Exelon Generation.

10 CFR 50.2

August 23, 2016

RA-16-072

US Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Oyster Creek Nuclear Generating Station
Renewed Facility Operating License No. DPR-16
NRC Docket No. 50-219

Subject: Sea Turtle Incidental Take Report 2016-1

The attached report provides detailed information regarding the recent incidental take of a dead juvenile Kemp's ridley sea turtle at Oyster Creek Nuclear Generating Station (OCNGS) on August 1, 2016.

If you have any questions or require additional information, please do not hesitate to contact Kathryn Houlahan at (609) 971-2588.

Sincerely,

Michael F. Gillin

Michael F. Gillin
Plant Manager
Oyster Creek Nuclear Generating Station

Enclosures:
Incidental Take Report 2016-1 with photographs
Marine Mammal Stranding Center STSSN Report for turtle 2016-1

IE77
NRR

cc: Julie Crocker
U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Marine Fisheries Service Northeast Region
Protected Resources Division
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Gloucester, MA 01930

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Patrick Mulligan
NJ Department of Environmental Protection
Bureau of Nuclear Engineering
P.O. Box 420, Mail Code 33-01
Trenton, NJ 08625-0420

| | Incidental Take 2016-1 |
|---|---|
| **OPERATIONS DEPARTMENT:** | |
| Observer's full name: | William Thompson |
| Reporter's full name: | John Devenney |
| Species Identification (Key attached): | Kemp's ridley |
| *Site of Impingement (CWS or* DWS): | DWS |
| Bay Number: | 6 |
| Date animal observed: | 1-August-16 |
| Time animal observed: | 16:28 |
| Date animal collected: | 1-August-16 |
| Time animal collected: | 16:34 |
| **CONDITIONS AT COLLECTION:** | |
| Tidal Stage: | Low Tide |
| Cloud conditions: | Overcast |
| Precipitation: | None |
| Intake water temperature: | 81˚F |
| Other conditions | None |
| Number of CW pumps running: | 4 |
| Number of DW pumps running: | 2 |
| Reactor power level at observation: | 100% |
| Reactor power previous 48-hours: | 100% |
| Date of last screen inspection: | 1-August-16 |
| Time of last screen inspection: | 12:15 |
| **ENVIRONMENTAL DEPARTMENT:** | |
| Date Brigantine MMSC contacted: | 1-August-16 |
| Time Brigantine MMSC contacted: | 16:49 |
| Date Animal picked up by MMSC: | 2-August-16 |
| Time Animal picked up by MMSC: | 08:30 |
| State of animal when first observed: | Dead |

| | Incidental Take 2016-1 |
|---|---|
| State of animal when collected: | Dead |
| State of animal when picked up: | Dead |
| State of animal arriving at MMSC: | Dead, internal organs extremely friable, no obvious cause of death. |
| Final disposition of animal: | Dead, buried off the beach |
| Carapace Length - Curved | 26.2 cm |
| Carapace Length - Straight | 25.1 cm |
| Carapace Width - Curved: | 27.0 cm |
| Carapace Width - Straight: | 23.1 cm |
| Weight - lbs. (kg) | 3.2 lbs. |
| Existing Tag Number | no tag |
| Photograph attached | Yes |
| Diagram of wounds, abnormalities, tag locations attached | Yes |
| | Juvenile Kemp's ridley |
| Description of Animal | female |

# SEA TURTLE STRANDING AND SALVAGE NETWORK – STRANDING REPORT

**OBSERVER'S NAME / ADDRESS / PHONE:**
First Jay M.I. ___ Last Pagel
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 16 Month 08 Day 01
Turtle number by day 02
**Field ID #** MMSC-16-067
***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.***

**STRANDING LOCATION:** ☐ Offshore (Atlantic or Gulf beach) ☒ Inshore (bay, river, sound, inlet, etc)
State New Jersey County Ocean
Descriptive location (be specific) Forked River, OCNGS, impinged on cooling grate
Latitude 39.814141°N Longitude 74.207657°W

