OCS-G 8753
ES/SR 91-18/S

UNITED STATES DEPARTMENT OF THE INTERIOR

MINERALS MANAGEMENT SERVICE

Gulf of Mexico OCS Region

New Orleans, Louisiana

FINAL

SITE-SPECIFIC ENVIRONMENTAL ASSESS.

ENDANGERED SPECIES/STRUCTURE REMOVAL

No. ES/SR 91-18/S

Structure-Removal Activity

Main Pass Area, Block 175

Lease OCS-G 8753

April 1991

Office of Program Services
APR 09 1991
Information Services Section

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

No. ES/SR 91-18/S

Assessment of the Environmental Impact of the Proposed Removal of Well No. 1 in Main Pass Area, Block 175 (Lease OCS-G 8753) by ARCO Oil and Gas Company

Date Submitted: March 28, 1991
Commencement Date: April, 1991
Prepared by Gary Rutherford

FINDING OF NO SIGNIFICANT IMPACT

I have considered the notification by ARCO Oil and Gas Company to remove Well No. 1 in the Main Pass Area, Block 175 (Lease OCS-G 8753), SEA No. ES/SR 91-18/S. Based on the environmental analysis and mitigation measures contained in the site-specific environmental assessment, there is no evidence to indicate that the proposed actions will significantly (40 CFR 1508.27) affect the quality of the human environment if the applications are approved subject to the mitigative measures. Preparation of an environmental impact statement is not required.

FB

Regional Supervisor
Leasing and Environment
Gulf of Mexico OCS Region

4/4/91
Date

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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) (USDI, 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 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 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 and evaluates the removal's 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 OF THE PROPOSAL AND NEED FOR THE PROPOSAL

A. DESCRIPTION OF THE PROPOSED ACTION WITH MITIGATION

ARCO proposes to remove Well No. 1 in Main Pass Area, Block 175, Lease OCS-G 8753. Well No. 1 is located in a water depth of 134 feet and lies aproximately 65 miles east of St. Bernard Parish, Louisiana. The operator plans to place an explosive charge inside of the casing string 15 feet BML and detonate it.

Refer to Appendix A for structure specifications for the removal, additional data on removal techniques, and sequence of events. It has been determined that the proposed operations fall within the category of activities covered by the National Marine Fisheries Service (NMFS) biological opinion of July 25, 1988, which addresses "standard" explosive structure removals in the Gulf of Mexico.

MITIGATION

Refer to the operator's proposals (Appendix A) for mitigative measure(s) proposed to reduce the likelihood of death or injury to sea turtles and marine mammals.

B. NEED FOR THE PROPOSED ACTION(S)

A discussion of the legal and regulatory mandates to remove abandoned oil and gas structures from Federal waters can be found in the PEA (USDI, MMS, 1987).

II. ALTERNATIVES TO THE PROPOSED ACTION

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

A. NON-REMOVAL OF THE STRUCTURES

ARCO would not proceed with the proposed removal(s). This alternative would eliminate the possibility that sea turtles, marine mammals or other marine life would be harmed by removal of the structure(s) as proposed. However, non-removal of the structure(s) 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 or easement. Therefore, non-removal does not appear to be a valid alternative.

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

The MMS has discussed various structure-removal techniques in the Final Environmental Impact Statement (FEIS) for Proposed Oil and Gas Lease Sales 131, 135, and 137 (USDI, MMS, 1990) and in the PEA (USDI, MMS, 1987). It was concluded that the most effective methods of structure removals are the use of explosives, either bulk or shaped charges, 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, it does not appear to be a feasible alternative for the removal of the subject structure(s).

Refer to the FEIS (USDI, MMS. 1990) and the PEA (USDI, MMS, 1987) for detailed information concerning alternative methods of structure removal.

C. REMOVAL OF THE STRUCTURE(S) AS PROPOSED WITH ADDED MITIGATION

Refer to the terms and conditions of the "generic" Incidental take statement (Appendix B), and any mitigation identified by this SEA necessary to reduce the likelihood of death or injury to sea turtles and marine mammals.

