

UNITED STATES DEPARTMENT OF THE INTERIOR

MINERALS MANAGEMENT SERVICE

Gulf of Mexico OCS Region

New Orleans, Louisiana

FINAL

SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT

ENDANGERED SPECIES / STRUCTURE REMOVAL

ES/SR No. 03-024

Assessment of the Environmental Impacts
of the Proposal to Remove Caisson #2 in
Ship Shoal Area, Block 80
Lease OCS-G 5537
by Samedan Oil Corporation

Date Submitted: March 6, 2003

Commencement Date: April-July, 2003

Prepared by

William Engelhardt

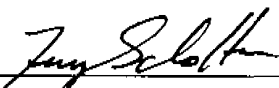
Biologist

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SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT/FONSI/EIS DETERMINATION

Samedan Oil Corporation's application to use explosives to remove Caisson #2 in Ship Shoal Area, Block 80, OCS-G 5537 has been reviewed. Our SEA, ES/SR 03-024, on the subject action is complete and results in a Finding of No Significant Impact. Based on the conclusions of the SEA, there is no evidence to indicate that the proposed action will significantly (40 CFR 1508.27) affect the quality of the human environment. Preparation of an environmental impact statement is not required. Mitigation is imposed to ensure environmental protection, consistent environmental policy and safety as required by the National Environmental Policy Act (NEPA), as amended; or measures needed for compliance with 40 CFR 1500.2(f) regarding the requirement for Federal agencies to avoid or minimize any possible adverse affects of their actions upon the quality of the human environment.



Chief, Project Management Section
Leasing and Environment, GOM OCS Region

3/10/03
Date

INTRODUCTION AND BACKGROUND

The purpose of this Site-Specific Environmental Assessment (SEA) is to assess the specific impacts associated with proposed structure-removal activities. The SEA is based on a Programmatic Environmental Assessment (PEA) (USDOJ, MMS 1987) which evaluates a broader spectrum of potential impacts resulting from the removal of structures (e.g., platforms/caissons across the central and western planning areas of the Gulf of Mexico [GOM] Outer Continental Shelf). The PEA/SEA process is designed to simplify and reduce the size of environmental assessment documents by eliminating repetitive discussions of the same issues. This SEA conforms to the Minerals Management Service (MMS) and other appropriate guidelines for preparing environmental assessments by utilizing data presented in the PEA to complete the assessment. It presents site-specific data regarding the proposed structure removal activities and evaluates the potential impacts. Mitigation measures are contained in this document to lessen potential impacts. Preparation of this SEA has allowed the determination of whether a Finding of No Significant Impact (FONSI) is appropriate or whether further assessment of the proposal is necessary.

I. DESCRIPTION AND NEED FOR THE PROPOSED ACTION

Samedan Oil Corporation proposes to use explosives to remove Caisson #2 in Ship Shoal Area, Block 80, Lease OCS-G5537. The structure is located approximately 25 miles Southwest of Terrebonne Parish, Louisiana, and 80 miles Southeast of Intracoastal City, Louisiana in a water depth of 27 feet. The operator plans to remove the structure by explosively severing the legs and conductor a minimum of 16 feet below the mudline. Refer to Appendix A for structure specifications, additional data on removal techniques, types and quantities of explosives to be used, and sequence of events.

A discussion of the legal and regulatory mandates to remove abandoned oil and gas structures from Federal Waters can be found in the PEA. According to the operator, the platform no longer supports a well capable of producing hydrocarbons at commercial rates.

II. ALTERNATIVES TO THE PROPOSED ACTION

Alternatives to the proposed structure removal with mitigation originally submitted are:

A. NON-REMOVAL OF THE STRUCTURE

The alternative to the proposed structure removal as originally submitted is non-removal. Non-removal of the structure would represent a conflict with Federal legal and regulatory requirements, which mandate the timely removal of obsolete or abandoned structures within a period of one year after termination of the lease, or upon termination of a right-of-use and easement. Therefore, non-removal is not an acceptable alternative.

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B. REMOVAL OF THE STRUCTURE BY ALTERNATIVE NON-EXPLOSIVE METHODS

Minerals Management Service initially discussed various structure-removal techniques in the Final Environmental Impact Statement (FEIS) for Proposed Oil and Gas Lease Sales 118 and 122 (USDOl, MMS, 1988) and in the PEA. Updated information is also found in the FEIS for Sales 169, 172, 175, 178, and 182 (USDOl, MMS, 1997) and the FEIS for Sales 171, 174, 177, and 180 (USDOl, MMS, 1998). It was concluded that the most effective methods of structure removal are the use of explosives, either bulk or shaped charges, abrasive cutters, and underwater arc cutting. Other methods appear promising but require additional development to solve the operational and logistical problems associated with these techniques. Primarily for this reason, these methods do not appear to be feasible alternatives for the removal of the subject structure.

C. REMOVAL OF THE STRUCTURE AS PROPOSED WITH ADDED MITIGATION

It has been determined that the proposed operations fall within the category of activities covered by the National Marine Fisheries Service (NMFS) also known as National Oceanic and Atmospheric Administration (NOAA Fisheries) Biological Opinion of July 25, 1988, which addresses "standard" explosive structure removals in the GOM.

Measures that Semaden Oil Corporation proposed to implement to reduce the likelihood of death or injury to sea turtles and marine mammals are discussed in the structure removal application. For additional information, refer to the terms and conditions of the "generic" Incidental Take Statement (Appendix B). Outer Continental Shelf Operating Regulations, Notices to Lessees and Operators, and other regulations and laws were identified throughout this assessment as existing mitigation for potential environmental effects associated with the proposed structure removal application. Additional information can be found in the PEA.

The following mitigative measures will be included in MMS's approval of the proposed structure removal to ensure environmental protection, consistent environmental policy, and safety as required by the National Environmental Policy Act:

Our review indicates that there are pipelines in the vicinity that may pose a hazard to your proposed operations. Therefore, please be advised that you will take precautions in accordance with Notice to Lessees and Operators No. 98-20, Section IV.B, prior to performing operations.

