

Technical Specifications
Appendix B, Section 3.5.1(A)

March 31, 2005

2130-05-20063
2120-052-2897

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

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

Subject: Annual Environmental Operating Report (AEOR) - 2004

Enclosed are two copies of the 2004 Annual Environmental Operating Report (AEOR) for the Oyster Creek Generating Station. The AEOR is submitted in accordance with Appendix B, Section 3.5.1(A) of the Oyster Creek Environmental Technical Specifications, as well as Condition 10 of the Incidental Take Statement of the OCGS Endangered Species Act, Section 7 Consultation, Biological Opinion.

If any further information or assistance is needed, please contact David Fawcett at 609-971-4284.

Sincerely,



C. N. Swenson
Vice President, Oyster Creek Generating Station

CNS/MB/DIF
Enclosure

cc: S. J. Collins, Administrator, USNRC Region I
P. S. Tam, USNRC Senior Project Manager, Oyster Creek
R. J. Summers, USNRC Senior Resident Inspector, Oyster Creek
File No. 05005

JE25

2004

ANNUAL ENVIRONMENTAL OPERATING REPORT

ENCLOSURE

OYSTER CREEK GENERATING STATION

LICENSE NO. DPR-16

DOCKET NO. 50-219

Prepared by:

AMERGEN ENERGY COMPANY, LLC

March 2005

1.0 Introduction

The Annual Environmental Operating Report (AEOR) provides a summary of the non-radiological environmental monitoring activities at the Oyster Creek Generating Station (OCGS) during the past year. The AEOR is required by Oyster Creek Environmental Technical Specification (OCETS) Appendix B, Section 3.5.1(A), as well as Condition 10 of the Incidental Take Statement of the OCGS Endangered Species Act, Section 7 Consultation, Biological Opinion. This AEOR covers the period from January 1, 2004 through December 31, 2004.

The OCGS is a boiling water reactor of 619 MWe maximum (summer) dependable net capacity, owned and operated by AmerGen Energy Company, LLC. The OCGS is located in Lacey Township, Ocean County, New Jersey. The plant is subject to Operating License No. DPR-16. The date of initial reactor criticality was May 3, 1969 and the commercial generation of power began on December 23, 1969.

2.0 Environmental Monitoring

This section is intended to address the results of environmental monitoring required to be implemented by Section 1.1 "Fish Kill Monitoring Program" of the OCETS during the reporting period. No reportable fish kills occurred at the OCGS during 2004.

3.0 Special Monitoring and Study Activities

Incidental Capture Reports documenting the circumstances of incidental captures of sea turtles during the reporting period are included in this report in accordance with Condition 10 of the Incidental Take Statement of the OCGS Endangered Species Act, Section 7 Consultation, Biological Opinion. Incident reports concerning the capture of endangered sea turtles entitled "Sea Turtle Incidental Capture Report 2004-1 through 2004-8" are provided as Attachments I through VIII, respectively. The circumstances surrounding the incidental captures that occurred during 2004 are summarized below. In all cases the incidental captures were reported to the Nuclear Regulatory Commission and the National Marine Fisheries Service within 24 hours of capture. 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

A juvenile Kemp's ridley sea turtle was captured dead after being gently removed from the dilution water system trash racks during the early afternoon of July 4, 2004. Operations personnel attempted to resuscitate the turtle without success. NRC

and NMFS were notified within 24 hours of the capture and the turtle was taken to the Marine Mammal Stranding Center (MMSC) in Brigantine, NJ by OCGS Environmental personnel. MMSC personnel examined the turtle and performed a necropsy on it. There were no obvious boat propeller wounds. Small bruises of unknown origin were observed on the ventral surface of the carapace but determined not to be a significant concern by MMSC personnel. After completing a necropsy on the turtle, MMSC personnel buried the carcass at Brigantine, NJ. According to the necropsy, the turtle was fresh dead but otherwise appeared healthy externally, and all internal organs appeared healthy and "otherwise unremarkable". Stomach contents consisted primarily of crab parts. Lungs appeared normal but sank in salt-water solution and felt compressed. Probable cause of death was considered to be suffocation, although it was impossible to tell whether death had occurred prior to or subsequent to arrival at the OCGS.