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

**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? ___
- ☐ 8 = Left floating, not recovered; painted? ☐ Yes* ☐ No
- ☐ 9 = Disposition unknown, explain ___

***If painted, what color?*** ___

**SEX:**
- ☐ Undetermined
- ☒ Female ☐ Male

Does tail extend beyond carapace?
☐ *Yes; how far?* ☐ cm/☐ in
☒ No
How was sex determined?
☒ Necropsy
☐ Tail length (adult only)

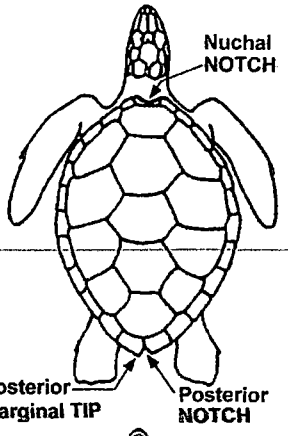
**TAGS:** ***Contact coordinator before disposing of any tagged animal!!***
Checked for flipper tags? ☒ Yes ☐ No
**Check all 4 flippers.** If found, record tag number(s) / tag location / return address

PIT tag scan? ☒ Yes ☐ No
If found, record number / tag location

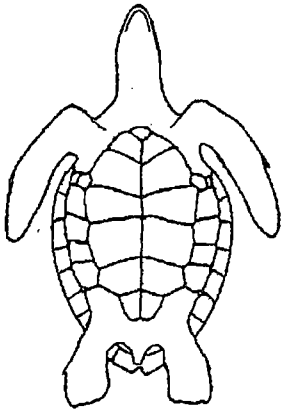
Coded wire tag scan? ☐ Yes ☒ No
If positive response, record location (flipper)
Unable to check for
Checked for living tag? ☒ Yes ☐ No
If found, record location (scute number & side)\