Under the Magnuson Fisheries Management Act, 50 CFR 600.920 prohibits the use of explosives to take reef fish in the Exclusive Economic Zone. Consequently, those involved in explosive structure removals must not take such stunned or killed fish on board their vessels. Should this happen, they could be charged by the National Marine Fisheries Service with violation of the Act. If you have questions, contact the National Marine Fisheries Service at (727) 570-5305

II. ENVIRONMENTAL EFFECTS, SOCIOECONOMIC CONCERNS, AND OTHER CONSIDERATIONS.

In accordance with *The National Environmental Policy Act (NEPA) of 1969, as amended (Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258, § 4[b], Sept. 13, 1982)* and the Council on Environmental Quality (CEQ) implementing regulations (40 CFR Sec. 1502.15) *Affected Environment*, the following potential environmental effects were identified from the proposed action. Mitigative measures are included to eliminate or reduce the potential effect from the proposed activities to a level of insignificance as described in 40 CFR Sec. 1508.27

A. PHYSICAL ENVIRONMENT

A discussion of environmental geology, geologic hazards, meteorological conditions, physical and chemical oceanography, water quality and air quality can be found in the PEA. The proposed structure-removal activities are not in an area of sediment instability (mud flows, slumps, or slides). Environmental effects to the physical environment have been considered, but potential impacts from the proposed activities were deemed insignificant (40 CFR 1508.27) and are not discussed in this SEA.

B. BIOLOGICAL ENVIRONMENT

A discussion of coastal habitats, protected, endangered and threatened species (birds, marine mammals, and sea turtles), and sensitive marine habitats are discussed in the PEA. The PEA delineates sensitive areas along the Texas coastline where whooping cranes and brown pelicans could be adversely impacted by structure-removal support activities. Since the operator will use a shore base in Intracoastal City, Louisiana, no impacts to these sensitive areas are expected.

A discussion of marine mammals occurring across the Gulf of Mexico (GOM) and an assessment of the potential impacts of structure-removal activities on marine mammals can be found in the PEA. Fritts et al. (1983) conducted aerial surveys across a 9,514 square-mile area of GOM waters. Results of these surveys indicate that the bottlenose dolphin is by far the most likely marine mammals to be encountered in the GOM. Minerals Management Service and /or NMFS (NOAA Fisheries) observers may be utilized to look for marine mammals prior to detonation of the primary charges at the removal site. If marine mammals are detected at the structure-removal site, detonation of the primary charges will be delayed until the animals are removed from the area

NMFS issued final regulations amending 50 CFR part 216 (67 FR 148, August 1, 2002, pp. 49869-49875 for the incidental take of bottlenose (*Tursiops truncatus*) and spotted (*Stenella frontalis* and *S. attenuata*) dolphins by U.S. citizens holding a Letter of Authorization that are engaged in structure removals in state and Federal OCS waters of the Gulf of Mexico. The incidental take is limited annually to a combined total of no more than 200 takings by harassment between the period of August 1, 2002 through February 2, 2004.

Please refer to the Federal Register of August 1, 2002 for the description of the specific activity and specific geographic region, permissible methods of taking, prohibitions, mitigation, and requirements for monitoring and reporting.

In spite of these precautions, a low probability exists that marine mammals could enter the blast area undetected and could be injured or killed by the underwater, subsurface detonations. Such an occurrence is considered highly unlikely and, with the indicated protective mitigation measures outlined in the "Generic" Biological Opinion, the proposed structure-removal activities are expected to have only a low impact on marine mammals.

A discussion of sea turtles occurring across the central and western GOM and an assessment of the potential impacts of structure-removal activities on sea turtles can be found in the PEA. Studies by Fritts et al. (1983) and Fuller and Tappan (1986) as well as stranding data from the Sea Turtle Stranding and Salvage Network (Teas 1995) indicate that sea turtles may occur in the vicinity of the proposed activities and therefore could be impacted by the structure-removal operations. Definitive information on the probability of encountering sea turtles at the removal site during explosive operations is scarce. The NMFS (NOAA Fisheries) and/or MMS observers will be utilized to look for sea turtles prior to detonation of the primary charges. If sea turtles are detected at the structure-removal site, detonation of the primary charges will be delayed until the animals are removed from the area. The possibility exists that sea turtles could enter the blast areas undetected and could be injured or killed by the underwater, subsurface detonations. However, with the indicated protective mitigation measures, we expect the proposed structure-removal activities to have only a low impact on sea turtles. The NMFS (NOAA Fisheries) authorized a cumulative incidental take for this category action, but with all the precautions to be taken as mitigating measures, it is unlikely these proposed operations will affect any sea turtles.

We considered other environmental effects to the biologic environment, but potential impacts from the proposed activities were deemed insignificant (40 CFR 1508.27) and are not discussed further in this SEA.

C. OTHER CONSIDERATIONS

A discussion of socioeconomic, commercial and recreational fisheries, archaeological resources, military warning areas, explosive dumping areas, navigation and shipping areas, pipelines, cables, other mineral uses, and health and human safety can be found in the PEA referenced in the Introduction.

Other environmental effects to the socioeconomic concerns have been considered, but potential impacts from the proposed activities were deemed insignificant (40 CFR 1508.27) and are not discussed further in this SEA.

Since the PEA was originally written, new concerns have emerged concerning the impacts of explosive structure removals on reef fish populations. On May 9, 1991, the GOM Fishery Management Council expressed concern over the declining stocks of reef fish, especially red snapper. They referred to the anecdotal accounts of finfish kills associated with explosive removals of offshore structures in order to link these activities with their concerns about declining populations of reef fish. They further suggested that MMS should hold all explosive structure removals in abeyance until more information becomes available on the effects of these activities on fish stocks. See the PEA (Section on Offshore Habitats and Biota) for a discussion of fish kills in association with explosive structure removals.

Minerals Management Service has declined to hold all explosive structure removals in abeyance citing the regulatory mandates for structure removals and problems with current non-explosive structure-removal methods. Minerals Management Service has stated a commitment to carry out studies to assess the impacts of oil and gas structure removals on Gulf fisheries resources and the results of these studies will be used to determine future policies with respect to these activities.

Minerals Management Service continues to consider the overall impacts of structure removals on commercial fishing to be low. Minerals Management Service policy of encouraging an active rigs-to-reefs program will help to offset cumulative structure-removal impacts to fisheries resources.

D. UNAVOIDABLE ADVERSE IMPACTS

A discussion of unavoidable adverse impacts can be found in the PEA. Two areas of ongoing concern have been the potential impact to protected, threatened, and/or endangered species and potential loss of habitat to the marine environment. Both topics are discussed in the PEA and previously in this document. A more recent issue of concern has surfaced regarding the impacts of explosive structure-removals on reef fish stocks. Although the impacts to commercial and recreational fisheries are considered to be low, further studies information about this issue will be available in the future. Other unavoidable adverse impacts are considered to be minor.