During the afternoon of July 11, 2004, a juvenile Kemp's ridley sea turtle was observed swimming in the water immediately upstream of the dilution water intake structure. The turtle appeared briefly at the water surface before diving out of sight. In accordance with OCGS procedures, operators immediately initiated efforts to retrieve the turtle as rapidly and gently as possible. The turtle was lively and appeared healthy with the exception of some very minor scrapes on the ventral surface of the carapace. The turtle was taken to the Marine Mammal Stranding Center (MMSC) in Brigantine, NJ on July 11, 2004. At the MMSC, the turtle was examined, measured and held to ensure it was feeding well. The turtle was released two days later to a safe location off of Brigantine, NJ.

At approximately 1100 hours on July 16, 2004, an OCGS operator performing a routine cleaning of the trash racks noticed a juvenile Kemp's ridley sea turtle among the vegetation and debris removed from the dilution water intake structure. The turtle appeared to be alive and in good condition when captured. Some small scrapes were observed on the plastron (undersurface of the carapace). No tags were present on the turtle when captured. The turtle was taken to the Marine Mammal Stranding Center (MMSC) in Brigantine, NJ the same afternoon. At the MMSC, the turtle was examined, fed and observed. The turtle was released by MMSC personnel to a safe location off of Brigantine, NJ.

During the early afternoon of July 20, 2004, an OCGS operator performing a routine cleaning of the trash racks noticed a sea turtle among the vegetation and debris removed from the circulating water intake structure. The turtle appeared to be either comatose or dead. In accordance with OCGS procedures, operators initiated resuscitation of the sea turtle but were unable to revive it. OCGS Environmental personnel who took custody of the turtle confirmed it to be a juvenile Kemp's ridley sea turtle (Lepidochelys kempii). The turtle measured only 7.2 in (18.3 cm) carapace length straight line and weighed just 1.8 lb (0.8 kg). A small puncture wound about 1.3 cm in diameter was observed on the left rear surface of the carapace, and internal organs were visible in that area. 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.

The turtle was taken to the Marine Mammal Stranding Center (MMSC) in Brigantine, NJ where it was examined, measured and a necropsy performed. The MMSC concluded that there was no obvious cause of death and buried the turtle at Brigantine, NJ.

During the morning of August 7, 2004, an OCGS operator performing a routine cleaning of the trash racks noticed a sea turtle among the vegetation and debris removed from the dilution water intake structure. The turtle appeared to be alive, healthy and moving about normally. OCGS personnel confirmed it to be a juvenile Kemp's ridley sea turtle (Lepidochelys kempi). A small and minor bruise on the plastron was noted. Also, a healed scar from a previous injury (i.e., not related to interaction with OCGS) was noted on the left side of the turtle's head immediately in front of its left eye. The turtle was taken to the Marine Mammal Stranding Center (MMSC) in Brigantine, NJ later the same morning, where it was examined, measured, observed, tagged and subsequently released to safety in the ocean off Brigantine, NJ.

During the morning of September 11, 2004, an OCGS operator performing a routine cleaning of the trash racks noticed a sea turtle among the vegetation and debris removed from the dilution water intake structure. The turtle appeared to be either comatose or dead. In accordance with OCGS procedures, operators initiated resuscitation of the sea turtle but were unable to revive it. OCGS Environmental personnel who took custody of the turtle confirmed it to be a juvenile Kemp's ridley sea turtle (Lepidochelys kempi). The turtle measured only 8.8 in (22.3 cm) carapace length straight line and weighed 4.8 lb (2.2 kg). A small puncture wound was observed on the underside of the neck. The turtle was taken to the Marine Mammal Stranding Center (MMSC) in Brigantine, NJ, where it was examined and measured. The turtle was transferred to the New Bolton Center of the University of Pennsylvania School of Veterinary Medicine, where a necropsy was performed. 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.

Late on the evening of September 12, 2004, an OCGS operator performing a routine cleaning of the trash racks noticed a sea turtle among the vegetation and debris removed from the circulating water intake structure. The turtle appeared to be healthy, alert and moving about normally. OCGS Environmental personnel confirmed it to be a juvenile Kemp's ridley sea turtle. The turtle measured only 8.3 in (21.0 cm) carapace length straight line and weighed just 3.1 lb (1.4 kg). The left front flipper was nearly entirely missing due to a previous injury that had completely healed. No tags or scarring from tags were present on the turtle when captured. USNRC and NMFS personnel were notified of the capture within 24 hours on September 13, 2004. The turtle was taken early the next morning to the MMSC in Brigantine, N, where it was examined, measured, fed and held for subsequent release. The turtle was transported to Virginia Marine Science Museum during the week of September 27, 2004 for PIT tagging and release to the Atlantic Ocean. Release of the turtle from a more southerly locale was arranged in order to help avoid autumn cold stunning effects that could occur if it were released from a New Jersey location at this time of year.

