To: Chief, Office of Structural and Technical Support, Field Operations, GOM OCS Region (MS 5210)

From: Regional Supervisor, Leasing and Environment, GOM OCS Region (MS 5400)

Subject: Site-Specific Environmental Assessment (SEA) Prepared for Structure-Removal Activities by Murphy Exploration & Production Company, Ship Shoal Area, Blocks 93 and 114, Leases OCS-063 and 064, SEA Nos. ES/SR 93-022, 93-023 and 93-024

Murphy Exploration & Production Company’s proposal to remove Caisson No. 53 in Block 93, and Caissons Nos. 9, 36, and 57 in Block 114, has been reviewed. Our SEA for the subject action is complete and results in a Finding of No Significant Impact. This Finding is conditioned on the imposition of the following mitigative measures to ensure environmental protection, consistent environmental policy, and safety as required by the National Environmental Policy Act. This Finding is valid only insofar as this conditions is imposed:

Our analysis indicates that there are existing pipelines located within 150 meters (490 feet) of the proposed activities. These pipelines may pose a hazard to the proposed operations. Precautions in accordance with NTL No. 83-3, section IV.B, must be taken prior to conducting operations.

The MMS has not been notified through the Fisherman’s Contingency Fund of any hang sites within Blocks 93 and 114.

J. Kenneth Adams

cc: ENV (1001-03(c) (MS 5440)
Leases OCS-063 and 064 POD File (MS 5032)
Public Records (MS 5034)

TStechmann:mbw:93-022.sea
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
Nos. ES/SR 93-022, 93-023 and 93-024

Structure-Removal Activities
Ship Shoal Blocks 93 and 114
Leases OCS-063 and 064

February 17, 1992
Assessment of the Environmental Impacts of the Proposed Removal of Caisson No. 53 in Ship Shoal Block 93 and Caissons Nos. 9, 36, and 57 in Ship Shoal Block 114 (Leases OCS-063 and 064) by Murphy Exploration & Production Company

Date Submitted: February 10, 1993
Commencement Date: March 1993
Prepared by Ted Stechmann
FINDING OF NO SIGNIFICANT IMPACT

I have considered the notification by Murphy Exploration & Production Company to remove Caisson No. 53 in Ship Shoal Block 93 and Caissons Nos. 9, 36, and 57 in Ship Shoal Block 114 (Leases OCS-063 and 064), SEA Nos. ES/SR 93-022, 93-023 and 93-024. Based on the environmental analysis, there is no evidence to indicate that the proposed action will significantly (40 CFR 1508.77) affect the quality of the human environment. Preparation of an environmental impact statement is not required.

[Signature]
Regional Supervisor
Leasing and Environment
Gulf of Mexico OCS Region

2/18/93
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) (USDOI, 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 the 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. 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

Murphy Exploration & Production Company proposes to remove Caisson No. 53 in Ship Shoal Block 93, and Caissons Nos. 9, 36, and 57 in Ship Shoal Block 114 (Leases OCS-063 and 064). The structures are located in water depths ranging from 31 (Block 93) to 52 feet (Block 114) and lie approximately 15 miles south of Terrebonne Parish, Louisiana. The operator plans to use mechanical cutters to sever the caissons and casing strings of each of the structures a minimum of 15 feet below the mud line.

Since no explosives will be utilized during the proposed removal activities, the MMS has determined that sea turtles and marine mammals will not be affected. A Section 7 Consultation under the Endangered Species Act will not be initiated.

Refer to Appendix A for structure specifications and additional information on the removal activities.

B. NEED FOR THE PROPOSED ACTION

A discussion of the legal and regulatory mandates to remove abandoned oil and gas structures from Federal waters can be found in the PEA referenced in the Introduction. Murphy Exploration & Production Company states that the structures were damaged by Hurricane Andrew and are of no future use.
II. ALTERNATIVES TO THE PROPOSED ACTION

A. NON-REMOVAL OF THE STRUCTURES

The alternative to the proposed structure removal as originally submitted is non-removal. Non-removal of the structures 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 of easement. Therefore, non-removal does not appear to be a valid alternative.

B. REMOVAL OF THE STRUCTURES AS PROPOSED WITH ADDED MITIGATION

In the course of this evaluation process, the following additional protective measure was identified to further mitigate the environmental impacts associated with the proposal:

There are existing pipelines located within 150 meters (490 feet) of the proposed activities. Therefore, precautions in accordance with NTL no. 83-3, Section IV.B, will be taken prior to conducting operations.