III. PUBLIC OPINION

A discussion of public concerns regarding structure removals can be found in the PEA. No public comments have been received regarding the proposed structure-removal operations.

In May 1991, the GOM Fishery Management Council requested that MMS place a moratorium over the explosive removal of offshore structures with three or more supports. Non-removal of these structures would conflict with current Federal legal and regulatory requirements which mandate the timely removal of abandoned or obsolete structures within a period of one year after termination of the lease, or upon termination of a right-of-use and easement.

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Minerals Management Service believes that current data on the effects of explosive removals on fish mortality are insufficient to draw any conclusions, and a moratorium on all but single pile caissons at this time is unjustified. In order to quantify explosive effects, MMS initiated an interagency study with the NMFS to determine fish mortalities from removal operations. In addition to the above study, MMS supports an active rigs-to-reefs program and encourages industry to search for a method that will minimize effects on fish from structure-removal operations.

V. CONSULTATION AND COORDINATION

In accordance with the provisions of Section 7 of the Endangered Species Act, as amended, the proposed structure-removal operations are covered by the Biological Opinion issued by the NMFS (NOAA Fisheries) on July 25, 1988, which established a category of "standard" explosive structure-removal operations. Their comments are included in Appendix B. The NMFS (NOAA Fisheries) concluded that this category of structure-removal activities will not likely jeopardize the continued existence of any threatened or endangered species under their purview. Additionally, they concluded that this type of "standard" structure-removal activity may result in injury or mortality of loggerhead, Kemp's Ridley, green, hawksbill, and leatherback turtles. Therefore, they established a cumulative level of incidental take and discussed various measures necessary to monitor and minimize this impact (see Appendix B). The NMFS (NOAA Fisheries) noted that no incidental taking of marine mammals was authorized under Section 101(a)(5) of the Marine Mammal Protection Act of 1972 in connection with this category of structure-removal activities. Therefore, taking of marine mammals by the operator will be prohibited unless they successfully apply for and obtain a Letter of Authorization to do so from the NMFS (NOAA Fisheries).

VI. BIBLIOGRAPHY AND SPECIAL REFERENCES

- Fritts, T.H., A.B. Irvine, R.D. Jennings, L.A. Collum, W. Hoffman, and M.A. McGehee. 1983. Turtles, birds, and mammals in the northern Gulf of Mexico and nearby Atlantic waters. U.S. Fish and Wildlife Service, Division of Biological Services, Washington, D.C.
- Fuller, D.A. and A.M. Tappan. 1986. The occurrence of sea turtles in Louisiana coastal waters. Coastal Fisheries Institute. Center for Wetland Resources. Louisiana State University. Baton Rouge, LA.
- Gitschlag, Gregg R., 2000. Personal Communication Concerning a Cumulative Trip Report Summary of Marine Mammal Observations during Explosive Structure Removal Operations; November 1995 to November 2000. Information Transfer Meeting, New Orleans Hilton. December 7, 2000.
- Teas, Wendy, G. 1995. 1994 Semi-annual Report of the Sea Turtle Stranding and Salvage Network. Atlantic and Gulf Coasts of the United States. January - June 1994. National Marine Fisheries Service. Southeast Fisheries Center, Miami Laboratory, 75 Virginia Beach Drive, Miami, FL.
- U.S. Department of the Interior. Minerals Management Service. 1997. Final Environmental Impact Statement. Gulf of Mexico Sales 169, 172, 175, 178 and 182: Central Planning Area. OCS EIS/EA MMS 97-0033. Washington, D.C. Available from NTIS, Springfield, VA.
- U.S. Department of the Interior. Minerals Management Service. 1998. Final Environmental Impact Statement. Gulf of Mexico Sales 171, 174, 177, and 180: Western Planning Area. OCS EIS/EA MMS 98-0008. Washington, D.C. Available from NTIS, Springfield, VA.
- U.S. Department of the Interior. Minerals Management Service. 1987. Programmatic Environmental Assessment. Structure-removal activities Central and Western Gulf of Mexico Planning Areas. OCS/EA 87-0002. Gulf of Mexico OCS Region, New Orleans, LA.

VII. PREPARER

Author: William Engelhardt- Biologist

VIII. APPENDICES

- A. SAMEDAN OIL CORPORATION CORRESPONDENCE
- B. NMFS CORRESPONDENCE

APPENDIX A

SAMEDAN OIL CORPORATION CORRESPONDENCE

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Warren B.
MS 5440

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UNITED STATES GOVERNMENT
MEMORANDUM

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ENVIRONMENTAL OPERATIONS SECTION

Feb 20, 03

To: Chief, Environment Operations Section, Leasing and Environment, Gulf of Mexico OCS Region (MS 5440)
From: Chief, Office of Structural and Technical Support, Field Operations, Gulf of Mexico OCS Region (MS 5210)
Subject: Platform Removal
Operator: Samedan
Control No: 03-024-022

PLATFORM	AREA/BLOCK	LEASE
<u>Leis. #2</u>	<u>SS 80</u>	<u>OCS-G 5537</u>

Shore Base: Intracoastal City, LA

The attached application is forwarded to your office so that the Finding of No Significant Impact can be prepared. We believe this proposed activity meets the requirements of the generic Endangered Species Act Section 8 Consultation Document. There are ~~no~~ existing pipeline(s) within 500 feet of the proposed removal location. Please verify if this removal is located in environmentally sensitive areas. Should you require additional information, please contact Mr. Arvind Shah at Extension 2894. LOCATION: 25 mi. SW of TERREBONNE PARISH, LA. 80 mi. SE of Intracoastal City, LA.

EX:

Water Depth 27'	+	APR/JUL 03 proposed date start
artificial Reef	-	16' BML
Hang Sites	-	
Turtles	-	
Vernal Pools	-	
P/U's + Enclosure	+	
Bird	-	
cc:		

Arvind Shah
Felix Dyhrkopp

AShah:pgm:\wp5\FORMS\1-50LBS

G/LE/proj mgmt / SRSEA/removals

REVISED 5/21/96

SAMEDAN OIL CORPORATION

350 Glenborough, Suite 240

Houston, TX 77067-3299

(281)876-6250

February 13, 2003

U. S. Department of the Interior
Minerals Management Service
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394

Attn: Mr. Arvind Shah
MS 5210

Re: Ship Shoal 80 #2
OCS-G-05537
Platform Abandonment



Gentlemen:

Samedan Oil Corporation requests approval to remove the above referenced Single Well Caisson Structure platform utilizing explosives. Enclosed (in triplicate) is the Proposed Platform/Structure Removal Application and copies of photographs showing front and end views of the platform.