The lessee will ensure that all aircraft used in support of their OCS operations maintain a minimum altitude of 2000 feet over all national wildlife refuges and national park lands.

The operator will contact Air Force Development Test Center, 3246th Test Wing/CCU, Attention: John Wilkinson/CCU, Eglin AFB, Florida 32542, telephone: (904)882-8963 regarding control of

electromagnetic emissions and operations of boat and/or aircraft traffic into the designated testing area EWTA-1 or enter into an agreement with the military installation.

III. ENVIRONMENTAL EFFECTS, SOCIOECONOMIC CONCERNS, AND OTHER CONSIDERATIONS

A. PHYSICAL ENVIRONMENT

1. Environmental Geology and Geologic Hazards

A discussion of environmental geology and geologic hazards can be found in the PEA (USDI, MMS, 1987). The proposed structure-removal activity is not in an area of sediment instability (mud flows, slumps, or slides). Therefore, geologic conditions are not expected to have an impact on the proposed structure-removal activities.

2. Meteorological Conditions

No impacts are expected as a result of the proposed activities. For analysis information, see the PEA referenced in the Introduction.

3. Physical and Chemical Oceanography

a. Physical Oceanography

No impacts are expected as a result of the proposed activities. For analysis information, see the PEA referenced in the Introduction.

b. Chemical Oceanography

Impacts are expected to be very low as a result of the proposed activities. For analysis information, see the PEA referenced in the Introduction.

4. Water Quality

Impacts are expected to be low as a result of the proposed activities. For analysis information, see the PEA referenced in the Introduction.

5. Air Quality

Impacts are expected to be very low as a result of the proposed activities. For analysis information, see the PEA referenced in the Introduction.

B. BIOLOGICAL ENVIRONMENT

1. Coastal Habitats

No impacts are expected as a result of the proposed activities. For analysis information, see the PEA referenced in the Introduction.

2. Protected, Endangered, and/or Threatened Species

a. Birds

The PEA (USDI, MMS, 1987) delineates sensitive areas along the Texas coastline where whooping cranes and brown pelicans could be adversely impacted by structure-removal support activities. The operator has indicated that helicopter flights and boat traffic would utilize a shorebase in Venice, Louisiana. The lessee will ensure that all aircraft used in support of their OCS operations maintain a minimum altitude of 2000 feet over all national wildlife refuges and national park lands.

b. Marine Mammals

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 (USDI, MMS, 1987). Fritts et al. (1983) conducted aerial surveys across a 9,514 square mile area of waters lying in the central GOM. Results of these surveys indicate that the bottlenose dolphin is by far the most likely marine mammal to be encountered at the proposed structure removal(s). MMS observers may be utilized to look for marine mammals prior to detonation of the primary charge(s) at the removal site(s). If marine mammals are detected at the structure-removal site(s), detonation of the primary charge(s) would be delayed until the animals are removed from the area(s). In spite of these precautions, a low probility exists that marine mammals could enter the blast area(s) undetected and could be injured or killed by the underwater, subsurface detonation(s). Such an occurrence is considered highly unlikely and with the indicated protective mitigation measure(s), the proposed structure-removal activities are expected to have only a low impact on marine mammals.

c. Sea Turtles

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 (USDI, MMS, 1987). 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 and Martinez, 1990) indicate that sea turtles 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(s) during removal operations is scarce. NMFS and/or MMS observers may be utilized to look for sea turtles prior to detonation of the primary charge(s). If sea turtles are detected at the structure-removal site(s), detonation of the primary charge(s) will be delayed until the animals are removed from the area(s). As in the case of marine mammals, the possibility exists that sea turtles could enter the blast area(s) undetected and could be injured or killed by the underwater, subsurface detonation(s). This occurrence is considered unlikely, and with the indicated protective mitigation measure(s), the proposed structure-removal activities are expected to have only a low impact on sea turtles. A cumulative incidental take has been authorized by NMFS for this category of action, but with all the precautions to be taken as mitigation measure(s), it is unlikely that any sea turtles will be affected by these proposed operations.