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 referenced in the Introduction. The proposed structure-removal activities are 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

Impacts are expected to be low 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 operator has indicated that they propose to use Dulac, Louisiana, as the shore base to support the proposed structure-removal activities. The PEA referenced in the Introduction delineates sensitive areas along the Texas coastline where whooping cranes and brown pelicans could be adversely impacted by structure-removal support activities. The shore base for the proposed activities lies outside of this sensitive area. Therefore, the proposed work is not expected to impact threatened or endangered birds or their habitats.

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 referenced in the Introduction. 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. Since the proposed structure removal will utilize no explosives, no impacts are expected 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 referenced in the Introduction. 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, 1992) indicate that sea turtles occur in the vicinity of the proposed activities. Definitive information on the probability of encountering sea turtles at the removal site during removal operations is scarce. Since the proposed structure removal will utilize no explosives, no impacts are expected on sea turtles.

2. Birds

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. 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 referenced in the Introduction. The proposed activities are not near any sensitive marine habitats. Therefore, the subject structure removal 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

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. The MMS has not been notified through the Fisherman's Contingency Fund of any bang sites within Blocks 93 and 114.

   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

   The proposed structure-removal activities will not take place in a military use/warning area or an explosive dumping area. In addition, the shore based location chosen by the operator and/or his contractor(s) will not require support vessels or aircraft to traverse any of these areas. A description of these areas, their locations and potential impacts of structure-removal activities in these areas can be found in the PEA referenced in the Introduction. The proposed activities will not impact or be impacted by any military use/warning areas or explosives dumping areas.

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 referenced in the Introduction.

5. Pipelines and Cables

The PEA referenced in the Introduction contains a description of the impacts of structure removals on pipelines and cables. The proposed work will take place within 150 m (490 feet) of existing pipelines. Since the operator is aware of existing laws and regulations for abandonment of structures (including procedures required by Notice to Lessees and Operators 83-1), 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 referenced in the Introduction describes the hazardous conditions for workers during structure-removal activities. The operator has proposed a nonexplosive method to remove the subject structure. 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 referenced in the Introduction. One area of primary concern is the potential loss of habitat to the marine environment. This topic is discussed in the PEA and a low level of impact is expected. 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 referenced in the Introduction. 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 does not require coordination with the National Marine Fisheries Service (NMFS).
VI. BIBLIOGRAPHY AND SPECIAL REFERENCES


Fuller, D. and J.M. Tappar. 1986. The occurrence of sea turtles in Louisiana coastal waters. Coastal Fisheries Institute, Center for Wetland Resources, Louisiana State University, Baton Rouge, LA.


VII. PREPARERS

Author:
Ted Stechmann - Biologist

Typist:
Michael B. Wallace - Environmental Operations Assistant
VIII. APPENDIX

A. MURPHY EXPLORATION & PRODUCTION COMPANY CORRESPONDENCE
UNITED STATES GOVERNMENT
MEMORANDUM

To: Environmental Operations Section (LE-5)

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

Subject: Platform Removal

OPERATOR: Murphy

Control No: ES/SR 93-022, 023, 024

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<td>53 114</td>
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Shore Base: Dulac, LA

The attached application is forwarded to your office so that the Finding of No Significant Impact can be prepared. Since explosives will not be used in this removal operation, an Endangered Species Act Section 7 Consultation Documentation is not required. There are existing pipeline(s) within 500 feet of the proposed removal location.

Arvind Shah (OSTS)
Extension 2894

Attachment

cc:

ASShah: LEXITYPE:Disk 5
PROPOSED OCS PLATFORM/STRUCTURE REMOVAL

I. Responsible Party
A. Lease Operator Name: Murphy Exploration & Production Co.
B. Address: 131 South Robertson St., P.O. Box 61780
   New Orleans, LA 70161-1780
C. Contact Person and Telephone Number:
   Chief Engineer, Petroleum: James A. Hunter (504) 561-2376
   Field Engineer: Paul Southworth (504) 561-2518

II. Identification of Structure to be Removed
A. Platform Name: No. 53
B. Location (Lease, Area, Block, and Block Coordinates):
   Ship Shoal Block 93 OCS-063
   X = 2158411.1  Y = 72591.8
C. Date Installed (Year): 6/87
D. Proposed Date of Removal (Month/Year): 3/93
E. Water Depth: 31'

III. Description of Structure to be Removed
A. Configuration (Attach a Photograph or a Diagram)
B. Size: 25' x 14' with 48' caisson
C. Number of Legs/Casings/Pilings: 5
D. Diameter and Wall Thickness of Legs/Casings/Pilings

- 48" x 2" WT: 30" x .625" WT: 16" x .375" WT: 11-3/4" x .489" WT
- 7-5/8" x .5" WT

E. Are Piles Grouted? No Inside or Outside? N/A

F. Brief description of soil composition and condition

Silt, sand and clay

IV. Purpose

Brief discussion of the reason for removing the structure

Structure was damaged by hurricane Andrew and is of no future use.

