In Reply Refer To: MS 5231

September 10, 1996

TDC Energy Corporation
Attention: Mr. Sanford S. Andrew
Post Office Box 53201
New Orleans, Louisiana 70153

Gentlemen:

Reference is made to the following plan received July 25, 1996:

Type Plan - Initial Development Operations Coordination Document
Lease - OCS-G 12991
Block - 91
Area - Grand Isle
Activities Proposed - Well No. 1

In accordance with 30 CFR 250.34, this plan is hereby deemed submitted and is now being considered for approval.

Your control number is N-5471 and should be referenced in your communication and correspondence concerning this plan.

Sincerely,

(Orig. Sgd.) Kent E. Stauffer

Donald C. Howard
Regional Supervisor
Field Operations

bcc: Lease OCS-G 12991 POD File (MS 5032)
MS 5034 w/public info. copy of the plan
and accomp. info.

MTolbert:cic:09/10/96:DOCDCOM

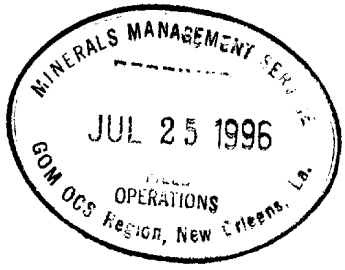
TDC Energy

600 Julia Street
New Orleans, Louisiana 70130
Office 504·529·3630
Fax 504·529·5541

16800 Imperial Valley Drive
Suite 210
Houston, TX 77060
Office 713·591·1282
Fax 713·591·1285

July 22, 1996

Mineral Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394



Attn: Regional Supervisor, Field Operations

RE: Initial Development Operations
Coordination Documents (DOCD)
Grand Isle 91
Lease OCS-G 12991

Gentlemen:

TDC Energy Corporation submits the subject Initial DOCD for your approval. Enclosed are eleven (11) copies of which five (5) contain proprietary data.

Your earliest review and approval would be appreciated.

Sincerely,

S S Andrew/gpl

Sanford S. Andrew
Operations Manager

SSA:JS/gpl
Enclosures

Initial Development Operations Coordination Document

TDC Energy Corporation

Grand Isle 91

Lease OCS-G 12991

July 15, 1996

Contact: Sanford S. Andrew
504/529-3630

TDC ENERGY CORPORATION

Grand Isle 91
Lease OCS-G 12991

In compliance with 30 CFR 250.34, the following information is submitted for the planned development and production activities for Grand Isle 91.

1. Description of Development Activities

   Under this Initial DOCD, TDC Energy Corporation (TDC) proposes to drill and complete for production one well. The well will be drilled from Mobil's Grand Isle 90 "A" Platform and will have a bottomhole location at Grand Isle Block 91, Lease OCS-G 12991.

   Drilling is proposed to commence on the OCS-G 12991 Well No. 1 on or before September 30, 1996. Completion of the No. 1 Well is projected to commence November 1, 1996. Production is to commence on or before December 31, 1996.

2. Description of Platform

   Again, TDC does not propose to set a platform. Well No. 1 is proposed to be drilled from Grand Isle 90 "A" Platform on the adjacent block.

   All hydrocarbon handling equipment for testing and production such as separators, tanks, and treaters is designed, installed, and operated to prevent pollution.

   Maintenance or repairs which are necessary to prevent pollution of offshore waters shall be undertaken immediately.

   Curbs, gutters, drip pans, and drains are installed in deck areas in a manner necessary to collect all contaminants not authorized for discharge.

   There shall be no disposal of equipment, cables, chains, containers, or other materials into offshore waters.

3. Description of Drilling Unit

   The proposed well will be drilled with a jack-up rig. Attached as Exhibit 2 is a schematic of a jack-up rig. When a rig is selected, the rig specifications will be made a part of the Application for Permit to Drill.

Safety features will include well control and blowout prevention equipment as described in 30 CFR 250.50. The appropriate life rafts, life jackets, ring buoys, etc. as prescribed by the U.S. Coast Guard will be maintained on the facility at all times.

4. Platform/Well Location

The location of the Grand Isle 90 "A" Platform (subject of a DOCD filed previously by Mobil) and the location of the well proposed to be drilled, as well as its proposed depth, are shown on the attached well location plat, enclosed herewith as Exhibit 3.

5. Structure Map and Cross Section

Attached as Exhibit 4 is a structure map, and as Exhibit 5 is a Geologic Cross Section.

6. Shallow Hazards

Attached as Exhibit 6 is a Shallow Hazards Report.

7. Bathymetry Map

Attached as Exhibit 7 is a Bathymetry Map.

8. Oil Spill Contingency Plan

All operations shall be performed in accordance with industry standards to prevent pollution of the environment. An Oil Spill Contingency Plan has been approved by the Minerals Management Service. This plan designates an Oil Spill Team consisting of company personnel and contract personnel. This team's duties are to eliminate the source of any spill, remove all sources of possible ignition, deploy the most reliable means of available transportation to monitor the movement of a slick, and contain and remove the slick if possible.

TDC is a member of Clean Gulf Associates (CGA). The CGA has two permanent equipment bases in Texas, at Port Aransas and Galveston, and five bases in Louisiana, at Venice, Grand Isle, Intracoastal City, Houma, and Cameron, and one location in Alabama at Theodore. Each base is equipped with fast response skimmers and there is a barge mounted high volume open sea skimmer based on Grand Isle, Louisiana. In addition to providing equipment, the CGA also supplies advisors for clean-up operations. Equipment available from CGA and the base it is located at is listed in the CGA Manual, Volume I, Section III.

TDC will make every effort to see that a spill is responded to as quickly as possible. Response equipment and response times will be suitable for anticipated environmental conditions in the area.

In good weather conditions fast response with oil boom, skimmers, pump and storage tanks would require approximately 9 hours, including preparation time as indicated below. A heavy equipment system response would require approximately 24-36 hours, included 6 hours preparation time.

		Hours
1.	Procurement of marine vessel capable of handling oil spill containment equipment and deployment to CGA Base in Grand Isle, Louisiana	2.0
2.	Load out Fast Response Time	2.0
3.	Travel time to Lease Site from CGA Base (50 miles to lease site, at 10 mph)	5.0
	Estimated Total Time	9.0

Equipment located in Grand Isle, Louisiana would be utilized first with additional equipment transported from the nearest equipment base as required.

9. Trajectory Analysis

Attached as Exhibit 8 is a Trajectory Analysis.

10. New or Unusual Technology

No new techniques or unusual technology will be required for this operation.

11. Lease Stipulations

The Regional Supervisor has determined that this lease is located in an area where the probability of a cultural resource is minimal.

12. Discharges

All discharges from proposed operations and production at Grand Isle 90 "A" Platform will comply with the Environmental Protection Agency NPDES General Permit for the Gulf of Mexico.

The permittee is authorized by the General Permit to discharge the effluents listed in the tables contained in Exhibit 9. Such discharges will be limited and monitored by the permittee as specified therein.

Discharges will be free of oil and will be in compliance with and monitored as required by EPA NPDES General Permit (GMG 290000) in accordance with

40 CFR 122-6. Any oil contaminated mud will be transported to shore for proper disposal.

A discussion of the quantity, rates of discharge and composition of solid and liquid wastes are enclosed as Exhibits 10 and 11.

13. Hydrogen Sulfide

We request that this area be classified as an area where the absence of H_2S has been confirmed in accordance with the attached H_2S report (Exhibit 12).

14. Projected Emissions

Projected emissions are included on the enclosed Projected Air Emissions Schedule as Exhibit 13.

15. Onshore Base

TDC will utilize existing onshore facilities located in Fourchon, Louisiana. This will serve as port of debarkation for supplies and crews. No onshore expansion or construction is anticipated with respect to this activity. Grand Isle 90 (surface location for the subject well) is located approximately 40 miles south of the Louisiana coastline and approximately 45 miles south of the Fourchon shore base. A vicinity map is attached as Exhibit 14.