This well has ceased production and the lease has expired. If additional information is required, please contact me at (281)876-6274.

Sincerely,

SAMEDAN OIL CORPORATION

A handwritten signature in cursive script, appearing to read "Pam Tullos".

Pam A. Tullos
Division Environmental/Regulatory Affairs Supervisor

PT/cc
Enc.

Date: January 28, 2003

PROPOSED PLATFORM/STRUCTURE REMOVAL

I. Responsible Party

- A. Lease Operator Name Noble Energy, Inc.
- B. Address 350 Glenborough, Suite 240, Houston, TX. 77067
- C. Contact Person & Telephone Number Pam Tullos/Regulatory Department
(281) 876-6229.
- D. Base for Removal Operations Intracoastal City, Louisiana

II. Identification of Structure to be Removed

- A. Platform Name/ MMS Complex ID Ship Shoal 80 #2 / Platform ID No. 23935
- B. Location (Lease, Area, Block & Block Coordinates) OCS-G-05537
Ship Shoal 80 #2
Lat: 28° 56' 17.081"
Long: 91° 19' 20.339"
- C. Date Installed (Year) 1991
- D. Proposed Date of Removal (Month/Year) April 2003 - July 2003
- E. Water Depth 27 Feet

III. Description of Structure to be Removed

- A. Diameter & Wall Thickness of Well Casing _____
Conductors: 20" O.D. x 0.625" Wall
Casings: 13 3/8" x 61 ppf; 9 5/8" x 36 ppf; 7-5/8" x 23 ppf
- B. Platforms, well jackets, and single-well caissons Single Well Caisson

- i. **Configuration** Single leg caisson with heliport, deck and boat landing
- ii. **Size** 20' x 20' Main Deck
27' x 27' Heliport
- iii. **Number of Legs/Casing/Pilings** Single Leg Caisson
1 - 48" OD Caisson
1-20" O.D. Conductor.
- iv. **Diameter & Wall Thickness of Legs/Casing/Pilings** _____
Caisson 48" O.D. x 1.500" Wall at Mud Line

Conductors: 20" O.D. x 0.625" Wall

Casings: 13 3/8" x 61 ppf; 9 5/8" x 36 ppf; 7-5/8" x 23 ppf

- v. **Are Piles Grouted?** N/A **Inside or Outside?** _____
- vi. **Brief Description of Soil Composition & Condition** Fine sand and soft clay

IV. Purpose

- A. **Lease Expiration Date** Right of Use and Easement expires 12/13/00
- B. **Brief Description of the Reason for Removing the Structure** _____
This platform no longer supports a well capable of producing hydrocarbons at
commercial rates.

V. Removal Method

- A. **Brief Description of the Method to be Used** Explosive charges will be used to sever the caisson and well conductors 16' below mudline. A derrick barge or jack up boat will be used to lift the deck onto a cargo barge for transportation. If severing is incomplete on first attempt, additional charges will be detonated.
- B. **Maximum Radius of Anchor Deployment** 3000' maximum deployment radius.
Unable to determine exact placement due to weather considerations at the time of removal.

VI. Explosives Information

- A. **If explosives are to be used, provide the following:** _____
- i. **Kind of Explosives** Composition B and/or C/4.
- ii. **Number & Size of Charges** _____
1 - 50# charge for the caisson.
1 - 50# charge for the conductor.
- a. **Single or Multiple Shots?** Single shots.
- b. **If multiple shots, sequence and timing of detonations**

- iii. **Bulk or Shaped Charge?** Both
- a. **Depth of Detonation Below Mud Line** 16 Feet
- b. **Inside or Outside Piling?** Inside
- iv. **Reason for explosives?** Most reliable method.

B. Use of Explosives in compliance with 1988 NMFS Biological Opinion Yes

i. **Biological Information** None

ii. **Biological Survey Results** Negative

iii. **Pre-Removal Monitoring Techniques**

48-hour pre-detonation survey for marine mammals and sea turtles to be

conducted by NMFS observers; immediately prior to detonation of charges, a

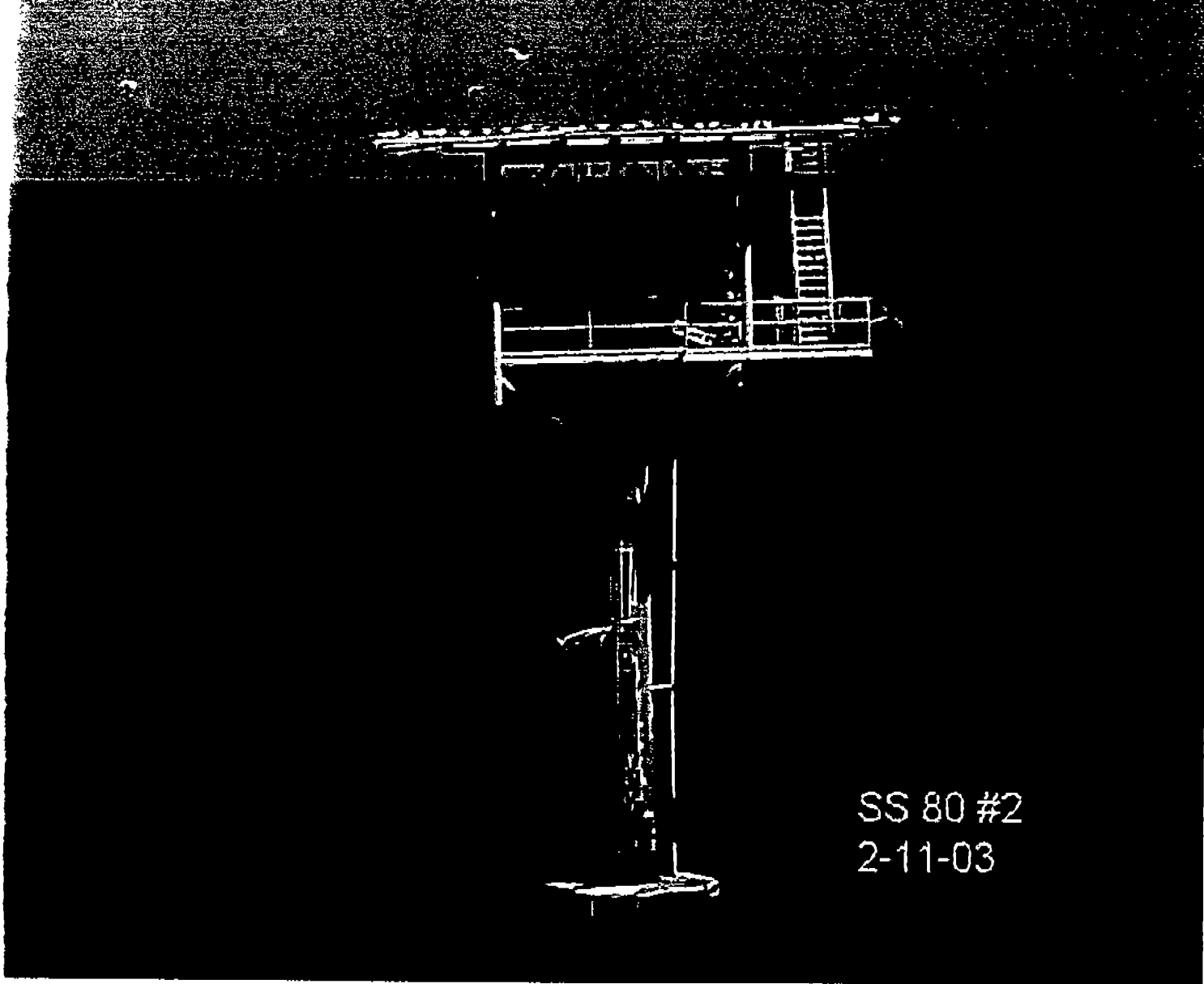
30- minute aerial survey to be performed.