**CARAPACE MEASUREMENTS: (*see drawing*)**

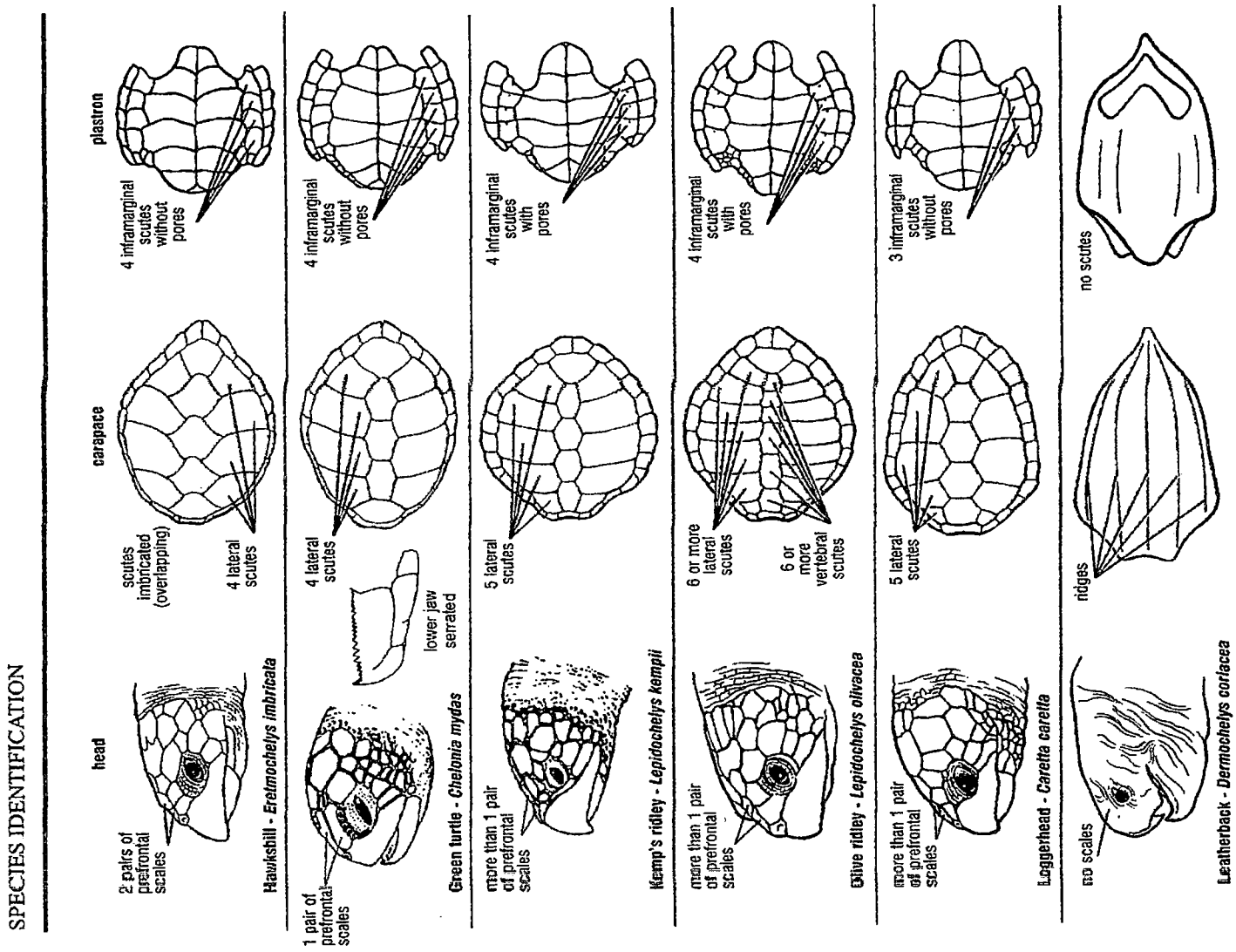
| **Using calipers** | | **Circle unit** |
|---|---|---|
| Straight length (NOTCH-TIP) | 25.1 | ☒ cm ☐ in |
| Minimum length (NOTCH-NOTCH) | | ☐ cm ☐ in |
| Straight width (Widest Point) | 23.1 | ☒ cm ☐ in |
| Using non-metal measuring tape | | **Circle unit** |
| Curved length (NOTCH–TIP) | 26.2 | ☒ cm ☐ in |
| Minimum length (NOTCH-NOTCH) | | ☐ cm ☐ in |
| Curved width (Widest Point) | 27 | ☒ cm ☐ in |
| | | **Circle unit** |
| **Weight** ☒ actual / ☐ est. | 3.2 | ☐ 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.**



Dead. Code 2. Found floating in cooling intake. Photos, measurements, necropsy, and disposal by MMSC staff. No obvious cause of death. Animal was well muscled but had very few fat deposits. GI tract was full of small crab parts. internal organs extremely friable. No obvious trauma or evidence of human interaction.




NMFS's Acceptable minimum Straight Carapace Lengths (SCL) for adult sea turtles. Any animal with a SCL's less than these listed are considered a juvenile animals; therefore, sex can ONLY be determined via necropsy:

| | |
|---|---|
| Leatherback | Unknown/undetermined minimum SCL |
| Loggerhead | SCL > 90 cm (35.43 inches) |
| Green | SCL > 95 cm (37.40 inches) |
| Kemp's Ridley | SCL > 60 cm (23.62 inches) |

*Please use an envelope and mail original form to:*

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MR. ROBERT SCHOELKOPF
NEW JERSEY STSSN COORDINATOR
MARINE MAMMAL STRANDING CENTER
P.O. BOX 773
BRIGANTINE, NJ 08203

# SEA TURTLE STRANDING AND SALVAGE NETWORK – GROSS NECROPSY REPORT

## IDENTIFICATION

1. STSSN #: _____ 2. Other state identifier/#: MMSC-16-067 3. Rehab: ☐Yes ☒No

4. Found dead: ☒Yes ☐No 5. If No, date of death __/__/__

6. Euthanized: ☐Yes ☒No 7. Frozen/Thawed: ☐Yes ☒No 8. Condition at necropsy: ☐1 ☒2 ☐3 ☐4 ☐5

9. Date necropsied: 08/03/16 10. Examiner: Jay Pagel 11. Affiliation: MMSC/Field Technician

12. Necropsy description: ☒External & internal examination ☐External examination only ☐Incomplete carcass

13. Disposition of carcass: ☐Buried on beach ☒Buried off site ☐Rendered ☐Incinerated ☐Other

14. Species: ☐CC ☐CM ☐DC ☒LK ☐EI ☐LO ☐UNK 15. Sex: ☐Male ☒Female ☐Undetermined

## EXTERNAL EXAMINATION

16a. Body weight: 3.2 ☐kg ☒lb 16b. ☒actual ☐ est. 17. Eyes sunken: ☐Yes ☒No 18. Skeletal features prominent: ☐Yes ☒No