The Fourchon base is capable of providing the services necessary for the proposed activities. It has 24-hour service, a radio tower with a phone patch, dock space, equipment and supply storage base, drinking water, etc. During drilling operations, a supply boat will make one (1) round trip per week, a crew boat will make five (5) round trips per week, and a helicopter will make one (1) round trip per week. During production activities there will be no extra trips by boat or helicopter.

The onshore activities associated with these development activities should not result in any increase in the size and number of onshore support and storage facilities or land and personnel requirements.

16. Coastal Zone Consistency

A certificate of Coastal Zone Consistency for the State of Louisiana is attached as Exhibit 15. Attached to the Coastal Zone Consistency are copies of the letters to the Baton Rouge Morning Advocate and The Courier requesting publication of the Public Notice.

17. Environmental Report

An Environmental Report is attached as Exhibit 16.

18. Bonding Information

The appropriate lease bond as prescribed in the final rule published in the Federal Register on August 27, 1993 (58 FR 45255), is being furnished concurrently to the Gulf of Mexico OCS Region Office of Leasing and Environment.

19. Authorized Representative

Inquiries may be made to the following authorized representative of TDC:

Mr. Sanford S. Andrew
Operations Manager
TDC Energy Corporation
600 Julia Street
New Orleans, LA 70130

20. List of Exhibits

1. Schematic of Platform
2. Typical Jack-Up Drilling Rig
3. Platform/Well Location Plat
4. Structure Map
5. Cross Section
6. Shallow Hazards Report
7. Bathymetry Map
8. Trajectory Analysis
9. Discharge Monitoring Checklists
10. Rates of Discharge
11. Mud Components
12. H_2S Report
13. Projected Air Emissions Schedule
14. Vicinity Map
15. Coastal Zone Consistency Certification
16. Environmental Report

Exhibit 1 Schematic of Platform

No platform schematic is provided herein because no platform will be set pursuant to this DOCD. The proposed well will be drilled and produced from Mobil's existing Grand Isle 90 "A" Platform.

Exhibit 2
Typical Jack-Up Drilling Rig

DESCRIPTION

GLOMAR MAIN PASS IV

A. GENERAL:

1. Type: Self-Elevating Drilling Unit

2. Classification: ABS Maltese Cross A1

3. Country of Registry: U.S.A.

B. DESIGN CRITERIA:

1. Maximum Drilling Depth (Rated): 25,000 feet.

2. Maximum Storm (with 416 feet of leg installed):

Water Depth	Maximum Wind Including Gusts	Maximum Wave Trough To Crests	Assumed Air Gap	Assumed Penetration
300 ft.	100 kts	50 ft. 13.5 sec.	37 ft.	10 ft.
250 ft.	100 kts	54 ft. 13.5 sec.	44 ft.	10 ft.
200 ft.	100 kts	57 ft. 13.5 sec.	46 ft.	10 ft.
150 ft.	100 kts	59 ft. 13.5 sec.	49 ft.	10 ft.
100 ft.	100 kts	60 ft. 13.5 sec.	50 ft.	10 ft.

NOTE: Any increase in penetration will result in corresponding decrease in water depth -- any decrease in penetration does not increase the water depth.

3. Minimum Water Depth: 20 ft. shallower locations possible under certain conditions. All drilling locations are subject to Insurance Surveyor's approval.

4. Maximum Water Depth (Non-Hurricane Season): 300 ft.

5. Minimum Design Air Temperature: -20°C.

C. CANTILEVER CAPABILITY:

Cantilever can be skidded 40 ft. from the stern of the jackup to the centerline of the rotary, and the drill floor can be maneuvered
12 ft. each side of center. Has capability to drill out a pattern within a 24 ft. x 35 ft. live drilling area aft of the hull.

The cantilever can be upgraded to skid off onto a fixed platform. In the skid off mode the drill floor can be maneuvered 14 ft.

each side of center.

D. PRINCIPAL DIMENSIONS:

1.	Length, Overall:	180 ft.
2.	Breadth:	175 ft.
3.	Depth of Hull:	25 ft.
4.	Distance between centers of two aft legs:	120 ft.
5.	Distance between center of bow leg and centerline of aft legs:	115 ft.
6.	Diameter of Spud Can: (Across the flats)	39 ft. 8 in.
7.	Height of Spud Can:	20 ft.
8.	Total Length of each leg:	416 ft.

E. LOADING AND TOWING DATA:

1.	Average Towing Speed:	5.0 knots with 9,000 hp ocean going tug.
2.	Displacement at the Loadline: (15.0 ft. of draft on the hull)	9,327 S. Tons
3.	Minimum Draft:	14 ft. 11 in.
4.	Maximum Leg Length for location tows:	416 ft.
5.	Maximum Leg Length for ocean tows: (wet tow)	357 ft.
6.	Maximum variable drilling load: (excluding 625 S. Ton cantilever load)	2,047 S. Tons

Variable load is the weight of supplies that are expendable, readily removable, or consumed during drilling operations.

Variable load consists of such items as:

a) Liquid Mud	h) Lube Oil
b) Bulk Mud	i) Casing
c) Bulk Cement	j) Drill Pipe
d) Chemicals	k) Drill Collars
e) Diesel Fuel	l) Supplies
f) Potable Water	m) Sack Materials
g) Drill Water	n) Spare Parts

7. Preload Capacity: 5,226 S. Tons

F. STORAGE CAPACITY:

1.	Drill Water:	5,200 bbls.
2.	Potable Water:	1,348 bbls.
3.	Fuel Oil:	2,470 bbls.
4.	Bulk Cement:	4,110 cu. ft.
5.	Bulk Mud: Surge Tanks:	4,575 cu. ft. 100 cu. ft.
6.	Liquid Mud: (includes mud processing tanks)	1,800 bbls.
7.	Tubular Storage Area: (approximate)	4,100 sq. ft.
8.	Sack Storage: (approximate)	1,965 sq. ft.

NOTE: Any combination of the above cannot exceed the maximum allowable variable load.

G. JACKING DATA:

1. National Rack and Pinion Type Jacking System driven by 600 volt AC electric motors.
2. Approximate Jacking Speed: 1-1/2 fpm
3. Maximum Jacking Load: 6,932 S. Tons
4. All jacking operations and conditions are subject to Insurance Surveyor's approval.

H. SUBSTRUCTURE:

1. Transverse skidding of drill floor and longitudinal skidding of substructure, hydraulically powered.
2. Rotary Load (maximum): 450 S. Tons
3. Setback Load (maximum): 225 S. Tons

4. Cantilever is designed for the combined rotary and setback loads not to exceed: 625 S. Tons

5. Center of rotary can be positioned a maximum of 12 feet either side of hull centerline, and a maximum of 40 feet aft of the hull.

I. HELIPORT:

1. 70 feet in diameter. Designed to support an S-61 helicopter in accordance with Sikorsky specifications.

2. Perimeter lighting system with alternating blue and amber lights.

3. Fire station with hose and nozzle.

J. LIVING QUARTERS:

1. Air conditioned quarters for 80 persons.

2. Galley, mess and recreation room.

3. Hospital with six (6) berths and first aid equipment and supplies.

K. METEOROLOGICAL INSTRUMENTS:

1. Anemometer.

2. Barometer.

3. Thermometer.

L. COMMUNICATIONS EQUIPMENT:

1. Single side band radio (Marine Frequencies, 2-24 MHz).

2. VHF-FM Transceiver (Marine Frequencies, 156 MHz Band).

3. Gaitronics paging/telephone system.

M. POWER GENERATING EQUIPMENT:

1. Diesel Engines: Five (5) Caterpillar D-399 TA. Cost of increased lube oil change frequency due to use of diesel fuel with greater than 0.5% sulfur content for Operator's account.