3. Birds

Mitigations to protect endangered birds and their habitats are invoked. For analysis information, see the PEA referenced in the Introduction.

4. Sensitive Marine Habitats

A discussion of sensitive marine habitats occurring in the central and western GOM and an assessment of the potential impacts of structure-removal activities on these areas can be found in the PEA (USDI, MMS, 1987). The proposed activities are not near any sensitive marine habitats. Therefore, the subject structure-removal(s) will not impact any sensitive marine habitats or their resident biota.

5. Offshore Habitats and Biota

Impacts are expected to be low as a result of the proposed activities. For analysis information, see the PEA referenced in the Introduction.

C. SOCIOECONOMIC CONCERNS

1. Employment

Impacts are expected to be very low as a result of the proposed activities. For analysis information, see the PEA referenced in the Introduction.

2. Economics

Impacts are expected to be very low as a result of the

proposed activities. For analysis information, see the PEA referenced in the Introduction.

3. Onshore Support Facilities, Land Use, and Coastal Communities and Services

The operator has indicated that Venice, Louisiana, would be the shore base for the proposed structure-removal activities. No impacts are expected as a result of the proposed activities. For analysis information, see the PEA referenced in the Introduction.

D. OTHER CONSIDERATIONS

1. Commercial and Recreational Fisheries

a. Commercial Fisheries

Impacts are expected to be low as a result of the proposed activities. For analysis information, see the PEA referenced in the Introduction.

b. Recreational Fisheries

Impacts are expected to be low as a result of the proposed activities. For analysis information, see the PEA referenced in the Introduction.

2. Archaeological Resources

Impacts are expected to be low as a result of the proposed activities. For analysis information, see the PEA referenced in the Introduction.

3. Military Use/Warning Areas and Explosive Dumping Areas

A description of military use/warning areas and explosive dumping areas, their locations and potential impacts of structure-removal activities on these areas can be found in the PEA (USDI MMS, 1987). The proposed structure-removal activities will take place in a testing area, EWTA-1.

4. Navigation and Shipping

The proposed structure-removal activities are not located adjacent to a vessel safety fairway or in an anchorage area. Structures located nearshore may serve as "landmarks" to vessels or helicopters operating in the area on a regular basis. The overall impacts of the proposed work on navigation and shipping is expected to be very low. More information on the impacts of structure removals on navigation and shipping can be found in the PEA (USDI, MMS, 1987).

5. Pipelines and Cables

The PEA (USDI, MMS, 1987) contains a description of the impacts of structure removals on pipelines and cables. The proposed work will not take place within 150 meters (490 feet) of existing pipelines. Since the operator must adhere to existing laws and regulations for abandonment of structures (including procedures required by Notice to Lessees and Operators 83-3), the proposed work will not pose a hazard to pipelines or cables in the area.

6. Other Mineral Resources

No impacts are expected as a result of the proposed activities. For analysis information, see the PEA referenced in the Introduction.

7. Human Health and Safety

The PEA (USDI, MMS, 1987) describes the hazardous conditions for workers during structure-removal activities. The operator has proposed the use of explosives in conjunction with the structure-removal activities. Existing legal and regulatory safety requirements will keep the impacts of the proposed work on human health and safety at a very low level.

E. UNAVOIDABLE ADVERSE IMPACTS

A discussion of unavoidable adverse impacts can be found in the PEA (USDI, MMS, 1987). Two areas of primary concern are 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. Other unavoidable adverse impacts are considered to be minor.

IV. PUBLIC OPINION

A discussion of public concerns regarding structure removals can be found in the PEA (USDI, MMS, 1987). The proposed structure-removal has generated no comments from the public.

V. CONSULTATION AND COORDINATION

In accordance with the provisions of Section 7 of the Endangered Species Act, this proposed structure-removal is covered by the biological opinion issued by NMFS on July 25, 1988, which established a category of "standard" explosive structure-removal operations. Their comments are included in Appendix B. The NMFS 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 activities 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 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 would be prohibited unless they successfully apply for and obtain a permit or waiver to do so from NMFS.

