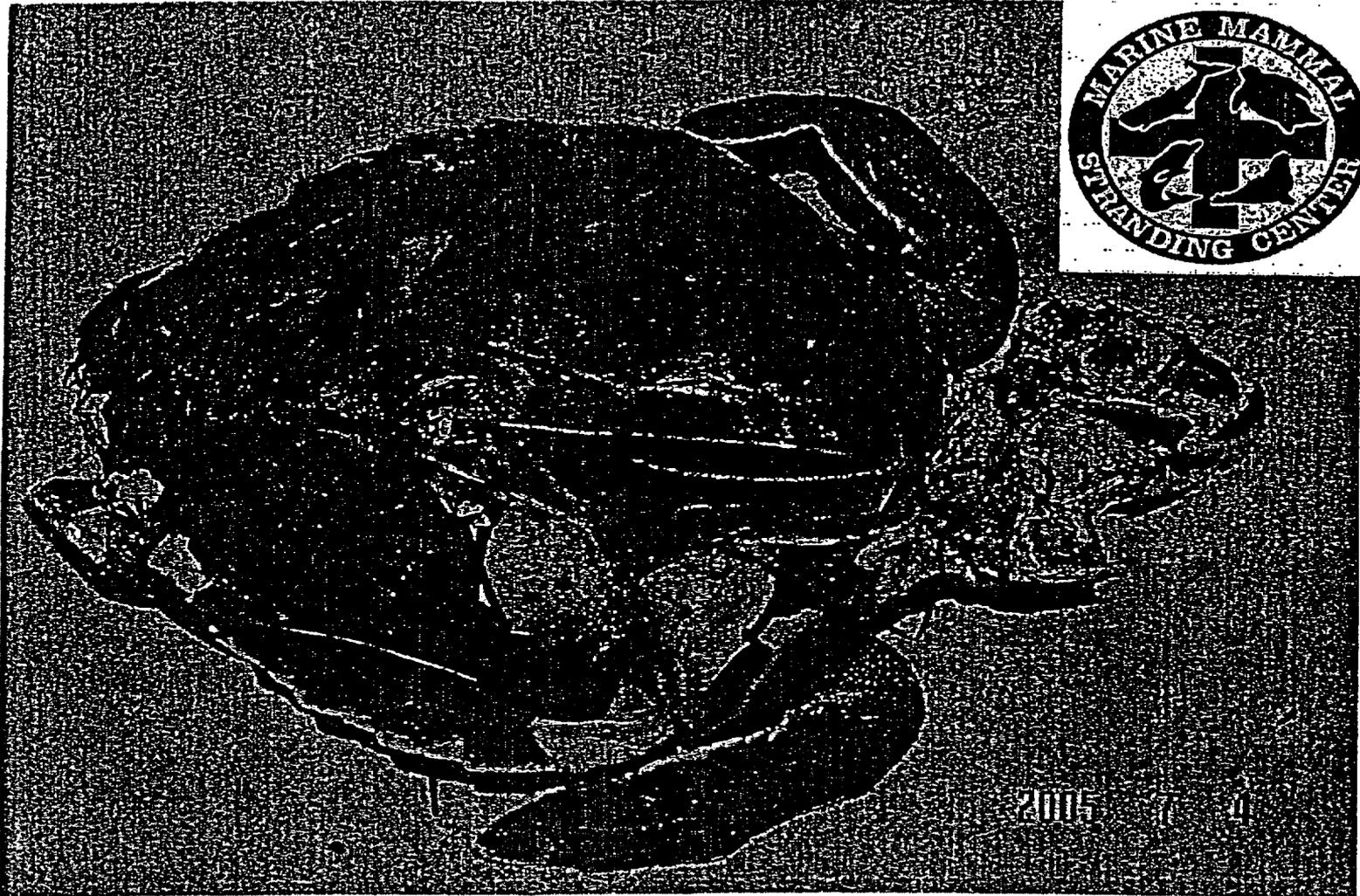
CARAPACE MEASUREMENTS: (see drawing)
 Using calipers Circle unit
 Straight length (NOTCH-TIP) 23.2 cm / in
 Minimum length (NOTCH-NOTCH) _____ cm / in
 Straight width (Widest Point) 21.0 cm / in
 Using non-metal measuring tape Circle unit
 Curved length (NOTCH-TIP) _____ cm / in
 Minimum length (NOTCH-NOTCH) _____ cm / in
 Curved width (Widest Point) _____ cm / in
 Weight actual / est. 3.0 kg / lb