2. Generators: Five (5) Kato 800 kw, 600 volt AC.

3. DC Power: Ross-Hill SCR system with controls for eight DC drilling motors (plus controls for electric cement pumps).

4. AC Distribution: Two (2) 1,000 KVA 600V/480V transformers. 480V motor control center and distribution panels.

5. Emergency Power: One Caterpillar D-379 400 kw generator.

N. AIR COMPRESSORS:

1. Three (3) 350 CFM, 125 psi air compressors with after coolers and air dryer.

2. One (1) 650 CFM, 40 psi air compressor for bulk handling.

O. WATER DISTILLATION UNIT:

Koomey reverse osmosis, 5,500 gpd.

P. SERVICE PUMPS:

For fuel, drill water, fire, bilge, potable water, and sanitary water. Three raw water pumps.

Q. FIRE-FIGHTING AND SAFETY EQUIPMENT:

1. Carbon dioxide system in engine room, paint locker, and mud pit room.

2. Salt water hose system.

3. Portable dry chemical fire extinguishers.

4. Portable CO_2 fire extinguishers.

5. Adequate first aid facilities.

R. LIFESAVING EQUIPMENT:

1. Life Rafts: Sufficient U.S.C.G. approved inflatable life rafts to accommodate all personnel on board.

2. Life Capsules: Two (2) 54-man U.S.C.G. approved Whittaker lifesaving capsules.

3. Life Jackets: Sufficient to furnish all personnel with one each plus excess as required by U.S.C.G.

S. CRANES:

Two (2) National OS-105 with 100 ft. booms rated at 40 S. Tons at 25 ft. radius, driven by diesel engine. One (1) National OS-215 with 120 ft. boom, rated at 55 tons at 30 ft. radius, driven by diesel engine.

T. WELDING MACHINES:

Three (3) 400-amp Lincoln electrically driven.

U. LIGHTING, WIRING, AND CONTROLS:

Vapor-proof or explosion-proof, as required.

V. SEWAGE TREATMENT PLANT:

Omnipure sewage collection and treatment system certified to accommodate 120 men.

Exhibit 3
Platform/Well Location Plat

347 | 348

EWING BANK AREA

GRAND ISLE AREA

90 | 91

OCS-G-4003
Mobil Oil Expl. & Prod. Co.

OCS-G-12991
TDC Energy Corporation

PROPOSED LOCATION
TDC Energy Corp. No. 1
OCS-G-12991

PBHL
6830' FSL
2223' FWL

Surf. Loc.
4778' FSL
6208' FWL

Platform "A"

93 | 92

TDC Energy Corporation

GRAND ISLE BLOCK 91

PROPOSED WELL
LOCATION MAP

C.I.: 100'

0 2000' 4000'

Exhibit 4
Structure Map

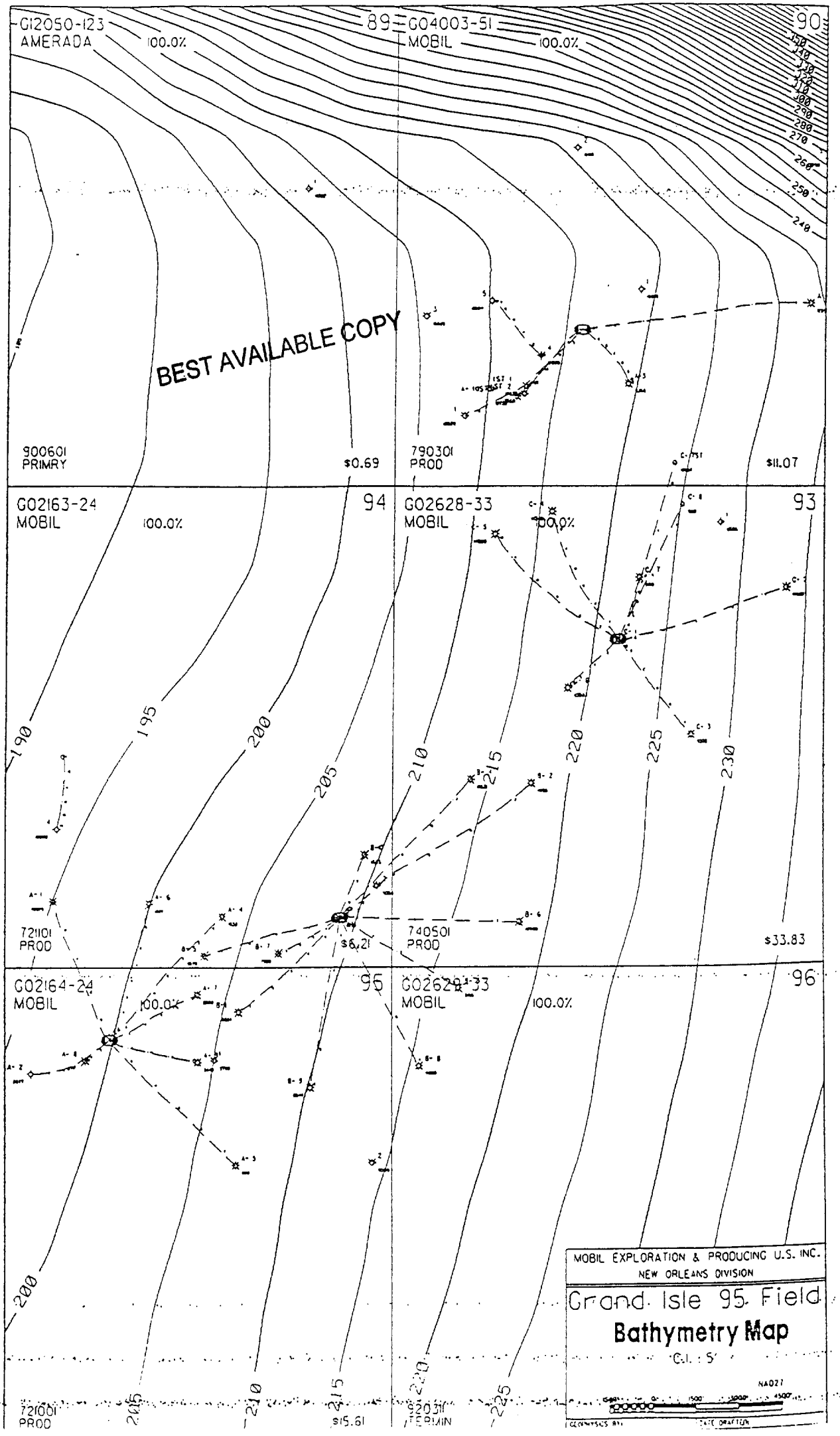
Exhibit 5
Cross Section

No cross section is provided herein, upon request one will be provided.