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.

Teas, Wendy G. and Anthony Martinez, 1990 1989 third-quarter report of the sea turtle stranding and salvages network. Atlantic and Gulf Coasts of the United States. January-September 1989. National Marine Fisheries Service. Southeast Fisheries Center, Miami Laboratory, 75 Virginia Beach Drive, Miami.

U.S. Department of the Interior. Minerals Managemert Service. 1990. Final Environmental Impact Statement. Proposed OCS oil and gas lease sales 131, 135, and 137 (Central, Western, and Eastern Gulf of Mexico). OCS EIS/EA MMS No. 90-0042. Washington D.C. Available from the Gulf of Mexico Region or NTIS, Springfield, VA. Volume 1, PB-90-273582 and Volume 2, PB90-273590.

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.

Table 1

Explosive Proposed by the Operator
for the Structure-Removal in
Main Pass Area, Block 175
(OCS-G 8753)

Type of Explosives:

Composition B bulk charge

Number and Size of Charges:

1-30 lb. charge for the 20 inch casing stub. A 30 lb. back-up charge is also proposed.

Employment of Charges:

Inside casings, 15 feet below the mudline

Sequence of Detonations:

The detonation will take place in 1 single shot.
If casing stub cannot be pulled, a second charge will be set up and run immediately.

VII. PREPARERS

Author:

Gary Rutherford - Geologist

Typist:

Anne Maranto - Clerk Typist

VIII. APPENDIX

A. ARCO OIL AND GAS COMPANY CORRESPONDENCE

B. NMFS CORRESPONDENCE

APPENDIX A

ARCO OIL AND GAS COMPANY CORRESPONDENCE

EXPLOSIVE < 5 [illegible] Rutherford

UNITED STATES GOVERNMENT
MEMORANDUM

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3-27-91

To: Environmental Operations Section (LE-5)

From: Office of Structural and Technical Support, Field Operations, Gulf of Mexico OCS Region (OSTS)

Subject: ~~Platform~~ CASING STUB Removal

RECEIVED
MAR 28 1991
Minerals Management Service
Leasing & Environment

OPERATOR: ARCO

Control No: ES/SR 91-18/S

~~Platform~~ CASING STUB	Area/Block	Lease
Well No. 1	MP 175	G-8753

Shore Base: Venice, 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 7 Consultation Document. There[redacted]/are no existing pipeline(s) within 500 feet of the proposed removal location. This block does not appear to be in a biologically sensitive area. If your data indicates otherwise, please advise.

BURT MULLIN
~~Arvind Shah~~ (OSTS)
Extension [redacted] 2904

NOTE: ① EWTA-1
Enclosure ② OVERFLIGHT MITIGATION

cc:

Please Rush

14 April SD

CBM
~~[illegible]~~ [illegible]

PROPOSED OCS PLATFORM/STRUCTURE REMOVAL

I. **Responsible Party**

A. Lease operator name ARCO Oil and Gas Company

B. Address P.O. Box 51408

Lafayette, LA 70505

C. Contact person and telephone number Doug Chester

318-264-4277

D. Shore base ARCO Oil & Gas, McDermott Road, Venice, LA

II. **Identification of Structure to be Removed**

A. Platform name N/A

B. Location (lease, area, block, and block coordinates) OCS-G-8753, Main Pass Block 175; 3172'FWL & 5,167'FNL of MP Block 175

C. Date installed (year) 1988

D. Proposed date of removal (Month/Year) April 1991

E. Water depth 134'

III. **Description of Structure to be Removed**

A. Configuration (attach a photograph or a diagram) Attached

B. Size 20"

C. Number of legs/casings/pilings One (1) casing stub

D. Diameter and wall thickness of legs/casings/pilings

20" OD x .5" wall thickness casing stub

E. Are piles grouted? No Inside or outside? N/A

F. Brief description of soil composition and condition

Firm Sand

IV. Purpose

Lease expiration date and reason for removing the structure 7/31/92

Well is uneconomical to produce. Casing stub needs to be cut 15' BML per 30 CFR Subpart G 250.112.