Post-Removal Monitoring Techniques

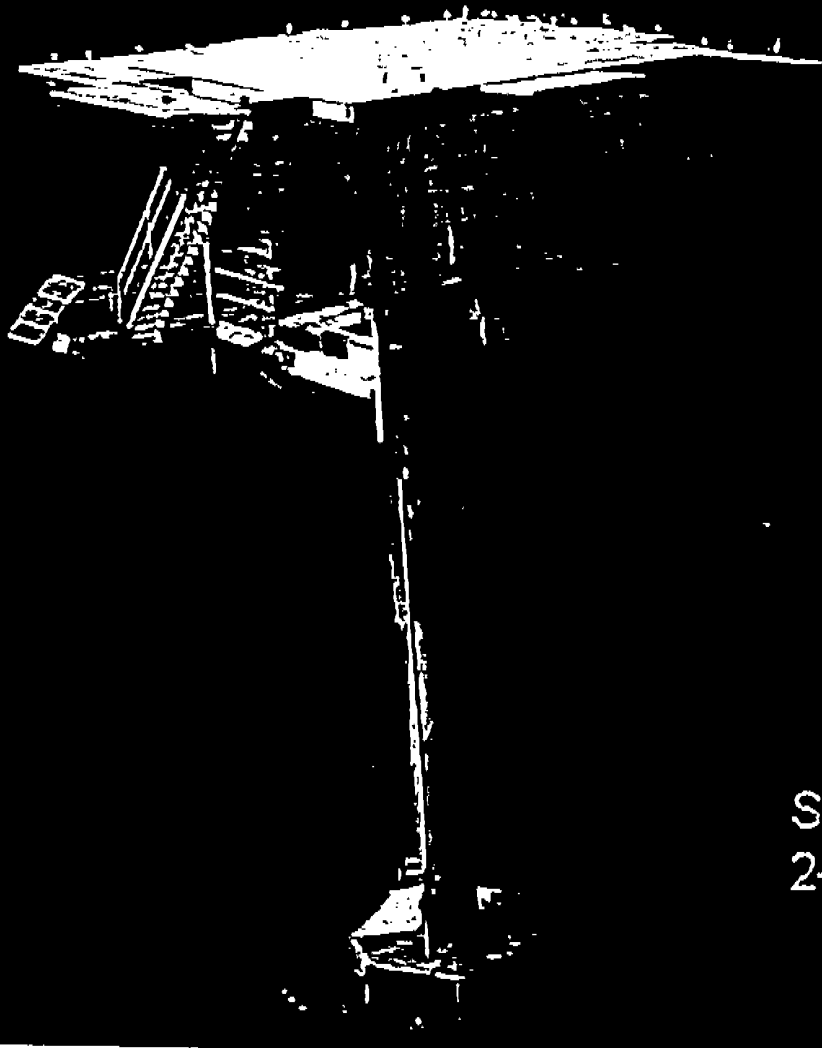
Divers will conduct a post-detonation survey under NMFS direction only if

marine mammals have been observed in the area.

iv. **Will transducers be used to measure the pressure and impulse of the detonation?** No



SS 80 #2
2-11-03



SS 80 #2
2-11-03

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APPENDIX B
NMFS CORRESPONDENCE



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Washington, D.C. 20235

JUL 25 1988

Mr. William D. Bettenberg
Director
Minerals Management Service
U.S. Department of the Interior
Washington, D.C. 20240

Dear Mr. Bettenberg:

Enclosed is the Biological opinion prepared by the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the Endangered Species Act (ESA) concerning potential impacts on endangered and threatened species associated with removal of certain oil and gas platforms and related structures in the Gulf of Mexico (GOM) using explosives.

This "standard" consultation covers only those removal operations that meet specified criteria pertaining to the size of explosive charge used, detonation depth, and number of blasts per structural grouping. Consultation must be initiated on a case-by-case basis for all dismantling operations requiring the use of explosives that do not meet the established criteria.

NMFS concludes that structure removals in the GOM that fall within the established criteria are not likely to jeopardize the continued existence of listed species under the jurisdiction of NMFS. However, it is our opinion that, the proposed activities may result in the injury or mortality of endangered and threatened sea turtles. Therefore, pursuant to Section 7 (b) (4) of the ESA, we have established a low level of incidental take, which is cumulative for all removals covered by this consultation, and terms and conditions necessary to minimize and monitor any impacts, should they occur. The terms and conditions are contained in the enclosed incidental take statement. Also enclosed is a list of pending consultations that meet, with noted exceptions, the criteria established in the "standard" consultation. This biological opinion and the mitigating measures and terms and conditions contained in the related incidental take statement apply to those proposed removal operations. Therefore, formal consultation is concluded for these proposed actions.