Exhibit 6

Shallow Hazards Report

Exhibit 7
Bathymetry Map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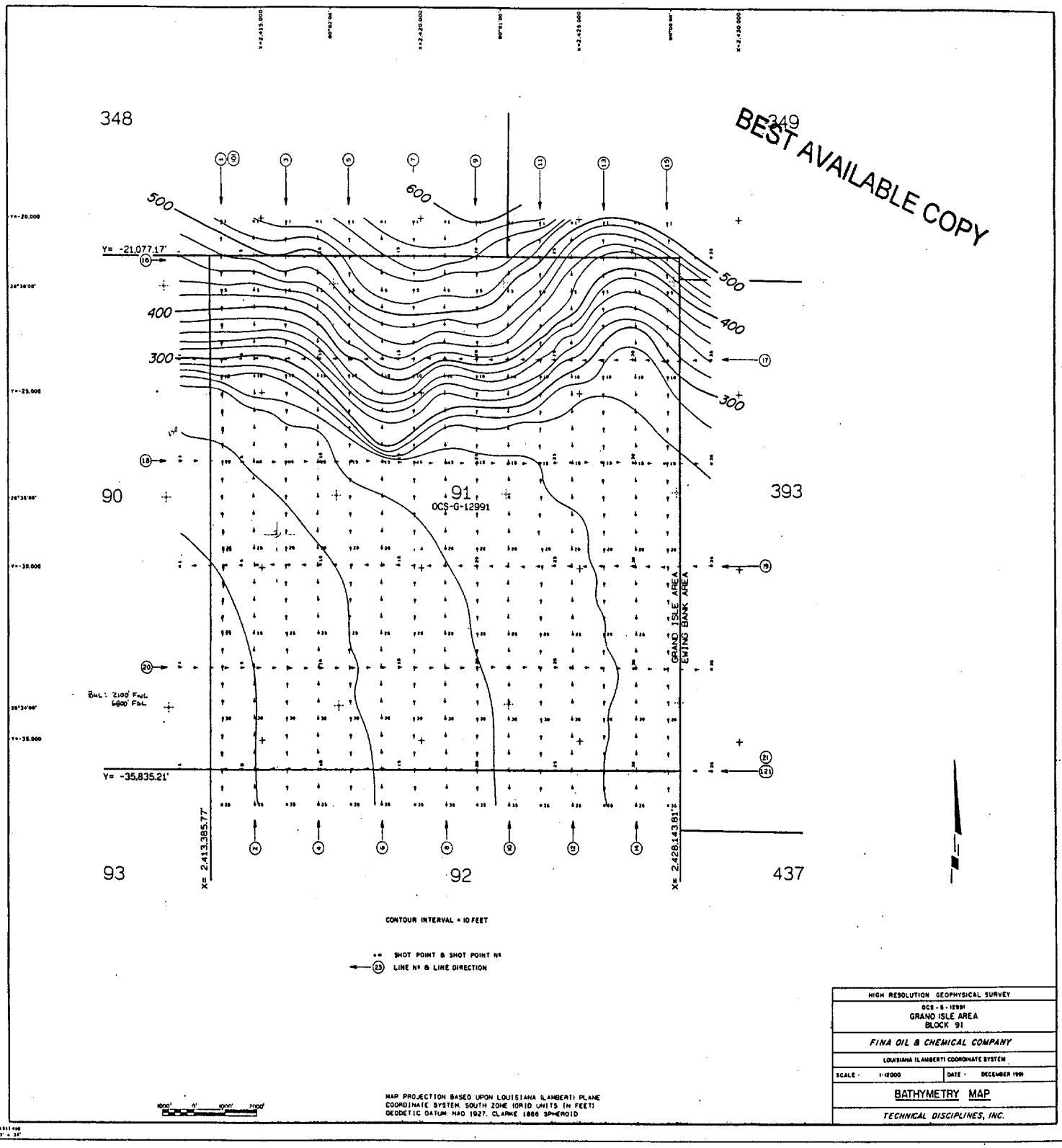
TERMIN
MOBIL EXPLORATION & PRODUCING U.S. INC.
NEW ORLEANS DIVISION
Grand Isle 95 Field
Bathymetry Map
C.I. : 5'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91
OCS-G-12991
393
GRAND ISLE AREA
EWING BANK AREA
BHL: 2100' FNL
6600' FEL
Y= -35,835.21'
X= 2,413,385.77'
X= 2,428,143.81'
93
92
437
CONTOUR INTERVAL = 10 FEET
SHOT POINT & SHOT POINT Nº
LINE Nº & LINE DIRECTION
MAP PROJECTION BASED UPON LOUISIANA ILAMBERT PLANE
COORDINATE SYSTEM, SOUTH ZONE (GRID UNITS IN FEET)
GEODETIC DATUM NAD 1927, CLARKE 1866 SPHEROID
HIGH RESOLUTION GEOPHYSICAL SURVEY
OCS - G - 12991
GRAND ISLE AREA
BLOCK 91
FINA OIL & CHEMICAL COMPANY
LOUISIANA ILAMBERT COORDINATE SYSTEM
SCALE - 1:12000
DATE - DECEMBER 1991
BATHYMETRY MAP
TECHNICAL DISCIPLINES, INC.

Exhibit 8
Trajectory Analysis

GRAND ISLE 91

OCS-G 12991

OIL SPILL TRAJECTORY ANALYSIS

In the event a spill occurs from Grand Isle 90 (surface location), our company has projected trajectory of a spill utilizing information in MMS's LTL of November 4, 1991, as updated by the EIS (Oil Spill Risk Analysis) for Lease Sales 157 and 161.

The LTL contains oil spill trajectory simulations using seasonal surface currents coupled with wind data, adjusted every 3 hours for 30 days or until a target is contacted.

Hypothetical spill trajectories were simulated for each of the potential launch sites across the entire Gulf. These simulations presume 500 spills occurring in each of the four seasons of the year. The results in the LTL were presented as probabilities that an oil spill beginning from a particular launch site would contact a certain land segment with 3, 10, or 30 days. Utilizing the summary of the trajectory analysis (for 10 days), the probable projected land fall of an oil spill from Grand Isle 90 is as follows. Also listed is the CGA Map Number corresponding to the land segment. This information will be utilized to determine environmentally sensitive areas that may be affected by a spill.

AREA	LAND SEGMENT CONTACT	PROBABILITY	CGA MAP NO.
Grand Isle Block 90 (surface location; hypothical spill location C41)	13-Vermilion Parish 14-New Iberia 16-Terrebonne Parish 17-Lafourche Parish Risk of landfall is less than 0.5% for all other land segments	1% 1% 8% 1%	6, 7

Volume II, Section V, of the CGA Manual containing maps as listed above, also includes equipment containment/cleanup protection response modes for the sensitive areas. Pollution response equipment available from CGA and its stockpile base is listed in the CGA Manual Volume I, Section III.

EXHIBIT 8 (1/1)

Exhibit 9

Discharge Monitoring Checklists

NPDES GENERAL PERMIT MONITORING CHECKLIST
DRILLING WELLS IN OCS WATERS

TO BE COMPLETED BY DRILLING ENGINEER AT END OF MONTH

REPORT FOR MONTH OF:_____, 199___. FORM COMPLETED BY:_____.

OCS-G #	WELL #	AREA & BLOCK #

DATE SPUDDED	DATE RIG RELEASED

Discharge	Free Oil			Solids/Foam (Vis.-Daily)	Maximum Hourly Discharge Rate (Est.-1/Hr.)	Resid. Cl_2 (Grab -1/Mo.)	Toxicity (Grab 1/Mo. & EOW)	Mercury, Cadmium (once prior to drilling)	
	Stat. Sheen -Weekly	Vis. -Daily	Vis. -Weekly					Mercury	Cadmium
Drilling Fluid	[1]	NA	NA	NA	[3]	NA	[5]	[6]	[6]
Drill Cuttings	[1]	NA	NA	NA	NA	NA	[5]	[6]	[6]
Deck Drainage	NA	[1]	NA	NA	NA	NA	NA	NA	
Sanitary Waste	NA	NA	NA	[2]	NA	[4]	NA	NA	
Domestic Waste	NA	NA	NA	[2]	NA	NA	NA	NA	
Miscellaneous[7]	NA	NA	[1]	NA	NA	NA	NA	NA	

Comments:

_____

_____

_____

(footnote references on back)

NPDES GENERAL PERMIT MONITORING CHECKLIST - DRILLING WELLS IN OCS WATERS (continued)

Stat. Sheen = Static Sheen Vis. = Visual Est. = Estimate Resid. = Residual EOW = End of Well 1/Mo. = Once Monthly 1/Hr. = Once Hourly

---

Notes:

[1] Number of days sheen observed; dates. (Only applicable when discharging)

[2] Number of days solids or foam observed. Discharge of food waste prohibited within 12 nautical miles of land. Outside 12 nautical miles, comminuted food waste able to pass through a 25 mm (approximately 1 inch) mesh screen may be discharged. Incineration ash and non-plastic clinkers that can pass through a 25 mm mesh screen may be discharged greater than 3 miles from nearest land, otherwise ash and non-plastic clinkers may only be discharged beyond 12 nautical miles from nearest land.

[3] Maximum hourly discharge rate in bbls/hr. Permit limitation of 1,000 bbls/hr. Confirm not subject to other discharge rate limitations due to proximity to area of biological concern.