19. Heavily encrusted w/ epibiota: ☐Yes ☒No 20. Leeches: ☐Yes ☒No 21. Gooseneck barnacles: ☐Yes ☒No

22. Epibiota coverage: 22a. Head/appendages: 0 % 22b. Carapace: 0 % 22c. Plastron: 0 %

23. External Trauma/evidence of Human Interaction (T/HI): ☐Yes ☒No (If yes, complete 25) Use STSSN scale in photos

24. Other anomalies: ☐Yes ☒No (If yes, complete 26) ☒ PHOTOGRAPHS TAKEN

**ANATOMIC LOCATION CODES:** Head (H) Neck(N) Eyes(E) Mouth(M) Carapace(C) Plastron(P) Tail(T) Vent(V)
*Use for 25a & 26a* Front flipper - Right (R) Left(L) Rear flipper - Right(F) Left(G) All appendages (Y)

**25a. T/HI-Type:** (check all that apply)
Enter anatomic codes in blanks: (Example: ⊗ Parallel slicing wounds(1) C )

☐Parallel slicing wounds(1)_____ ☐Single linear wound(2)_____
☐Partial/complete amputation(3)_____ ☐Blunt/crushing(4)_____
☐Fractures/Broken bones(5)_____ ☐Dislocations(6) _____
☐Probable bite wound(7)_____ ☐Bottom paint(8)_____
☐Ligature/entanglement-type(9)_____ ☐Puncture(10)_____
☐Entangling material attached(11)_____[a] ☐Tar in mouth(12)
☐Hook and/or line present (13)_____[a] [a] If yes, complete 25e
☐Other(14) _____,describe:_____

**25b.** ☐T/HI – multiple events

**25c. T/HI- Description:** (check all that apply)
Enter 25a. + anatomic codes: (Example: ⊗ Exudate/fibrin 1C )

☐Exudate/fibrin_____ ☐Fibrous tissue formation_____
☐Bone formation/remodeling_____ ☐Hemorrhage_____
☐Encapsulated sand/debris_____ ☐Blood clots_____
☐Completely healed_____ ☐Other_____ describe under 25d

Parallel slicing wounds (cm): Chord length: ___,___,___,___
Cut span: ___,___,___,___ width: ___,___,___,___
length: ___,___,___,___ depth: ___,___,___,___

Other wounds (cm): Diagram wounds/measurements on pg 3
Wound length: _____ width: _____ depth: _____

**25d. T/HI-Comments** (cont. pg 3): _____

**25e. T/HI-Fisheries/Entanglement data:** (Fisheries gear, other entangling material)

Gear type:
☐Netting ☐Line & pot ☐Line & buoy ☐Unknown gear/line
☐Hook ☐Monofilament ☐Braided line ☐Other

Number of wraps around body part: _____, location: _____[1] (use anatomic codes)
Additional areas:___,___[2]; ___,___[3]; ___,___[4]; ___,___[5] (Example: 4 , R )

☐Material removed prior to necropsy

Associated injury: (additional comment under 25d)
☐Ligature – skin incised/ulcerated
☐Ligature – full thickness (deep tissue/bone exposed)
☐Ligature – partially/completely healed

Gear description (color, shape, size): _____ T/HI-Material collected*: ☐Yes ☐No
Gear identification information: _____ Disposition of material: _____