Late on the evening of September 23, 2004, an OCGS operator performing a routine cleaning of the trash racks noticed a sea turtle among the vegetation and debris removed from the circulating water intake structure. The turtle appeared to be alert and responsive. OCGS Environmental personnel who took custody of the turtle confirmed it to be a juvenile Kemp's ridley sea turtle. Small abrasions on the underside of the carapace of the turtle were observed. No tags or scarring from previous tags were present on the turtle when captured. The turtle was taken to the MMSC in Brigantine, NJ at approximately 0600 hours on September 24, 2004. At the MMSC, the turtle was examined, measured, fed and held for observation prior to release. The turtle was transported to Virginia Marine Science Museum during the week of September 27, 2004 for PIT tagging and release to the Atlantic Ocean. Release of the turtle from a more southerly locale was arranged in order to help avoid autumn cold stunning effects that could occur if it were released from a New Jersey location at this time of year.

Regarding trends in the number of incidental sea turtle captures at the OCGS, eight incidental captures occurred during 2004 which is considerably more than the long term average of slightly over two incidental captures per year recorded over the last decade. Also notable was the fact that all of the sea turtles incidentally captured at OCGS during 2004 were Kemp's ridley juveniles.

Only two incidental captures occurred at OCGS during each of the prior two years. 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 were no operational changes undertaken at OCGS which would have been expected to lead to an increase in sea turtle captures. However, there are several factors that may influence the number of sea turtle incidental captures which occur at the OCGS. Barnegat Inlet, the only tidal inlet in the vicinity of Oyster Creek, and 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 captures 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. Crabs are the preferred food of Kemp's ridley turtles and have been found in the stomachs of turtles incidentally captured at OCGS and which were subsequently necropsied. Blue crabs have declined in abundance over the past several years to historic low levels in some bays and estuaries located to the south, such as Chesapeake Bay. The opposite trend has occurred recently in Barnegat Bay, where the abundance of blue crabs has increased markedly during the past few years

(NMFS, 2004). Such an abundance of their preferred food in Barnegat Bay relative to other estuaries could have caused Kemp's ridley turtles to remain within Barnegat Bay and its tributaries for a longer than normal period during 2004 while they browsed and fed.

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. The hurricane season of 2004 was unusually active, with twelve named storms and four hurricanes passing offshore of New Jersey or close enough to our coast to cause strong and dangerous rip currents. The effect of some of these storms may have been to force more turtles from offshore waters into the coastal bays such as Barnegat Bay, or perhaps may have prevented them from exiting the bays as readily as they might have in other years. If the turtles were retained in the bay and its tributaries for a more extended period than normal, it is reasonable to assume that they would have had a greater than normal likelihood of being incidentally captured at the OCGS intake structures.

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 captures 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.

4.0 Additional Information

This section provides additional information that is required by Section 3.5.1 of the Appendix B OCETS.

4.1 Summary of OCETS Non-Routine Environmental Operating Reports (NEOR) and the corrective action taken to remedy them.

There were no Non-Routine Environmental Operating Reports (NEORs) during 2004.

4.2 Summary of changes made to state and federal permits and certificates, which pertain to the requirements of the OCETS.

On August 7, 2004, OCGS recorded the fifth incidental take of the year of a Kemp's ridley sea turtle. Because this exceeded the OCGS Incidental Take Statement (ITS) annual limit for Kemp's ridleys, OCGS personnel advised the NRC and NMFS that the limit had been exceeded. A formal request to reinitiate formal Section 7 consultation for the OCGS was submitted by the NRC to NMFS on August 26, 2004. During discussions between the technical staffs of NRC and NMFS, it was agreed that an updated Biological Assessment for OCGS would be prepared as soon as possible which would include a detailed discussion of the OCGS incidental takes which took place subsequent to the current OCGS Biological Opinion dated July 18, 2001. This updated Biological Assessment document was prepared in draft format by AmerGen Energy during the third and fourth calendar quarters of 2004 and submitted to NRC. When finalized, the updated Biological Assessment will be submitted to NMFS for review and consideration in preparation of a revised Biological Opinion and Incidental Take Statement for the OCGS facility.