V. Removal Method

A. Brief description of the method to be used

Casings will be cut with mechanical cutters.

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

1. Kind of Explosives N/A
2. Number and Sizes of Charges N/A
a. Single Shot or Multiple Shots? N/A

b. If multiple shots, sequence and timing of
detonations N/A

3. Bulk or Shaped Charge? N/A
   a. Depth of Detonation Below Mud Line N/A
   b. Inside or Outside Piling? N/A

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? No
If yes, briefly describe the proposed detection method:  

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 any effects on marine life? No

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.

No recent biological survey is available for the said area. There have been no sightings of turtles or marine mammals in the area.
1. Design wave 100 year storm in Gulf waters

2. Structural steel design is in accordance with the AISC specifications (FEB 12, 1967). A 33% increase in allowable stress has been permitted in design of members subjected to wind and wave forces when these forces govern the design.

3. Design load on production deck:
   A. Dead load 50 PSF
   B. Live load 200 PSF

4. All grating (handrails) to be hot-dip galvanized after fabrication to conform to the latest revision of ASA A-123.

--- Design Loadings ---

1. Vertical live + dead load 115 kips

2. Environmental load 76 kips

3. Maximum mud line moment 2420 ft-kips

4. Maximum moment below mud line 4092 ft-kips @ 14 ft

--- Oceano Oily Gas Company ---

Deck for platform

Ship shall block 93

R.R. 4 1/2 TO 180" MD 13 WELD JACKET
PROPOSED OCS PLATFORM/STRUCTURE REMOVAL

I. Responsible Party
A. Lease Operator Name: Murphy Exploration & Production Co.
B. Address 131 South Robertson St., P.O. Box 61780
   New Orleans, LA 70161-1780
C. Contact Person and Telephone Number: Chief Engineer, Petroleum: James A. Hunter (504) 561-2376; Field Engineer: Paul Southworth (504) 561-2518

II. Identification of Structure to be Removed
A. Platform Name No. 9
B. Location (Lease, Area, Block, and Block Coordinates):
   Ship Shoal Block 114 QCS-064
   X = 2158287.0  Y = 60009.0
C. Date Installed (Year) 6/65
D. Proposed Date of Removal (Month/Year) 3/93
E. Water Depth 52'

III. Description of Structure to be Removed
A. Configuration (Attach a Photograph or a Diagram)
B. Size 25' x 14' w/ 48' caisson
C. Number of Legs/Casings/Pillings 5 casings
D. Diameter and Wall Thickness of Legs/Casings/Pilings

- 48" x 1.75" WT; 36" x .5" WT; 16" x .375" WT
- 10-3/4" x .4" WT; 7" x .362" WT

Are Piles Grouted? No  Inside or Outside? N/A

F. Brief description of soil composition and condition

Silt, sand and clay

IV. Purpose

Brief discussion of the reason for removing the structure

Structure was damaged by hurricane Andrew and is of no future use.

V. Removal Method

A. Brief description of the method to be used

Casings will be cut with mechanical cutters.

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

1. Kind of Explosives N/A
2. Number and Sizes of Charges N/A
a. Single Shot or Multiple Shots? N/A

b. If multiple shots, sequence and timing of detonations N/A

3. Bulk or Shaped Charge? N/A

a. Depth of Detonation Below Mud Line N/A

b. Inside or Outside Piling? N/A

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? No
If yes, briefly describe the proposed detection method

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 any effects on marine life? No

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.

No recent biological survey is available for the said area. Therefore, there have been no sightings of turtles or marine mammals in the area.
PROPOSED OCS PLATFORM/STRUCTURE REMOVAL

I. Responsible Party
A. Lease Operator Name Murphy Exploration & Production Co. 
B. Address 131 South Robertson St., P.O. Box 61780
    New Orleans, LA 70161-1780
C. Contact Person and Telephone Number Chief Engineer, Petroleum: James A. Hunter (504) 561-2376; Field Engineer: Paul Southworth (504) 561-2518

II. Identification of Structure to be Removed
A. Platform Name No. 36
B. Location (Lease, Area, Block, and Block Coordinates; Ship Shoal Block 114 OCS-064
    X=2158287.0 Y=60009.0
C. Date Installed (Year) 12/71
D. Proposed Date of Removal (Month/Year) 3/93
E. Water Depth 52'

III. Description of Structure to be Removed
A. Configuration (Attach a Photograph or a Diagram)
B. Size 25' x 14'
C. Number of Legs/Casings/Pilings 4 pile 4 casings
D. Diameter and Wall Thickness of Legs/Casings/Pilings

- 36" x .5" WT; 16" x .375" WT
- 10/3/4" x .4" WT; 7-5/8" x .43" WT

E. Are Piles Grouted? **No** Inside or Outside? **N/A**

F. Brief description of soil composition and condition

- Silt, sand and clay

IV. **Purpose**

Brief discussion of the reason for removing the structure

- Structure was damaged by hurricane Andrew and is of no future use.