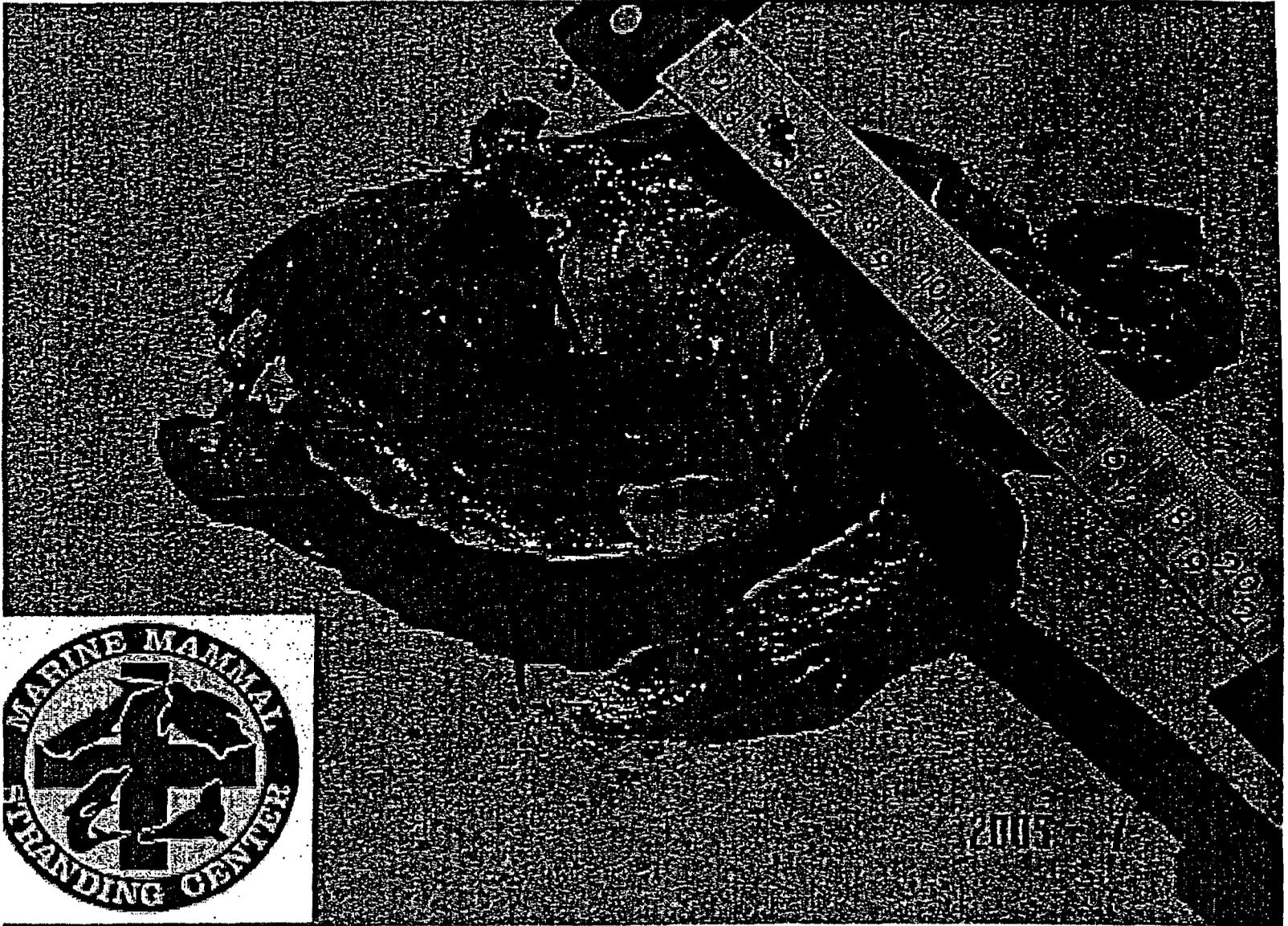


Mark wounds / abnormalities on diagrams at left and describe below (note tar or oil, gear or debris entanglement, propeller damage, epibiota, papillomas, emaciation, etc.). Please note if no wounds / abnormalities are found.
Skull crushed through right orbital (possible prop strike). Right carapace near shoulder (RFF) cracked (possible prop or skeg wound). Unable to determine if injuries were pre or post-mortem. Photos, measurements, necropsy and burial by MMSC staff. Esophagus: lined with a black, gritty material. Stomach: devoid of any ingesta. Small intestine: milky-yellow mucous, no digesta present. Large intestine/colon: dark-brown, moist, loosely formed feces. Heart: no observed parasites, no gross lesions. Sex determined by necropsy: immature male.

OYSTER CREEK GENERATING STATION

Sea Turtle Incidental Take Report 2005-1





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ATTACHMENT II

**SEA TURTLE INCIDENTAL TAKE REPORT
2005-2**

OYSTER CREEK GENERATING STATION

Sea Turtle Incidental Take Report 2005-2

At approximately 0500 hours on Friday August 5, 2005, an Oyster Creek Generating Station (OCGS) operator performing a routine cleaning of the trash racks noticed a live sea turtle below the water surface within Bay # 4 of the circulating water intake structure. The operator retrieved the turtle as gently as possible. The turtle appeared to be alive and moving about normally but a wound to a portion of the left front flipper was apparent. The Marine Mammal Stranding Center representative who took custody of the turtle the same morning confirmed it to be a juvenile Kemp's ridley sea turtle (Lepidochelys kempii). The water temperature at the time of the incidental take was approximately 82.7 F (28.2 C) and OCGS was in operation at 100% power with four circulating water pumps and two dilution pumps in operation. Although it is impossible to say precisely how long the turtle had been near the circulating water intake structure prior to removal, the circulating water trash racks and intake bays had been inspected only about one hour earlier the same day at approximately 0400 hours. The turtle was not observed during that inspection.