[4] Per permit: 1 milligrams/liter (mg/l) (1 ppm) minimum; maintain as close to that as possible. Waived if marine sanitation device (MSD) maintained and test results (per Hach method CN-66-DPD) at facility.

[5] Per permit: 30,000 ppm minimum (96-hour LC50). Report pass or fail. Suspended particulate phase (SPP) with mysidopsis bahia following approved test method. Sample shall be taken beneath the shaker. End of well sample shall be taken after the final log run is completed and prior to bulk discharge.

[6] Measured in mg mercury/Kg barite, mg cadmium/Kg barite. Per permit: maximum of 1.0 mg/kg mercury to barite, 3.0 mg/kg cadmium to barite.

[7] Desalinization unit discharge; blowout preventer fluid; uncontaminated ballast water; uncontaminated bilge water; uncontaminated freshwater; mud, cuttings and cement at seafloor; uncontaminated seawater; boiler blowdown; source water and sand; diatomaceous earth filter media; excess cement slurry.

Note also: NO DISCHARGE of:

1) Drilling fluids: a) to which barite has been added, unless suppliers provide documentation that the barite being used on the well will meet the above limits (concentrations provided by supplier shall be reported on DMR), b) which are oil based or inverse emulsion, c) which are oil contaminated, d) to which diesel oil has been added, or e) to which mineral oil has been added except as a carrier fluid, lubricity additive or pill.

2) Cuttings generated using drilling fluids qualifying under a) - e) above.

This checklist is to facilitate compliance with the Final Modification to NPDES General Permit for the Western Portion of the Outer Continental Shelf (OCS) of the Gulf of Mexico (GMG-290000), published December 3, 1993, at 58 FR 63964, effective January 3, 1994, and expiring November 19, 1997.

NPDES GENERAL PERMIT MONITORING CHECKLIST
DISCHARGING PLATFORMS IN OCS WATERS

TO BE COMPLETED BY OPERATIONS COORDINATOR AT END OF MONTH

REPORT FOR MONTH OF:_____, 199___. FORM COMPLETED BY:_____.

LEASE OCS-G _____

GENERAL PERMIT # 2900____, OUTFALL # _____

Discharge	Free Oil			Solids/ Foam (Vis. -Daily)	Flow (Est. -1/Mo.)	Resid. Cl_2 (Grab -1/Mo.)	Toxicity (Grab 1/Yr.[9])		Radium 226 & 228 (Grab 1/Yr.[9])	Oil & Grease (Grab 1/Mo.)	
	Stat. Sheen -Daily	Vis. -Daily	Vis. -Weekly				7-Day	Monthly		Daily Max.	Monthly Avg.
Produced Water	NA	NA	NA	NA	[3]	NA	[5]	[5]	[6]	[7]	[7]
Produced Sand	NO DISCHARGE ALLOWED										
Well Treatment Fluids, Completion Fluids, Workover Fluids	[1]	NA	NA	NA	NA	NA	NA		NA	[7]	[7]
Deck Drainage	NA	[1]	NA	NA	NA	NA	NA		NA	NA	
Sanitary Waste	NA	NA	NA	[2]	NA	[4]	NA		NA	NA	
Domestic Waste	NA	NA	NA	[2]	NA	NA	NA		NA	NA	
Miscellaneous[8]	NA	NA	[1]	NA	NA	NA	NA		NA	NA	

Comments:

_____

_____

_____

(footnote references on back)

NPDES GENERAL PERMIT MONITORING CHECKLIST - DISCHARGING PLATFORMS IN OCS WATERS (continued)

Stat. Sheen = Static Sheen Vis. = Visual Est. = Estimate Resid. = Residual EOW = End of Well 1/Mo. = Once Monthly 1/Qr. = Once Quarterly 1/Yr. = Once Yearly

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Notes:

[1] Number of days sheen observed; dates. (Only applicable when discharging.)

[2] Number of days solids or foam observed. Discharge of food waste prohibited within 12 nautical miles of land. Outside 12 nautical miles, comminuted food waste able to pass through a 25 mm (approximately 1 inch) mesh screen may be discharged. Incineration ash and non-plastic clinkers that can pass through a 25 mm mesh screen may be discharged greater than 3 miles from nearest land, otherwise ash and non-plastic clinkers may only be discharged beyond 12 nautical miles from nearest land.

[3] Monthly average, measured in millions of gallons/day (MGD). To convert from bbls/day to MGD, multiply number of barrels by conversion factor of 0.000042. Example: 10,000 bbls/day x 0.000042 = 0.42 MGD. Permit limitation: 25,000 bbls/day.

[4] Per permit: 1 milligrams/liter (mg/l) (1 ppm) minimum; maintain as close to that as possible. Waived if marine sanitation device (MSD) maintained and test results (per Hach method CN-66-DPD) at facility. Limitation not applicable to facilities continuously manned by 9 or fewer persons or intermittently by any number.

[5] Per permit: Enter 7-day average minimum (lowest for either of the two species) NOEC (no observed effect concentration) and monthly average minimum (lowest for either of the two species) NOEC. After one (1) full year of compliance, required testing frequency shall be reduced to once per year.

[6] Measured in pico curies/liter (piC/l). After one full year of compliance, required testing frequency shall be reduced to once per year.

[7] Record daily maximum and monthly average mg/l. Permit limitations are 42 mg/l daily maximum, 29 mg/l monthly average.

[8] Desalinization unit discharge; blowout preventer fluid; uncontaminated ballast water; uncontaminated freshwater; mud, cuttings and cement at seafloor; uncontaminated seawater; boiler blowdown; source water and sand; diatomaceous earth filter media; excess cement slurry.

[9] The flow used to determine the frequency of toxicity testing and radiation monitoring shall be the flow most recently reported on the discharge monitoring report for the facility (however, see notes 5 and 6).

DISCHARGE RATE	TOXICITY, RADIOACTIVITY TESTING FREQUENCY
0 - 499 bbls/day	Once per year
500 - 4,599 bbls/day	Once per quarter
4,600 bbls/day and above	Once per month

Note also: Bioaccumulation testing requirement for discharges of produced water in excess of 4,600 bbls/day will be satisfied by participation in Offshore Operators Committee sponsored study.

This checklist is to facilitate compliance with the Final Modification to NPDES General Permit for the Western Portion of the Outer Continental Shelf (OCS) of the Gulf of Mexico (GMG-290000), published December 3, 1993, at 58 FR 63964, effective January 3, 1994, and expiring November 19, 1997.

Exhibit 10
Rates of Discharge

QUANTITY, RATES OF DISCHARGE, AND COMPOSITION OF WASTES

DRILLING OPERATIONS

The anticipated discharge rates for TDC Energy Corporation's drilling and completion operations for Grand Isle 90 (surface location for proposed well) are listed below:

Drilling Fluids	2,769 bbls/month
Drill Cuttings	1,400 bbls/month
Deck Drainage	1,500 bbls/month
Sewage and Domestic Liquid Waste	2,000 gals/day*

*Based on 50 gals/person/day with average 40 persons on board

The quantity of discharge of cuttings is based on the average hole size for each section of hole. Mud may be discharged for purposes of dilution or at the end of the well. Fifty percent (50%) for attached liquids to cuttings is added to give a total drilling fluids discharge. Sewage is treated on location. Solid domestic wastes are transported to shore for proper disposal at an authorized disposal site.

The fluid used for drilling will be a typical lignosulfonate mud, unless otherwise noted in the drilling prognosis. Concentrations of the chemicals in the mud can be estimated from the daily fluids chemical inventory. Other surveillance of the fluid is accomplished by the monthly and end-of-well LC50 toxicity tests required by the EPA. A list of mud additives that may be used while conducting development drilling operations is enclosed as Exhibit 11.

In no instance will the drilling fluid discharge rate exceed 1,000 bbls/hour.