**26a. Anomalies-Type:** (check all that apply)
Enter anatomic codes in blanks: (Example: ⊗ Ulcers(16) Y )

☐Fibropapillomas/Papillomas(15)_____ ☐Ulcers(16)_____
☐Crust/exudate(17)_____ ☐Masses (non-FP or uncertain)(18)_____
☐Other(19)_____

**26b.** ☐Anomalies: multiple types ☐ PHOTOGRAPHS TAKEN

**26c. Other anomalies-Description:** (check all that apply)
Extent of observation: *(Refer to Pap Map for FP turtles)*
Enter 26a. + anatomic codes: (Example: ⊗ 10-25% affected 16Y )

☐<5% surface affected_____ ☐10-25% affected_____
☐>25-50% affected_____ ☐>50% affected_____
☐Visual field involved_____ ☐Both eyes_____
☐Mouth obstructed_____

**26d. Anomalies-Comments** (cont. pg 3): _____

**INTERNAL EXAMINATION** (comments extended to page 3 – optional)

**NUTRITIONAL CONDITION - INTERNAL**

**27. Muscle status:** ☒Well-muscled/No atrophy ☐Mild to moderate atrophy ☐Severe atrophy

**28. Fat status:** ☐Abundant/No atrophy ☒Mild to moderate atrophy ☐Severe atrophy

**29a. CARDIOVASCULAR SYSTEM (heart/major vessels) – Examined:** ☒Yes ☐No **29b. Blood in Heart chambers:** ☒Yes ☐No

**29c. CV-Findings/Comments:** NSF

**30a. HEPATOBILIARY SYSTEM (liver and gall bladder) – Examined:** ☒Yes ☐No

**30b. Liver Findings:** ☒No significant findings ☐Severe atrophy (shrunken, black) ☐Trauma ☐Masses(describe under comments) ☐Other

**30c. HB-Findings/Comments:** NSF

**ANATOMIC LOCATION CODES:** Mouth(M) Esophagus(G) Stomach(S) Proximal intestine(P) Distal intestine(D) Cloaca(L)

**31a. ALIMENTARY SYSTEM (includes spleen and pancreas) – Examined:** ☒Yes ☐No

**31b. GI-Findings:** (check all that apply) **Enter anatomic codes in blanks:** (Example: ⊗ Ulcers(20)_D_)

☐Ulcers(20)_____ ☐Perforation (21)_____ ☐Masses(22)_____ ☐Impaction(23)_____ ☐Obstruction(24)_____
☐Intussusception(25)_____ ☐Perforation(26)_____ ☐Plication(27) ☐Other(28)_____

**31c. GI-percentage of affected area:** **Enter 31b. + anatomic codes:** (Example: ⊗ >25-50 affected_20D_)

☐<5%_____ ☐10-25%_____ ☐>25-50%_____ ☐>50%_____ ☐N/A

**31d. GI-Foreign material:** ☐Yes ☒No **(if yes, complete 32)**

**31e. Injury/lesion associated with foreign material:** ☐Yes ☐No **If yes, give entry for 31b:** _____(Example: _21,G_)

**GI-Contents**(include & note any biotic impacted material):

**31f. Esophagus:** ☒ Empty ☐ Contents, describe: _____

**31g. Stomach:** ☐ Empty ☒ Contents, describe: Small amount of crab hard parts.

**31h. Proximal intestine:** ☐ Empty ☒ Contents, describe: Crab hard parts throughout.

**31i. Distal intestine:** ☐ Empty ☒ Contents, describe: Crab hard parts throughout.

**31j. GI-Findings/Comments:** NSF

**32a. GI-Foreign material - type:** ☐Hook(29) ☐Line(30) ☐Hard plastic(31) ☐Plastic bag(32) ☐Balloon(33) ☐Tar(34) ☐Other(35)

**32b. Material/lesion location(s):** _____ (use anatomic codes) ☐ PHOTOGRAPHS TAKEN

**32c. Material collected*:** ☐Yes ☐No **Disposition of material:** _____

**32d. Foreign material-Description of material & comments:** _____

**33a. UROGENITAL SYSTEM (kidneys, reproductive, urinary bladder) – Examined:** ☒Yes ☐No

**33b. Gonads identified as:** ☐Testes(complete 31c-e) ☒Ovaries(complete 31f-h) ☐Unknown **(Indicate sex in Page 1, Field 15)**