The turtle measured 9.3 in (23.6 cm) carapace length straight line and weighed 4.2 lb (1.9 kg). The turtle exhibited a severe laceration near the base of the left front flipper. However, the turtle appeared to be in good health and moving about normally after its gentle retrieval from the water at OCGS. No tags were present on the turtle when captured. USNRC and NMFS personnel were notified of the capture within 24 hours on August 5, 2005.

The turtle was taken to the Marine Mammal Stranding Center (MMSC) in Brigantine, NJ during the morning of August 5, 2005. At the MMSC, the turtle was examined, measured and held for feeding and rehabilitation. The Sea Turtle Stranding and Salvage Network Stranding Report 05-162 pre The turtle was sent the following day from MMSC to the Sea Turtle Rescue and Rehabilitation Center in Topsail Beach, NC for further rehabilitation and medical evaluation. On August 12, the turtle was transported to the NC State Veterinary School for amputation of the wounded flipper. The turtle will undergo additional rehabilitation before being released into the Atlantic Ocean.

SEA TURTLE STRANDING AND SALVAGE NETWORK - STRANDING REPORT

OBSERVER'S NAME / ADDRESS / PHONE:

First Brandi M.I. N Last Biehl

Affiliation Marine Mammal Stranding Center

Address PO Box 773, 3625 Brigantine Blvd., Brigantine, NJ 08203

Area code/Phone number (609) 266-0538

STRANDING DATE:

Year 20 05 Month 08 Day 5

Turtle number by day 01

Field ID # 05-162

Coordinator must be notified within 24 hrs; this was done by phone (609)266-0538

email fax

SPECIES: (check one)

- CC = Loggerhead
- CM = Green
- DC = Leatherback
- EI = Hawksbill
- LK = Kemp's Ridley
- LO = Olive Ridley
- UN = Unidentified

Check Unidentified if not positive. Do Not Guess.

Carcass necropsied? Yes No

Photos taken? Yes No

Species verified by coordinator?
 Yes No

SEX:

Undetermined

Female Male

Does tail extend beyond carapace?

Yes; how far? _____ cm / in
 No

How was sex determined?