V. **Removal Method**

A. Brief description of the method to be used

- Casings will be cut with mechanical cutters.

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

1. Kind of Explosives **N/A**

2. Number and Sizes of Charges **N/A**
a. Single Shot or Multiple Shots? N/A

b. If multiple shots, sequence and timing of detonations N/A

3. Bulk or Shaped Charge? N/A

a. Depth of Detonation Below Mud Line N/A

b. Inside or Outside Piling? N/A

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? No
If yes, briefly describe the proposed detection method

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 any effects on marine life? No

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.

No recent biological survey is available for the said area. There have been no sightings of turtles or marine mammals in the area.
PROPOSED OCS PLATFORM/STRUCTURE REMOVAL

I. Responsible Party
A. Lease Operator Name Murphy Exploration & Production Co.
B. Address 131 South Robertson St., P.O. Box 61780
   New Orleans, LA 70161-1780
C. Contact Person and Telephone Number Chief Engineer, Petroleum: James A. Hunter (504) 561-2376; Field Engineer: Paul Southworth (504) 561-2518

II. Identification of Structure to be Removed
A. Platform Name No. 57
B. Location (Lease, Area, Block, and Block Coordinates; Ship Shoal Block 114 OCS-064
   X=2159099.6 Y=58868.8
C. Date Installed (Year) 4/86
D. Proposed Date of Removal (Month/Year) 3/93
E. Water Depth 52'

III. Description of Structure to be Removed
A. Configuration (Attach a Photograph or a Diagram)
B. Size 25' x 14' with 48" caisson
C. Number of Legs/Casings/Pilings 5
D. Diameter and Wall Thickness of Legs/Casings/Pilings

- 48" x 2" WT: 30" X 1" WT: 16" X .496" WT: 10-3/4" X .4" WT:
- 7-5/8" X .5" WT

E. Are Piles Grouted? No Inside or Outside? N/A

F. Brief description of soil composition and condition

- Silt, sand and clay

IV. Purpose

Brief discussion of the reason for removing the structure

- Structure was damaged by hurricane Andrew and is of no future use.

V. Removal Method:

A. Brief description of the method to be used

- Casings will be cut with mechanical cutters.

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

1. Kind of Explosives N/A
2. Number and Sizes of Charges N/A
2. Single Shot or Multiple Shots? N/A
   b. If multiple shots, sequence and timing of detonations N/A

3. Bulk or Shaped Charge? N/A
   a. Depth of Detonation Below Mud Line N/A
   b. Inside or Outside Piling? N/A

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? No
If yes, briefly describe the proposed detection method


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 any effects on marine life? No

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.

No recent biological survey is available for the said area. There have been no sightings of turtles or marine mammals in the area.
DIA. NO. 1

1. DESIGN WAVE 100 YEAR STORM IN GULF WATERS

2. STRUCTURAL STEEL DESIGN IN ACCORDANCE WITH THE AISC SPECIFICATIONS (FEB 2, 1989) A 36; INCREASE IN ALLOWABLE STRESS HAS BEEN PERMITTED IN DESIGN OF MEMBERS SUBJECTED TO WIND (WAVE) FORCES WHEN THESE FORCES EXCEED THE DESIGN.

3. DESIGN LOADS ON PRODUCTION DECK:
   A. DEAD LOAD 30 P.S.I.
   B. LIVE 400 P.S.F.

4. ALL GRATING AND HANDRAILS TO BE HOT DIP Galvanized AFTER FABRICATION TO CONFORM WITH THE LATEST REVISION OF AISC.

DESIGN LOADS:

1. VERTICAL LIVE AND DEAD LOAD 130 KIPS

2. ENVIRONMENTAL LOADS 103 KIPS

3. MAXIMUM MUD LINE MOMENT 3773 FT-LBS

4. MAXIMUM MOMENT BELOW ML LINE 6504 FT-LBS @ 36 FT.

ODCO OIL GAS COMPANY

DECK FOR PLATFORM: SHIP SHOAL BLOCK 1.

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