Any drilling fluid contaminated with oil will be transported to shore for proper disposal at an authorized disposal site.

PRODUCTION OPERATIONS

All produced water discharges will be monitored in accordance with the EPA NPDES Permit.

Exhibit 11
Mud Components

DRILLING MUD COMPONENTS

COMMON CHEMICAL OR CHEMICAL TRADE NAME	DESCRIPTION OF MATERIAL
Aluminum Stearate	Aluminum Stearate
"AXTAFLO-S"	Nonionic Surfactant
Barite	Barium Sulfate ($BaSo_4$)
Calcium Carbonate	Aragonite ($CaCo_3$)
Calcium Chloride	Hydrophilite ($CaCl_2$)
Calcium Oxide	Lime (Quick)
Calcium Sulfate	Anhydriate ($CaSO_4$)
Carboxymethyl Cellulose	Carboxymethyl Cellulose
Caustic Potash	Potassium Hydrate
Caustic Soda	Sodium Hydroxide (NaOH)
Chrome Lignite	Chrome Lignite
Chrome Lignosulfonate	Chrome Lignosulfonate
Drilling Detergent	Soap
"E-Pal"	Non-toxic, Biodegradable defoamer
Ferrochrome Lignosulfonate	Derived from wood pulp
Gel	Sodium montmorilloniate, bentonite, attapulgite
Gypsum	$CaSo_4.2H_20$
Lignite	Lignite
Lignosulfonate	Lignosulfonate
"Mud Sweep"	Cement Pre-flush
"MOR-REX"	Hydroloyzed Cereal Solid
"Shale-Trol"	Organo-aluminum complex
Sapp	Sodium Acid Pyrophosphate
Soda Ash	Sodium Carbonate
Sodium Bicarbonate	$NaHCO_3$
Sodium Carboxymethyl Cellulose	Sodium Carboxymethyl Cellulose
Sodium Chloride	NaCl
Sodium Chromate	NaCr04.10H20
Starch	Corn Starch
"TX-9010"	Biodegradable drilling lubricant
"TORQ-Trim"	Biodegradable drilling lubricant
"Black Magic"	Oil base mud conc.
"Black Magic Supermix"	Sacked concentrated oil base mud
Diesel	Used to mix certain loss-circulation pills
"Jelflake"	Plastic foil, shredded cellophane
MICA	Loss-circulation material
"Pipe-Lax"	Surfactant mixed with diesel
"Wall-Nut"	Ground walnut shells
Wood Fibers	Loss-circulation material

Exhibit 12
H_2S Report

DISCUSSION OF HYDROGEN SULFIDE

To date Mobil has drilled thirty-four (34) wells in the Grand Isle 95 field. Drilling and producing operations in the previously-drilled wells indicate that hydrogen sulfide (H_2S) is not present in quantities that could potentially result in atmospheric concentrations of 20 ppm or more. As a result, TDC Energy Corporation requests a determination that the area in which the proposed operations will take place be classified as an area of zones where the absence of H_2S has been confirmed. This request is in accordance with MMS instructions outlined in the September 5, 1989, Letter to Lessees and 30 CFR 250.

EXHIBIT 12 (1/1)

Exhibit 13

Air Quality Report

TDC ENERGY CORPORATION
INITIAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT
OCS-G 12991, GRAND ISLE BLOCK 91
PROJECTED AIR EMISSION SCHEDULE

GENERAL INFORMATION

Location of Facility:	Lease OCS-G 12991, Grand Isle Block 91
Proposed Operations:	Drill, complete and commence production from the OCS-G 12991 Well No. 1 from Mobil's Grand Isle 90 "A" Platform (in adjacent block).
Name of Rig:	Glomar Main Pass IV jack-up rig, or similar series rig
Operator:	TDC Energy Corporation 600 Julia Street New Orleans, LA 70150
Contact Person:	Sanford S. (Sandy) Andrew
Date Operations Commence:	September 30, 1996
Distance Offshore:	40 miles
Number of Days for Operations:	45 days in 1996 for drilling and completion; 60 days of production in 1996; and production throughout 1997, 1998 and 1999.

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELLS
TDC Energy Corp.	Grand Isle	91	OCS-G12991	GI90 "A"	#1

Year	Emitted Substances (TPY)				
	TSP	SOx	NOx	HC	CO
1996	1.86	11.42	100.70	8.09	58.65
1997	0.04	0.02	66.13	4.54	57.11
1998	0.04	0.02	66.13	4.54	57.11
1999	0.04	0.02	66.13	4.54	57.11
Allowable (TPY):	1332.00	1332.00	1332.00	1332.00	40258.64

In accordance with 30 CFR 250.45(d) "Exemption Formulas", the facility described in this Initial DOCD is exempt from further air quality review.

ESTIMATED EMISSIONS FOR 1996

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELLS	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS
TDC Energy Corp.	Grand Isle	91	OCS-G12991	GI90 "A"	#1			Sandy Andrew	(504)-529-3630	Emissions are for drilling, completing, & producing one well only

OPERATIONS	EQUIPMENT		MAX. FUEL	ACT. FUEL	RUN TIME		EMISSIONS (POUNDS PER HOUR)					EMISSIONS (TONS PER YEAR)				
	Diesel Engines	HP	GAL/HR	GAL/D												
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
	[illegible]	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	TSP	SOx	NOx	VOC	CO	TSP	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	1100	53.13	1275.12	24	45	0.58	3.61	26.65	0.80	5.81	0.31	1.95	14.39	0.43	3.14
	PRIME MOVER>600hp diesel	1100	53.13	1275.12	24	45	0.58	3.61	26.65	0.80	5.81	0.31	1.95	14.39	0.43	3.14
	PRIME MOVER>600hp diesel	1100	53.13	1275.12	24	45	0.58	3.61	26.65	0.80	5.81	0.31	1.95	14.39	0.43	3.14
	PRIME MOVER>600hp diesel	1100	53.13	1275.12	24	45	0.58	3.61	26.65	0.80	5.81	0.31	1.95	14.39	0.43	3.14
	PRIME MOVER>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	AUXILIARY EQUIP<600hp diesel	600	28.98	695.52	1	45	1.32	1.23	18.50	1.48	4.00	0.03	0.03	0.42	0.03	0.09
	VESSELS>600hp diesel	2000	96.60	2318.40	24	45	1.06	6.56	48.46	1.45	10.57	0.57	3.54	26.17	0.79	5.71
PIPELINE INSTALLATION	PIPELINE LAY BARGE diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PIPELINE BURY BARGE diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PIPELINE BURY BARGE diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT TUG diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MATERIAL TUG diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	RECIP.<600hp diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP.>600hp diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	TURBINE nat gas	0	0	0	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.2 cycle lean nat gas	0	0	0	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle lean nat gas	0	0	0	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle rich nat gas	672	4800.10	115202.30	24	60		0.003	14.80	0.21	12.73		0.002	10.66	0.15	9.17
	[illegible]	1.89	1798.94	43174.60	24	60	0.01	0.001	0.25	0.01	0.06	0.01	0.001	0.18	0.00	0.05
	[illegible]	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MISCELLANEOUS		BPD	SCF/HR	COUNT												
	TANK-	0			0	0				0.00					0.00	
	FLARE-		111111.11		24	60		0.06	7.93	6.70	43.17		0.05	5.71	4.82	31.08
	PROCESS VENT-		11.11		24	60				0.04					0.03	
	FUGITIVES-			555.56		60				0.01					0.01	
	GLYCOL STILL VENT-		111111.11		24	60				0.73					0.53	
DRILLING	OIL BURN	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WELL TEST	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
							1996 YEAR TOTALS (lb/hr)					1996 YEAR TOTALS (tons/yr)				
							4.71	22.30	196.56	13.83	93.80	1.86	11.42	100.70	8.09	58.65
									DISTANCE FROM LAND IN MILES			EXEMPTION CALCULATIONS (tons/yr)				
										40.0		1332.00	1332.00	1332.00	1332.00	40258.64