4.3 Summary of changes in station design, which could involve an environmental impact.

During 2004, there were extensive modifications to the security systems of the OCGS in order to comply with the requirements of the Design Basis Threat (DBT). Some of the modifications to the physical plant as a result of this project included construction of a new security fence line, which made certain paved parking areas inaccessible to vehicle traffic. In order to compensate for this loss of parking space, certain areas of the site were regraded and paved to serve as new parking areas. OCGS personnel worked closely with federal, state & local agencies to ensure that environmental impacts from this project were minimized and that all necessary environmental permits were obtained. There were no other changes in station design during the reporting period, which could involve an environmental impact.

4.4 Summary of changes to the OCETS

There were no changes to the OCETS during the reporting period.

References

National Marine Fisheries Service. 2004. NMFS Landings Query Results, Blue Crab, New Jersey.

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.

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ENCLOSURE I
ATTACHMENT I

DOCKET 50-219

SEA TURTLE INCIDENTAL CAPTURE REPORT 2004-1

OYSTER CREEK GENERATING STATION

Sea Turtle Incidental Capture Report 2004-1

At approximately 1215 hours on Sunday July 4, 2004, an Oyster Creek Generating Station (OCGS) operator performing a routine cleaning of the trash racks noticed a sea turtle among the vegetation and debris removed from Bay # 4 of the dilution water intake structure. The turtle appeared to be either comatose or dead. In accordance with OCGS procedures, operators initiated resuscitation of the sea turtle but were unable to revive it. OCGS Environmental personnel 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 capture was approximately 78 F (25.6 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 on the trash bars prior to removal, the dilution water trash racks had been inspected earlier the same day at 0800 hours. The turtle was not observed during that trash rack inspection and cleaning.

The turtle measured 10.4 in (26.5 cm) carapace length straight line and weighed 12 lb (5.4 kg). 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 captured. USNRC and NMFS personnel were notified of the capture within 24 hours on July 4, 2004.

The turtle was taken to the Marine Mammal Stranding Center (MMSC) in Brigantine, NJ at approximately 1500 hours on July 4, 2004. At the MMSC, the turtle was examined, measured and a necropsy performed. The turtle was buried by MMSC personnel at Brigantine, NJ.

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ENCLOSURE I
ATTACHMENT II

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SEA TURTLE INCIDENTAL CAPTURE REPORT 2004-2

OYSTER CREEK GENERATING STATION

Sea Turtle Incidental Capture Report 2004-2

At approximately 1422 hours on Sunday July 11, 2004, an Oyster Creek Generating Station (OCGS) operator preparing to perform a routine cleaning of the trash racks noticed a sea turtle swimming in the water immediately upstream of the trash racks in Bay # 5 of the dilution water intake structure. The turtle appeared briefly at the water surface before diving out of sight. In accordance with OCGS procedures, operators immediately initiated efforts to retrieve the turtle as rapidly and gently as possible. OCGS Environmental personnel who took custody of the turtle confirmed it to be a juvenile Kemp's ridley sea turtle (Lepidochelys kempi). The water temperature at the time of the incidental capture was approximately 81.5 F (27.5 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 swimming in the area of the trash bars prior to removal, the dilution water trash racks had been inspected earlier the same day at 1315 hours. The turtle was not observed during that trash rack inspection.

The turtle measured 8.8 in (22.3 cm) carapace length straight line and weighed 4 lb (1.8 kg). Some very minor scrapes were observed on the ventral surface of the carapace. No external tags were present on the turtle when captured. USNRC and NMFS personnel were notified of the capture within 24 hours on July 11, 2004.

The turtle was taken to the Marine Mammal Stranding Center (MMSC) in Brigantine, NJ at approximately 1623 hours on July 11, 2004. At the MMSC, the turtle was examined, held to ensure it was feeding well. The turtle was released two days later to a safe location off of Brigantine, NJ.