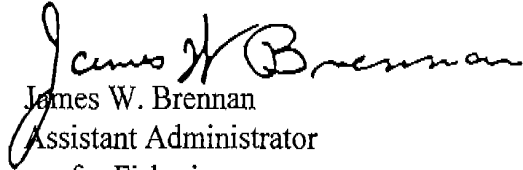
25 Years Stimulating America's Progress ☆ 1913 - 1988

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Consultation must be reinitiated if: (1) the amount or extent of taking specified in the incidental take statement is exceeded; (2) new information reveals impacts of the proposed activities that may affect listed species in a manner or to an extent not considered thus far in our opinions; (3) the identified activities are modified in a manner that causes an adverse effect to listed species not previously considered or (4) a new species is listed or critical habitat is designated that may be affected by the project.

I look forward to your continued cooperation in future consultations.

Sincerely,


James W. Brennan
Assistant Administrator
for Fisheries

Enclosures

Biological Opinion

Agency: Minerals Management Service, U.S. Department of the Interior

Activity: Consultation for Removal of Certain Outer Continental Shelf
Oil and Gas Structures in the Gulf of Mexico

Consultation Conducted By: National Marine Fisheries Service (NMFS)

Date Issued: July 25, 1988

Background Information:

In a letter dated November 19, 1986, the Minerals Management Service (MMS) made an initial request for formal consultation pursuant to Section 7 of the Endangered Species Act (ESA) for the removal of an offshore oil and gas platform located in the Federal waters of the Gulf of Mexico (GOM). MMS and NMFS determined that removal of oil and gas platforms and related structures in the GOM may affect endangered and threatened marine species. This "may affect" determination was based on a possible relationship between endangered and threatened sea turtle mortalities and the dismantling of platforms using explosives. On November 25, 1986, NMFS issued the first of a series of biological opinions addressing, in detail, the potential impacts to listed marine species that may occur as a result of OCS abandonment activities.

MMS and NMFS established procedures for expediting Section 7 consultations on platform abandonment activities in the GOM referred to as "expedited consultations." Following those procedures, approximately 44 consultations have been completed for removal operations in the GOM region. All of the consultations have concluded that the proposed abandonment activities were not likely to jeopardize the continued existence of any listed species, but that the proposed activities may result in the incidental taking of endangered and threatened sea turtles.

The dismantling of platforms and related structures using explosives has evolved to a point where a "standard" protocol can be established for removal operations meeting certain criteria. Based upon removal techniques developed and reviewed in conjunction with the previously conducted "expedited consultations," MMS has requested, by letter of May 24, 1988, a "generic consultation" that would be applicable to all future removal operations that fall within a distinct category, defined by specific parameters. A category has been designed to include those structure types and removal techniques most commonly encountered during the expedited consultations and dismantling operations already completed. Since approximately 1000 structures that may be scheduled for future removal fall within the parameters of the established category, NMFS agrees that a "generic" consultation is appropriate at this time. The objective of the consultation is to reduce the administrative burden on both MMS and NMFS for conducting repetitive consultations on activities that may result in similar impacts to listed species and that require identical mitigating measures to maintain adequate protection for such species. This biological opinion responds to MMS' May 24, 1988, consultation request. The opinion is based on the best scientific and commercial data presently available and incorporates information from: 1) previous MMS Summary Evaluations, 2) previous NMFS biological opinions on platform removal, 3) the scientific literature, and 4) other pertinent and available information. Consultation must be reinitiated if new information becomes available concerning impacts to listed species that would alter the conclusions reached in this opinion or require modification of the measures identified in the attached incidental take statement. Consultation will continue on a case-by-case basis for those structure removals that do not meet the criteria established for "standard" removals.

Description of Proposed Action:

The proposed action involves the removal by explosive means, of offshore oil and gas structures located in Federal waters in the Gulf of Mexico. Removal of the structures will be accomplished by severing the support pilings, caissons, wall conductors, etc., using varying amounts of explosives to permit salvage of the structures. This involves the placement of explosives inside or outside of supporting structures and detonating charges primarily using electronically controlled signals.

This "generic" consultation considers only those removal operations that meet certain criteria pertaining to the size of the explosive charge used, detonation depths, and number of blasts per structural grouping. The specific criteria established to cover such removals are as follows:

1) Use of high velocity explosives (detonation rate greater than 7,600 meters/second).

2) A maximum of eight individual blast per group of detonations with charges staggered at an interval of 0.9 seconds (900 milliseconds).

3) Charges must be set at a minimum depth of 15 feet below the sediment surface. Severing of structures above the sediment surface "open water" must be accomplished by mechanical (nonexplosive) methods.

4) The maximum amount of explosives per detonation is not to exceed 50 pounds.

Species Occurring in the Project Area:

Listed species under the jurisdiction of NMFS that may occur in the project area:

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>STATUS</u>	<u>LISTED</u>
right whale	<u>Eubalaena glacialis</u>	E	6/2/70
finback whale	<u>Balaenoptera physalus</u>	E	6/2/70
humpback whale	<u>Megaptera novaeangliae</u>	E	6/2/70
sei whale	<u>Balaenoptera borealis</u>	E	6/2/70
sperm whale	<u>Physeter catodon</u>	E	6/2/70
green turtle	<u>Chelonia rydas</u>	Th E*	7/28/78
Kemp's ridley turtle	<u>Lepidochelys kempi</u>	E	12/2/70
leatherback turtle	<u>Dermochelys coriacea</u>	E	6/2/70
loggerhead turtle	<u>Caretta caretta</u>	Th	7/28/78
hawksbill turtle	<u>Eretmochelys imbricata</u>	E	6/2/70

*All of the U.S. green turtle populations are listed as threatened except the Florida breeding population, which is listed as endangered.

No critical habitat has been designated in the project area for the above species.

Assessment of Impacts:

Based upon their known distribution and abundance in the GOM, endangered whales are believed unlikely to occur in the vicinity of the proposed structure removal activities, and, therefore, unlikely to be adversely affected by the proposed action.

Previous NMFS biological opinions (November 25, 1986 and February 26, 1987) have addressed, in detail, removal of structures in the GOM. Accounts of endangered and threatened species which occur in the project area, and the "Assessment of Impacts" contained in these prior opinions also apply to this consultation and are incorporated by reference.

In summary, the opinions referenced above acknowledge the existence of a possible relationship between the use of underwater explosives in removing platforms and related structures and the occurrence of stranded sea turtles, marine mammals (Tursiops truncatus) and fish. Limited experiments conducted by NMFS, Galveston Laboratory confirm that sea turtles (and other marine vertebrates) found in proximity to petroleum platforms can be injured or killed by removal operations employing underwater explosives (Klima, 1986).