ESTIMATED EMISSIONS FOR 1997

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELLS	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS
TDC Energy Corp.	Grand Isle	91	OCS-G12991	GI90 "A"		#1		Sandy Andrew	(504)-529-3630	Emissions are for drilling, completing, & producing one well only

OPERATIONS	EQUIPMENT		MAX. FUEL	ACT. FUEL	RUN TIME		EMISSIONS (POUNDS PER HOUR)					EMISSIONS (TONS PER YEAR)				
	Diesel Engines	HP	GAL/HR	GAL/D												
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
	Burner	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	TSP	SOx	NOx	VOC	CO	TSP	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	AUXILIARY EQUIP<600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPELINE INSTALLATION	PIPELINE LAY BARGE diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PIPELINE BURY BARGE diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MATERIAL TUG diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	RECIP.<600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP.>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TURBINE nat gas	0	0.00	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.2 cycle lean nat gas	0	0.00	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle lean nat gas	0	0.00	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle rich nat gas	672	4800.10	115202.30	24	365		0.003	14.80	0.21	12.73		0.012	64.83	0.91	55.76
	[illegible]	1.89	1798.94	43174.60	24	365	0.01	0.001	0.25	0.01	0.06	0.04	0.005	1.10	0.02	0.28
	[illegible]	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MISCELLANEOUS		BPD	SCF/HR	COUNT												
	TANK-	0			0	0				0.00					0.00	
	FLARE-		111111.11		1	50		0.06	7.93	6.70	43.17		0.00	0.20	0.17	1.08
	PROCESS VENT-		11.11		24	365				0.04					0.17	
	FUGITIVES-			555.56		365				0.01					0.06	
	GLYCOL STILL VENT-		111111.11		24	365				0.73					3.21	
DRILLING	OIL BURN	0				0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WELL TEST	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
							1997 YEAR TOTALS (lb/hr)					1997 YEAR TOTALS (tons/yr)				
							0.01	0.07	22.99	7.70	55.96	0.04	0.02	66.13	4.54	57.11
								DISTANCE FROM LAND IN MILES				EXEMPTION CALCULATIONS (tons/yr)				
									40.0			1332.00	1332.00	1332.00	1332.00	40258.64

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELLS	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS
TDC Energy Corp.	Grand Isle	91	OCS-G12991	GI90 "A"	#1			Sandy Andrew	(504)-529-3630	Emissions are for drilling, completing, & producing one well only

ESTIMATED EMISSIONS FOR 1998

OPERATIONS	EQUIPMENT		MAX. FUEL	ACT. FUEL	RUN TIME		EMISSIONS (POUNDS PER HOUR)					EMISSIONS (TONS PER YEAR)				
	Diesel Engines	HP	GAL/HR	GAL/D												
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
	Burners	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	TSP	SOx	NOx	VOC	CO	TSP	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	AUXILIARY EQUIP<600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPELINE INSTALLATION	PIPELINE LAY BARGE diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PIPELINE BURY BARGE diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MATERIAL TUG diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	RECIP.<600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP.>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TURBINE nat gas	0	0.00	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.2 cycle lean nat gas	0	0.00	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle lean nat gas	0	0.00	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle rich nat gas	672	4800.10	115202.30	24	365		0.003	14.80	0.21	12.73		0.01	64.83	0.91	55.76
	[illegible]	1.89	1798.94	43174.60	24	365	0.01	0.001	0.25	0.01	0.06	0.04	0.005	1.10	0.02	0.28
	[illegible]	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MISCELLANEOUS		BPD	SCF/HR	COUNT												
	TANK-	0			0	0				0.00					0.00	
	FLARE-		111111.11		1	50		0.00	7.93	6.70	43.17		0.00	0.20	0.17	1.08
	PROCESS VENT-		11.11		24	365				0.04					0.17	
	FUGITIVES-			555.56		365				0.01					0.06	
	GLYCOL STILL VENT-		111111.11		24	365				0.73					3.21	
DRILLING	OIL BURN	0				0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WELL TEST	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
							1998 YEAR TOTALS (lb/hr)					1998 YEAR TOTALS (tons/yr)				
							0.01	**0.00**	**22.99**	**7.70**	**55.96**	**0.04**	**0.02**	**66.13**	**4.54**	**57.11**
									DISTANCE FROM LAND IN MILES			EXEMPTION CALCULATIONS (tons/yr)				
										40.0		1332.00	1332.00	1332.00	1332.00	40258.64

ESTIMATED EMISSIONS FOR 1999

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELLS	LATITUDE	LONGITUDE	CONTACT	PHONE	REMARKS
TDC Energy Corp.	Grand Isle	91	OCS-G12991	GI90 "A"	#1			Sandy Andrew	(504)-529-3630	Emissions are for drilling, completing, & producing one well only

OPERATIONS	EQUIPMENT Diesel Engines Nat. Gas Engines [redacted]	HP HP MMBTU/HR	MAX. FUEL GAL/HR SCF/HR SCF/HR	ACT. FUEL GAL/D SCF/D SCF/D	RUN TIME HR/D	RUN TIME DAYS	EMISSIONS (POUNDS PER HOUR) TSP	SOx	NOx	VOC	CO	EMISSIONS (TONS PER YEAR) TSP	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	AUXILIARY EQUIP<600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPELINE INSTALLATION	PIPELINE LAY BARGE diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PIPELINE BURY BARGE diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MATERIAL TUG diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION-Diesel Crane	RECIP.<600hp diesel	0	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP.>600hp diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TURBINE nat gas	0	0.00	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.2 cycle lean nat gas	0	0.00	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle lean nat gas	0	0.00	0.00				0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle rich nat gas	672	4800.10	115202.30	24	365		0.003	14.80	0.21	12.73		0.01	64.83	0.91	55.76
	[redacted]	1.88888889	1798.94	43174.60	24	365	0.01	0.001	0.25	0.01	0.06	0.04	0.005	1.10	0.02	0.28
Line Heater		0	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MISCELLANEOUS		BPD	SCF/HR	COUNT												
	TANK-	0			0	0				0.00					0.00	
	FLARE-		111111.11		1	50		0.06	7.93	6.70	43.17		0.002	0.20	0.17	1.08
	PROCESS VENT-		11.11		24	365				0.04					0.17	
	FUGITIVES-			555.56		365				0.01					0.06	
	GLYCOL STILL VENT-		111111.11		24	365				0.73					3.21	
DRILLING	OIL BURN	0				0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WELL TEST	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00

	TSP	SOx	NOx	VOC	CO
1999 YEAR TOTALS (lb/hr)	0.01	0.07	22.99	7.70	55.96
1999 YEAR TOTALS (tons/yr)	0.04	0.02	66.13	4.54	57.11
EXEMPTION CALCULATIONS (tons/yr)	1332.00	1332.00	1332.00	1332.00	40258.64