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ENCLOSURE I
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SEA TURTLE INCIDENTAL CAPTURE REPORT 2004-3

OYSTER CREEK GENERATING STATION

Sea Turtle Incidental Capture Report 2004-3

At approximately 1100 hours on Friday July 16, 2004, an Oyster Creek Generating Station (OCGS) operator performing a routine cleaning of the trash racks noticed a sea turtle among the vegetation and debris removed from Bay # 5 of the dilution water intake structure. The turtle appeared to be alive and in good condition when captured. OCGS Environmental personnel who took custody of the turtle confirmed it to be a juvenile Kemp's ridley sea turtle (Lepidochelys kempi). The water temperature at the time of the incidental capture was approximately 76 F (24.4 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 on the trash bars prior to removal, the dilution water trash racks had been inspected earlier the same day at 0900 hours. The turtle was not observed during that trash rack inspection and cleaning.

The turtle measured 11.0 in (28.0 cm) carapace length straight line and weighed 6.9 lb (3.1 kg). Some small scrapes were observed on the plastron (undersurface of the carapace). No tags were present on the turtle when captured. USNRC and NMFS personnel were notified of the capture within 24 hours on July 16, 2004.

The turtle was taken to the Marine Mammal Stranding Center (MMSC) in Brigantine, NJ at approximately 1300 hours on July 16, 2004. At the MMSC, the turtle was examined, fed and observed. The turtle was released by MMSC personnel to a safe location off of Brigantine, NJ.

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ENCLOSURE I
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SEA TURTLE INCIDENTAL CAPTURE REPORT 2004-4

OYSTER CREEK GENERATING STATION

Sea Turtle Incidental Capture Report 2004-4

At approximately 1213 hours on Tuesday July 20, 2004, an Oyster Creek Generating Station (OCGS) operator performing a routine cleaning of the trash racks noticed a sea turtle among the vegetation and debris removed from Bay # 1 of the circulating water intake structure. The turtle appeared to be either comatose or dead. In accordance with OCGS procedures, operators initiated resuscitation of the sea turtle but were unable to revive it. OCGS Environmental personnel 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 capture was approximately 79.7 F (26.5 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 on the trash bars prior to removal, the dilution water trash racks had been inspected at 2115 hours the previous evening. The turtle was not observed during that trash rack inspection and cleaning.

The turtle measured only 7.2 in (18.3 cm) carapace length straight line and weighed just 1.8 lb (0.8 kg). A small puncture wound about 1.3 cm in diameter was observed on the left rear 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 captured. USNRC and NMFS personnel were notified of the capture within 24 hours on July 20, 2004.

The turtle was taken to the Marine Mammal Stranding Center (MMSC) in Brigantine, NJ at approximately 1000 hours on July 21, 2004. At the MMSC, the turtle was examined, measured and a necropsy performed. The turtle was buried by MMSC personnel at Brigantine, NJ.

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ENCLOSURE I
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SEA TURTLE INCIDENTAL CAPTURE REPORT 2004-5

OYSTER CREEK GENERATING STATION

Sea Turtle Incidental Capture Report 2004-5

At approximately 0900 hours on Saturday August 7, 2004, an Oyster Creek Generating Station (OCGS) operator performing a routine cleaning of the trash racks noticed a sea turtle among the vegetation and debris removed from Bay # 5 of the dilution water intake structure. The turtle appeared to be alive, healthy and moving about normally. OCGS personnel who took custody of the turtle photographed it and confirmed it to be a juvenile Kemp's ridley sea turtle (Lepidochelys kempi). The water temperature at the time of the incidental capture was approximately 72.8 F (22.7 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 on the trash bars prior to removal, the dilution water trash racks had been inspected at 0515 hours the same morning. The turtle was not observed during that trash rack inspection and cleaning.

The turtle measured 27 cm (10.6 in) carapace length straight line and weighed 3.2 kg (7.0 lb). A small and minor bruise on the plastron was noted. Also, a healed scar from a previous injury (i.e., not related to interaction with OCGS) was noted on the left side of the turtle's head immediately in front of its left eye. No tags were present on the turtle when captured. USNRC and NMFS personnel were notified of the capture within 24 hours on August 7, 2004.

The turtle was taken to the Marine Mammal Stranding Center (MMSC) in Brigantine, NJ during the morning of August 7, 2004. At the MMSC, the turtle was examined, measured, observed, tagged and subsequently released to safety in the ocean off Brigantine, NJ.