Technology most commonly used in the dismantling of platforms includes: bulk explosives, shaped explosive charges, mechanical and abrasive cutters and underwater arc cutters. The use of bulk explosives has become the industry's standard procedure for severing pilings, well conductors and related supporting structures (approx. 90% use). When using bulk charges, the inside of the structure can be jetted out to at least 15 feet below the sediment floor to allow placement of explosives inside of the structure, resulting in a decrease in the impulse and pressure forces released into the water column upon detonation. The use of high velocity shaped charges is reported to have some advantages over bulk explosives and has been used in combination with smaller bulk charges. The cutting action obtained by a shaped charge is accomplished by focusing the explosive energy with a conical metallic liner. A major advantage associated with use of high velocity shaped charges is that a smaller amount of explosive charge is required to sever the structure, which also results in reductions in the impulse and pressure forces released into the water column. Use of mechanical cutters and underwater arc cutters is successful in some circumstances and do not produce the impulse and pressure forces associated with detonation of explosives, however, these methods are, in most instances, more time consuming, costly and more hazardous to divers. As a result, these methods are not used on a routine basis (MMS Report on Platform Removal Techniques).

Based upon data obtained during previously conducted "expedited" consultations on platform removals, the following is a comparison of the types of explosives most likely to be used in the proposed removal operations:

<u>Explosive</u>	<u>Detonating Velocity</u>	<u>Brisance*</u>
RDX	approx. 8,199 m/sec.	1.35
C-4	approx. 8,001 m/sec.	1.15
Comp. -B	approx. 7,803 m/sec.	1.32

* Brisance is the measure of shattering power as compared to TNT which has brisance of 1.00. (MMS Report on Platform Removal Techniques, 1986.)

The proposed removal operations will be accomplished using high velocity explosives. Use of this type of explosive charge should minimize the duration of the impulse and pressure forces produced by detonation of the charges, while providing the amount of force required to sever the structures. According to MMS, restricting the grouping of detonations to eight individual blasts per group and staggering blasts by 0.9 seconds (900 milliseconds) will minimize the area affected by the blasts and suppress phasing of shock waves, thereby decreasing the cumulative effects of the blasts. In addition, since all detonations will occur at least 15 feet below the sediment surface and no more than 50 pounds of explosives per blast will be permitted, the amount of residual energy released into the marine environment should be reduced significantly. As a result, NMFS believes that minimal shock and impulse forces will be released in the vicinity of removal operations at any given time.

To date, of approximately 44 previously conducted consultations covering abandonment activities, about 33 structure removals have been completed. Each removal operation was monitored by NMFS observers and was conducted using appropriate mitigating measures. At the present time, eight turtles have been sighted in areas near structures being dismantled, at least two of which were green turtles. Of the eight documented sightings, one turtle was reported to be floating on it's back near a platform after detonation of Charges, apparently stunned or injured. No other incidents of sea turtle injury or mortality have been reported. Therefore, NMFS believes that the proposed actions are not likely to result in significant adverse impacts to endangered and threatened sea turtle populations.

Conclusions:

Based on the above, it is our opinion that removal of platforms and related structures in the GOM is not likely to jeopardize the continued existence of threatened and endangered species under the jurisdiction of NMFS. However, NMFS concludes that the proposed activities may result in the injury or mortality of loggerhead, Kemp's ridley, green, hawksbill, and leatherback turtles. Therefore, pursuant to Section 7 (b) (4) of the ESA, we have established a low level of incidental take and terms and conditions necessary to minimize and monitor this impact. Compliance with these terms and conditions is the responsibility of MMS and the permit applicant.

Reinitiation Of Consultation:

Consultation must be reinitiated if: 1) the amount or extent of taking specified in the incidental take statement is met or exceeded; 2) new information reveals impacts of the project that may affect listed species in a manner or to an extent not considered in this opinion; 3) the identified activities are modified in a manner that causes an adverse effect on listed species not previously considered; or 4) a new species is listed or critical habitat in designated that may be affected by the proposed activities.

INCIDENTAL TAKE STATEMENT

Section 7(b) (4) of the Endangered Species Act requires that when a proposed agency action is found to be consistent with section 7 (a) (2) of the Act and the proposed actions may incidentally take individuals of listed species, NMFS will issue a statement that specifies the impact (amount or extent) of such incidental taking. Incidental taking by the Federal agency or applicant that complies with the specified terms and conditions of this statement is authorized and exempt from the taking prohibitions of the ESA.

Based on stranding records, incidental captures aboard commercial shrimp vessels and historical data, five species of sea turtles are known to occur in northern Gulf of Mexico waters. Current available information on the relationship between sea turtle mortality and the use of high-velocity explosives to remove oil platforms indicates that injury and/or death of sea turtles may result from the proposed actions. Therefore, pursuant to Section 7 (b) (4) of the ESA, an incidental take (by injury or mortality) level of one documented Kemp's ridley, green, hawksbill or leatherback turtle or ten loggerhead turtles is set for all removal operations conducted under the terms and conditions of this incidental take statement. The level of taking specified here is cumulative for all removals covered by this consultation. If the incidental take meets or exceeds this specified level, MMS must reinitiate consultation. The Southeast Region, NMFS, will cooperate with MMS in the review of the incident to determine the need for developing further mitigation measures.

The reasonable and prudent measures that NMFS believes are necessary to minimize the impact of incidental takings have been discussed with MMS and will be incorporated in the removal design for "standard" structure removals. The following terms and conditions are established for these removals to implement the identified mitigation measures and to document the incidental take should such take occur:

- 1) Qualified observer(s), as approved by NMFS, must be used to monitor the area around the site prior to, during and after detonation of charges. Observer coverage will begin 48 hours prior to detonation of charges. If sea turtles are observed in the vicinity of the platform and thought to be resident at the site, pre- and post- detonation diver surveys must be conducted.

2) On days that blasting operations occur, a 30-minute aerial survey must be conducted within one hour before and one hour after each blasting episode. The NMFS-approved observer and/or NMFS on-site personnel (NMFS employee only) must be used to check for the presence of turtles and, if possible, to identify species. If weather conditions (fog, excessive winds, etc.) make it impossible to conduct aerial surveys, blasting activities may be allowed to proceed if approved by the NMFS and/or MMS personnel on-site.