Necropsy

Tail length (adult only)

STRANDING LOCATION: Offshore (Atlantic or Gulf beach) Inshore (bay, river, sound, inlet, etc)

State NJ County Ocean County

Descriptive location (be specific) Forked River, Oyster Creek Nuclear Power Plant, impinged on water intake grating.

Latitude 39° 48. 85' N Longitude 74° 12. 42' W

CONDITION: (check one)

- 0 = Alive
- 1 = Fresh dead
- 2 = Moderately decomposed
- 3 = Severely decomposed
- 4 = Dried carcass
- 5 = Skeleton, bones only

FINAL DISPOSITION: (check)

1 = Left on beach where found; painted? Yes* No(5)

2 = Buried: on beach / off beach;
carcass painted before buried? Yes* No

3 = Salvaged: all / part(s), what/why?

4 = Pulled up on beach/dune; painted? Yes* No

6 = Alive, released

7 = Alive, taken to rehab. facility, where?

Topsail Sea Turtle Hospital (Topsail, NC)

8 = Left floating, not recovered; painted? Yes* No

9 = Disposition unknown, explain _____

*if painted, what color? _____

TAGS: Contact coordinator before disposing of any tagged animal!!

Checked for flipper tags? Yes No
Check all 4 flippers. If found, record tag number(s) / tag location / return address

PIT tag scan? Yes No

If found, record number / tag location

Coded wire tag scan? Yes No

If positive response, record location (flipper)

Checked for living tag? Yes No

If found, record location (scute number & side)

CARAPACE MEASUREMENTS: (see drawing)

Using calipers

Straight length (NOTCH-TIP) 23.6 cm in

Minimum length (NOTCH-NOTCH) _____ cm / in

Straight width (Widest Point) 21.5 cm in

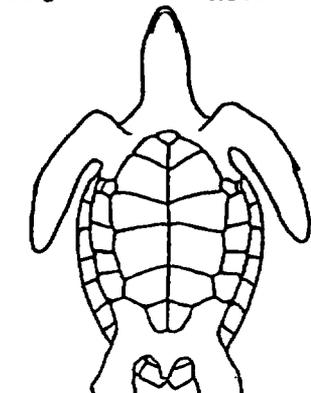
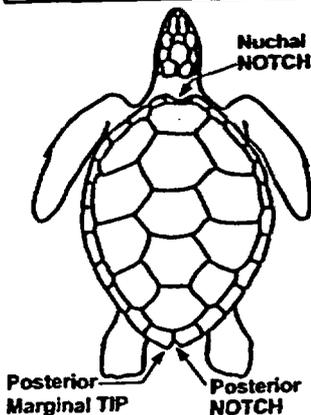
Using non-metal measuring tape

Curved length (NOTCH-TIP) _____ cm / in

Minimum length (NOTCH-NOTCH) _____ cm / in

Curved width (Widest Point) _____ cm / in

Weight actual / est. 4.2 kg lb



Mark wounds / abnormalities on diagrams at left and describe below (note tar or oil, gear or debris entanglement, propeller damage, epibiota, papillomas, emaciation, etc.). Please note if no wounds / abnormalities are found.

Responsive. Emaciated. Left front flipper has severe laceration extending 3/4 of the way across (small amount of muscle and tissue attaching it). Small abrasions to right front flipper. Injuries indicate a previous entanglement in a line or net. Taken to MMSC for evaluation. 08/06/05 Transferred to The Sea Turtle Hospital, Topsail, NC for further rehabilitation. 08/12/05 Left front flipper amputation by NC State Vet School.



- HOME PATIENT INDEX FACILITY AND STAFF SATELLITE TRACKING GIFTSHOP NESTING PHOTO ALBUM LINKS
- bay caretta holden II corenetta noaa hammock emeraldII sullivan quarter stacy III
- hanover boryk hope pounder II brunswick splash briggy

BRIGGY	KEMP'S RIDLEY Lepidochelys kemp Juvenile	ADMIT AUG 6, 2005	
		Weight	1.9 kg
		SCL:	cm
		SCW:	cm

THE STRANDING

Found with severe laceration to front flipper.



THE TREATMENT

Transported August 12 to the NC State Vet School for amputation of wounded flipper.