V. Removal Method

A. Brief description of the method to be used Stub will be located, explosives will be guided into the inside of the casing stub with divers, the stub cut a minimum of 15' BML and the stub removed.

B. If explosives are to be used, provide the following:

1. Kind of explosives 30 lbs comp B bulk charge

2. Number and sizes of charges (1) 30 lb and a second 30 lb only if stub cannot be pulled after first.

   a. Single shot or multiple shots? (2) only if needed.

   b. If multiple shots, sequence and timing of detonations Fire 1st charge, if casing stub cannot be pulled, a second charge will be set up and run immediately.

3. Bulk or shaped charge? Bulk

a. Depth of detonation below mud line 20 feet

b. Inside or outside piling? Inside casing stub

C. Pre-removal monitoring techniques

1. Is the use of scare charges or acoustic devices proposed? No

If yes, provide the following:

a. Number and kind

b. Size of charges

c. Brief description of how, where, and when scare charges or acoustic devices will be used

2. Will divers or acoustic devices be used to conduct a pre-removal survey to detect presence of turtles and marine mammals? Yes

If yes, briefly describe the proposed detection method Divers will be used to guide explosives into casing stub, at which time they will be able to determine the presence of any turtles and marine animals.

D. Post-removal monitoring techniques

1. Will transducers be used to measure the pressure and impulse of the detonations? No.

2. Will divers be used to survey the area after removal to determine and effects on marine life? No, Mesotech side scan sonar will be used to perform a 300' radius site clearance survey.

VI. Biological Information

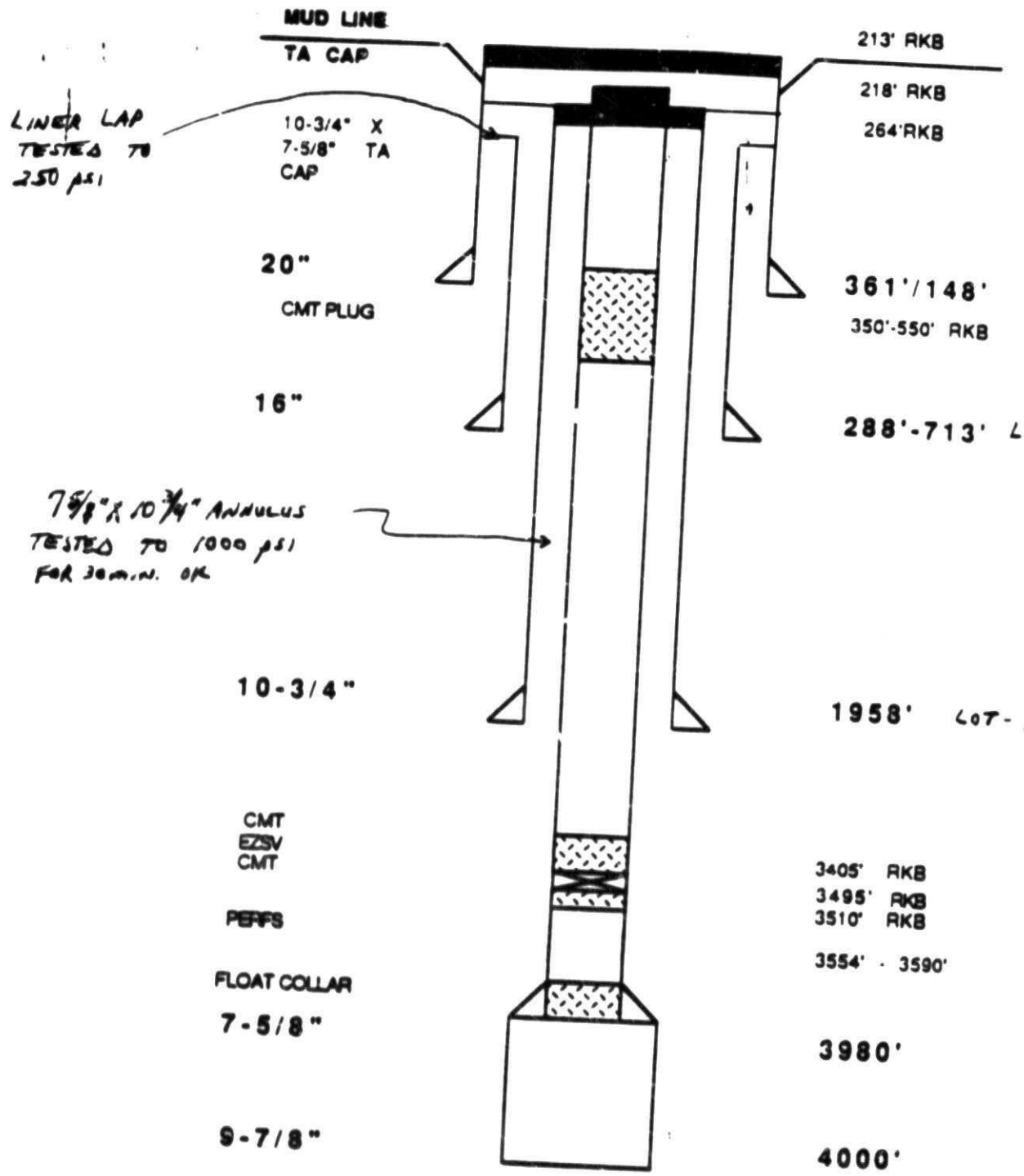
If available, provide the results of any recent biological surveys conducted in the vicinity of the structure. If available, describe any recent observations of turtles or marine mammals at the structure site. None available.