3) If sea turtles are observed in the vicinity of the platform (within 1000 yards of the site) prior to detonating charges, blasting will be delayed until attempts are successful in removing them at least 1000 yards from the blast site. The aerial survey must be repeated prior to resuming detonation of charges.

4) Detonation of explosives will occur no sooner than 1 hour following sunrise and no later than 1 hour prior to sunset. However, if it is determined by NMFS and/or MMS on-site personnel that special circumstances justify a modification of these time restrictions and that such modification is not likely to adversely impact listed species, blasting may be allowed to proceed outside of this time frame.

5) During all diving operations (working dives as required in the course of the removals), divers will be instructed to scan the subsurface areas surrounding the platform (blasting) sites for turtles and marine mammals. Any sightings must be reported to the NMFS or MMS on-site personnel. Upon completion of blasting, divers must report and attempt to recover any sighted injured or dead sea turtles or marine mammals.

6) Charges must be staggered 0.9 seconds (900 milliseconds) for each group of structures, to minimize the cumulative effects of the blasts. If a removal operation involves multiple groupings of structures, the interval between detonation of charges for each group should be minimized to avoid the "chumming" effect. Whenever such intervals exceed 90-minutes, the aerial survey must be repeated.

7) The use of scare charges should be avoided to minimize the "chumming effect." Use of scare charges may be allowed only if approved by the NMFS and/or MMS on-site personnel.

8) A report summarizing the results of the removal and mitigation measures must be submitted to the MMS Gulf of Mexico Region within 15 working days of the removal. A copy of the report must be forwarded to NMFS, Southeast Region.

This incidental take statement applies only to endangered and threatened sea turtles. In order to allow an incidental take of a marine mammal species, the taking must be authorized under Section 101 (a) (5) of the Marine Mammal Protection Act of 1972. Although interest has been expressed in obtaining an exception authorizing a limited take of dolphins incidental to abandonment activities, no marine mammal take is authorized until appropriate small take regulations are in place and related "Letters of Authorization" are issued.

REFERENCES

- Caillouet, C. W., A. M. Landry, M. J. Duronslet, S. A. Manzella, C. T. Fontaine, D. B. Revera, K. L. Indelicato, T. D. Williams, and D. Forcucci, 1986. Preliminary Evaluation of Biological Impacts of Underwater Explosions Associated with Removal of an Oil Field Structure From the Gulf of Mexico Near Crystal Beach, Texas. National Marine Fisheries Service, Southeast Fisheries Center, Galveston Laboratory, 32 pp.
- Duronslet, M. J., C. W. Caillouet, S. Manzella, K. W. Indelicato, C. T. Fontaine, D. B. Revera, T. Williams and D. Boss, 1986. The Effects of an Underwater Explosion on the Turtles Lepidochelys kempfi and Caretta caretta with Observation of Effects on Other Marine Organisms. Unpublished Trip Report - Removal of Tenneco Oil Platform on June 21, 1986. NMFS, SEFC, Galveston Laboratory, 19 pp.
- Fontaine, C. T., 1986. Observations on the Removal of Tenneco Oil Platform 493-B, West Cameron Field, 20-23 July 1986. Unpublished Trip Report to NMFS, SEFC, Galveston Laboratory, 9 pp.
- Klima, E. F. , 1986. Summary Report on Biological Impacts of Offshore Petroleum Platform Severance Using Explosives. Unpublished Report to NMFS, SEFC, Galveston Laboratory, 19 pr.
- Minerals Management Service, 1986. Platform Removal Techniques. Unpublished Report, MMS Gulf of Mexico Region, 14 pp.
- National Marine Fisheries Service, 1986. Biological Opinion Concerning Impacts of Proposed Removal of Cities Services Oil and Gas Corporation's Offshore Platform B-1, Located in Galveston Block 144, Gulf of Mexico. 14 pp.
- National Marine Fisheries Service, 1987. Biological Opinion Concerning Proposed Removal of Pennzoil Company's Platform A, Located in Vermilion Block 228, Gulf of Mexico. 24 pp.
- Renaud, M. and G. Gitschlag, 1987. Study of Biological Impacts of the Explosive Removal of an Offshore Platform (Pennzoil Platform-Vermilion 228A). Unpublished Trip Report to NMFS, SEFC, Galveston Laboratory, 9pp.

<u>#</u>	<u>Operator</u>	<u>Lease Area</u>	<u>Block</u>	<u>Structure</u>
40	Mobil Exploration and Producing Company U.S. Inc. "	Eugene Island Vermilion	354 182	A A
41	Kerr-McGee Corporation	Ship Shoal	296	A
42	Conoco Inc. "	Ship Shoal Vermilion	206 242	A A
43	Mobil Exploration and Producing Company U.S. Inc. "	West Cameron West Cameron	132 101	1 C
44	Tenneco Oil Exploration and Production	East Cameron	255	F
45*	Mobil Exploration and Producing Company U.S. Inc. " " (heliport) Except capped and plugged wells "A" & "B" in Vermilion -76-B	Eugene Island Vermilion "	199 76 "	C B "
46	Mobil Exploration and Producing Company U.S. Inc.	Vermilion	76	1
47	Samaden Oil Corporation	Galveston	241	A
48	Conoco In. " "	Grand Isle " "	63 54 47	A 3 6
49	Mobil Exploration and Producing Company U.S. Inc.	Main Pass	91	2
50	Mobil Exploration and Producing Company U.S. Inc.	South Pelto	12	D
51	Exxon Company " " "	West Delta " " "	30 " 31 "	5 V 1 W
52	Conoco Inc.	West Delta	45	R-1

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53	Mobil Exploration and Producing Company U.S. Inc. "	West Cameron South Marsh	71 235	A 9
54	Tenneco Oil Exploration and Production	Ship Shoal	199	E
56*	Conoco Inc.	West Cameron	135	A
	"	East Cameron	47	D
	"	S. Marsh, W. Ad.	261	A
	Except West Cameron-261-A			
57*	Exxon Company U.S.A. Except High Island East Addition-A342-A	High Is., E. Ad.	A-342	B
58	BHP Petroleum	High Island	A-507	A
59	Mobil Exploration and Producing Company U.S. Inc.	East Cameron	14	5
60	FMP Operating Company	West Cameron	464	A
61	Amoco Production Company	S. Marsh Island	33	A

* Consultations whose numbers include an asterisk (*) did not totally fall under the parameters of this "standard" consultation, therefore, only those removals meeting the parameters are approved and further consultation will be necessary for the exceptions.