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SEA TURTLE INCIDENTAL CAPTURE REPORT 2004-6

OYSTER CREEK GENERATING STATION

Sea Turtle Incidental Capture Report 2004-6

At approximately 1010 hours on Saturday September 11, 2004, an Oyster Creek Generating Station (OCGS) operator performing a routine cleaning of the trash racks noticed a sea turtle among the vegetation and debris removed from Bay # 4 of the dilution water intake structure. The turtle appeared to be either comatose or dead. In accordance with OCGS procedures, operators initiated resuscitation of the sea turtle but were unable to revive it. OCGS Environmental personnel 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 capture 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 on the trash bars prior to removal, the dilution water trash racks had been inspected and cleaned the previous morning. The turtle was not observed during that trash rack inspection and cleaning.

The turtle measured only 8.8 in (22.3 cm) carapace length straight line and weighed 4.8 lb (2.2 kg). A small puncture wound was observed on the underside of the neck. No tags were present on the turtle when captured. USNRC and NMFS personnel were notified of the capture within 24 hours on September 11, 2004.

The turtle was taken to the Marine Mammal Stranding Center (MMSC) in Brigantine, NJ at approximately 1230 hours on September 11, 2004. At the MMSC, the turtle was examined and measured. The turtle was transferred to the New Bolton Center of the University of Pennsylvania School of Veterinary Medicine, where a necropsy was performed. 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.

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SEA TURTLE INCIDENTAL CAPTURE REPORT 2004-7

OYSTER CREEK GENERATING STATION

Sea Turtle Incidental Capture Report 2004-7

At approximately 2329 hours on Sunday September 12, 2004, an Oyster Creek Generating Station (OCGS) operator performing a routine cleaning of the trash racks noticed a sea turtle among the vegetation and debris removed from Bay # 5 of the circulating water intake structure. The turtle appeared to be healthy, alert and moving about normally. OCGS Environmental personnel 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 capture was approximately 76.8 F (24.9 C) and OCGS was in operation at 40% 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 circulating water trash racks had been inspected at 2000 hours the same evening. The turtle was not observed during that trash rack inspection and cleaning.

The turtle measured only 8.3 in (21.0 cm) carapace length straight line and weighed 3.1 lb (1.4 kg). The left front flipper was nearly entirely missing due to a previous injury that had completely healed. No tags or scarring from tags were present on the turtle when captured. USNRC and NMFS personnel were notified of the capture within 24 hours on September 13, 2004.

The turtle was taken to the Marine Mammal Stranding Center (MMS) in Brigantine, NJ at approximately 0700 hours on September 13, 2004. At the MMS, the turtle was examined, measured, fed and held for subsequent release. The turtle was transported to Virginia Marine Science Museum during the week of September 27, 2004 for PIT tagging and release to the Atlantic Ocean. Release of the turtle from a more southerly locale will help avoid autumn cold stunning effects that could occur if released from a New Jersey location at this time of year.

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SEA TURTLE INCIDENTAL CAPTURE REPORT 2004-8

OYSTER CREEK GENERATING STATION

Sea Turtle Incidental Capture Report 2004-8

At approximately 2145 hours on Thursday September 23, 2004, an Oyster Creek Generating Station (OCGS) operator performing a routine cleaning of the trash racks noticed a sea turtle among the vegetation and debris removed from Bay # 3 of the circulating water intake structure. The turtle appeared to be alert and responsive. OCGS Environmental personnel 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 capture was approximately 71.4 F (21.9 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 on the trash bars prior to removal, the circulating water trash racks had been inspected and cleaned earlier the same day. The turtle was not observed during that trash rack inspection and cleaning.

The turtle measured only 9.5 in (24.2 cm) carapace length straight line and weighed 4.2lb (1.9 kg). Small abrasions on the underside of the carapace of the turtle were observed. No tags or scarring from previous tags were present on the turtle when captured. USNRC and NMFS personnel were notified of the capture within 24 hours on September 24, 2004.

The turtle was taken to the Marine Mammal Stranding Center (MMS) in Brigantine, NJ at approximately 0600 hours on September 24, 2004. At the MMS, the turtle was examined, measured, fed and held for observation prior to release. The turtle was transported to the Virginia Marine Science Museum during the week of September 27, 2004 for PIT tagging and release to the Atlantic Ocean. Release of the turtle from a more southerly locale will help avoid autumn cold stunning effects that could occur if released from a New Jersey location at this time of year.