PLEASE SEND THREE COPIES OF THE APPLICATION TO:

Regional Supervisor, Field Operations (OSTS)
Minerals Management Service
1201 Elmwood Park Blvd.
New Orleans, Louisiana 70123

EAST MAIN PASS 175 #1
TA SCHEMATIC

WD - 134'



5166.66' FNL & 3172 FWL

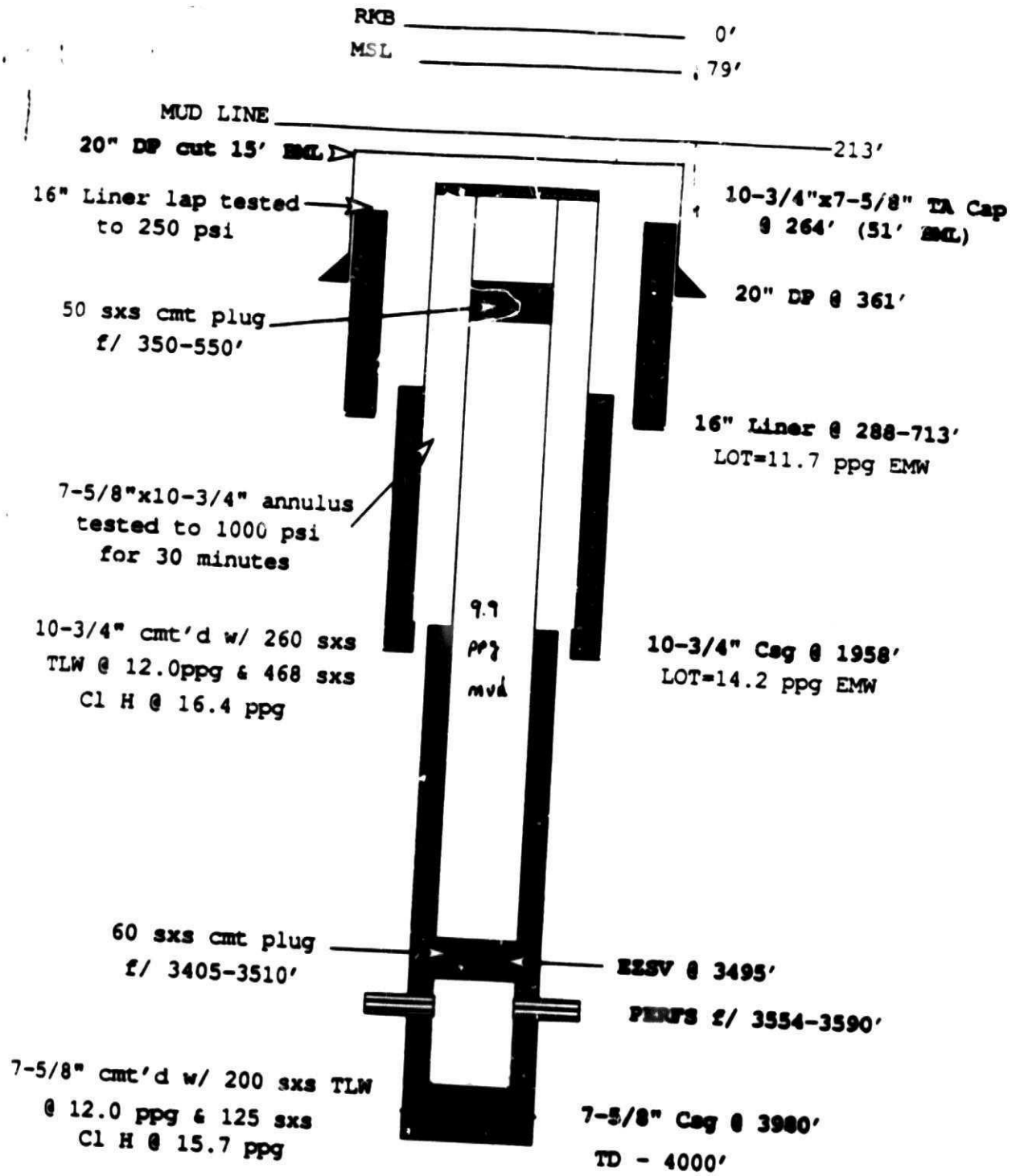
X = 2,848,272.08'