**33c. Testes–characterization:** ☐Cylindrical ☐Ellipsoidal ☐Flat **33d. Testes-size:** ___length x ___width (cm)

**33e. Epididymis–characterization:** ☐Not expanded from wall ☐Distinct ridge ☐Pendulous ☐Obvious white coils

**33f. Ovaries–characterization:** ☒All follicles <4mm ☐Developing follicles (4-24mm) ☐Corpus luteum (>7mm) ☐Corpus albicans

**33g. Ovary length:** 1.6 (cm)

**33h. Oviduct–characterization:** ☒White, straight (<3mm diam) ☐Partially convoluted (3-15mm diam)
☐Very convoluted (>15mm diameter) ☐Contains eggs (>24mm)

**33i. UG-Findings/Comments:** NSF

**34a. RESPIRATORY SYSTEM – Examined:** ☒Yes ☐No

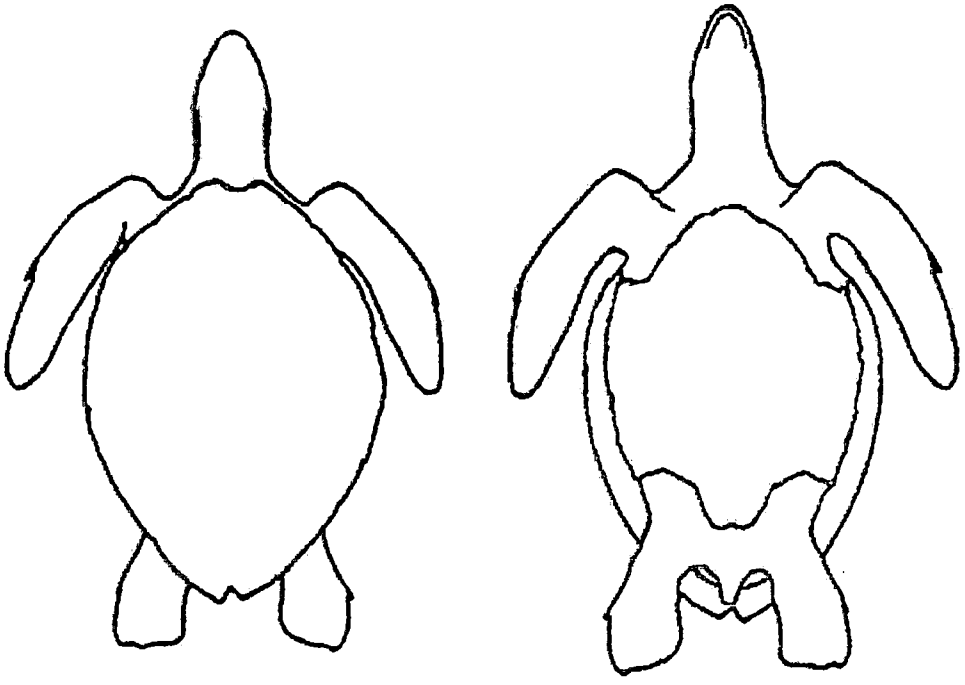
**34b. Foam/froth in trachea:** ☐Yes ☒No **34c. If froth present:** ☐Above bifurcation ☐Below bifurcation

**34d. Sand/sediment in trachea:** ☐Yes ☒No **34e. Lungs-hyperinflated:** ☐Yes ☒No ☐Don't know

**34f. Lungs–other anomalies:** ☒No significant findings ☐Exudate in airways ☐Masses ☐Aspirated debris ☐Other

**34g. RESP-Findings/Comments:** NSF

**35. Other Comments** (including nervous system or other observations):
No cause of death could be identified and there were no other significant findings.



| Specimen (label w/ ID#) | Fixed | Frozen-bagged | Frozen-Foil | Other (specify) |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

**DISCLAIMER**

*All fisheries gear should be submitted to Pascagoula (SE) or North Kingston (NE) NOAA laboratories for ID