Y = 346,863.34'

LAT = 29 35 09.651

LONG = 88 [illegible] 58.634

MAIN PASS 175 #1 (OCS-G-8753)
PROPOSED P&A SCHEMATIC



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

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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 these proposed removal operations. Therefore, formal consultation is concluded for these proposed actions.

Consultation must be reinititated 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

James W. Brennan
Assistant Administrator
for Fisheries

Enclosures

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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: _____

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.

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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, well 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:

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

2) A maximum of eight individual blasts 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 (non-explosive) 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:

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

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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).

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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:

Explosive	Detonating Velocity	Brisance*
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.

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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 is designated that may be affected by the proposed activities.

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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.

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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.

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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.

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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.

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Renaud, M. and G. Gitschlag, 1987. Study of Biological Impacts of the Explosive Removal of an Offshore Platform (Pennzoil Platform - Vermillion 228A). Unpublished Trip Report to NMFS, SEFC, Galveston Laboratory. 9pp.

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#	Operator	Lease Area	Block	Structure
40	Mobil Exploration and Producing Company U.S. Inc.	Eugene Island	354	A
	"	Vermilion	182	A
41	Kerr-McGee Corporation	Ship Shoal	296	A
42	Conoco Inc.	Ship Shoal	206	A
	"	Vermilion	242	A
43	Mobil Exploration and Producing Company U.S. Inc.	West Cameron	132	1
	"	"	101	C
44	Tenneco Oil Exploration and Production	East Cameron	255	F
45*	Mobil Exploration and Producing Company U.S. Inc.	Eugene Island	119	C
	"	Vermilion	76	B
	" (heliport)	"	"	"
	Except capped and plugged wells "A" & "B" in Vermilion-76-B			
46	Mobil Exploration and Producing Company U.S. Inc.	Vermilion	76	1
47	Samaden Oil Corporation	Galveston	241	A
48	Conoco Inc.	Grand Isle	63	A
	"	"	54	3
	"	"	47	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	5
	"	"	"	V
	"	"	31	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. Except West Cameron-261-A	West Cameron East Cameron S. Marsh, N. Ad	135 47 261	A D 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.