DISTANCE FROM LAND IN MILES: 40.0

Exhibit 14
Vicinity Map

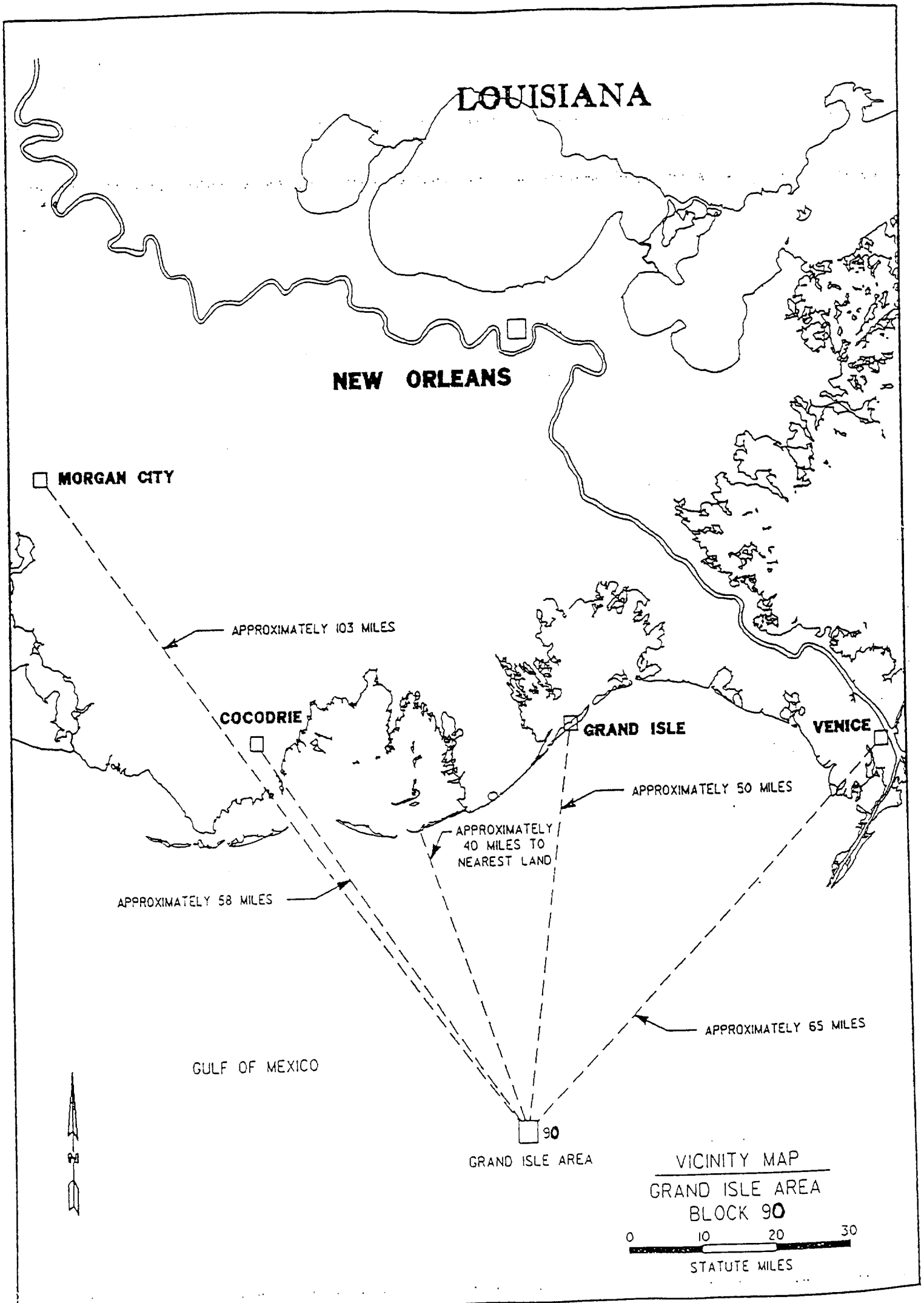
LOUISIANA
NEW ORLEANS
MORGAN CITY
APPROXIMATELY 103 MILES
COCODRIE
GRAND ISLE
VENICE
APPROXIMATELY 50 MILES
APPROXIMATELY 40 MILES TO NEAREST LAND
APPROXIMATELY 58 MILES
APPROXIMATELY 65 MILES
GULF OF MEXICO
90
GRAND ISLE AREA
VICINITY MAP
GRAND ISLE AREA
BLOCK 90
0 10 20 30
STATUTE MILES

Exhibit 15

Coastal Zone Consistency Certification

COASTAL ZONE MANAGEMENT

CONSISTENCY CERTIFICATION

DEVELOPMENT/PRODUCTION
Type of Plan

Grand Isle 91
Area and Block

Lease OCS-G 12991
Lease Number

The proposed activities described in detail in this plan comply with Louisiana's approved Coastal Management Program(s) and will be conducted in a manner consistent with such Program(s). Also, a Public Notice will be publicized in the Baton Rouge Morning Advocate and The Courier on August 1, 1996.

TDC Energy Corporation

Designated Operator

A S Andrew

Certifying Official

July 19, 1996

Date

EXHIBIT 15 (1/3)

TDC Energy

600 Julia Street
New Orleans, Louisiana 70130
Office 504·529·3630
Fax 504·529·5541

16800 Imperial Valley Drive
Suite 210
Houston, TX 77060
Office 713·591·1282
Fax 713·591·1285

July 22, 1996

Morning Advocate
P. O. Box 588
Baton Rouge, LA 70821-0588

Attn: Ms. Vicki Thompson

Enclosed is a Public Notice which we request be published for on day only on August 1, 1996.

Please send an affidavit and the invoice to the following:

TDC Energy Corporation
600 Julia Street
New Orleans, LA 70130
Attn: Mr. Sanford S. Andrew

Your assistance in this matter will be appreciated.

Sincerely,

S. S. Andrew gpl

Sanford S. Andrew
Operations Manager

SSA/JS/gpl
Enclosure

TDC Energy

600 Julia Street
New Orleans, Louisiana 70130
Office 504·529·3630
Fax 504·529·5541

16800 Imperial Valley Drive
Suite 210
Houston, TX 77060
Office 713·591·1282
Fax 713·591·1285

July 22, 1996

The Courier
P. O. Box 2717
Q. Houma, LA 70361

Attn: Ms. Roxanne Smith

Dear Ms. Smith:

Enclosed is a Public Notice which we request be published for one day only on August 1, 1996.

Please send an affidavit and the invoice to the following:

TDC Energy Corporation
600 Julia Street
New Orleans, LA 70130
Attn: Mr. Sanford S. Andrew

Your assistance in this matter will be appreciated.

Sincerely,

S. S. Andrew/gpl

Sanford S. Andrew
Operations Manager

SSA/JS/gpl
Enclosure

PUBLIC NOTICE

Public Notice of Federal Consistency review of a Development Operations Coordination Document by the Coastal Management Division/Louisiana Department of Natural Resources for the plan's consistency with the Louisiana Coastal Resources Program.

Applicant: TDC Energy Corporation
600 Julia Street
New Orleans, LA 70130

Location: Grand Isle 91
OCS-G 12991

Description: Development Operations Coordination Document is for the production of oil & gas. Activities will include drilling and completing one well (said well to be drilled from an existing platform on the adjacent block), transport of crews and equipment by helicopter and/or cargo vessel from onshore base located at Fourchon, Louisiana, and commencement of production. No ecologically sensitive species or habitats are expected to be located near or affected by these activities.

A copy of the plan described above is available for inspection at the Coastal Management Division Office located on the 10th Floor of the State Lands and Natural Resources Building, 625 North 4th Street, Baton Rouge, Louisiana. Office hours: 8:00 a.m. to 4:30 p.m., Monday through Friday. The public is requested to submit comments to the Coastal Management Division, Attention OCS Plans, P. O. Box 44396, Baton Rouge, LA 70804. Comments must be received within 15 days of the date of this notice for 15 days after the Coastal Management Division obtains a copy of the plan and it is available for public inspection. This public notice is provided to meet the requirements of the NOAA Regulations on Federal Consistency with approved Coastal Management Programs.

EXHIBIT 15 (4/3)

Exhibit 16
Environmental Report

Initial Development Operations Coordination Document

Environmental Report

Grand Isle 91

OCS-G 12991
Offshore, Louisiana

July 15, 1996

EXHIBIT 16

I. DESCRIPTION OF PROPOSED ACTION

Under this Initial DOCD, TDC Energy Corporation (TDC) proposes to drill and complete for production one well. The well will be drilled from Mobil's Grand Isle 90 "A" Platform and will have a bottomhole location at Grand Isle Block 91, Lease OCS-G 12991.

Drilling is proposed to commence on the OCS-G 12991 Well No. 1 on or about September 30, 1996. Completion of the No. 1 Well is projected to commence November 1, 1996. Production is to commence on or before December 31, 1996.

A. Description of Proposed Travel Modes, Routes and Frequency

Support vessels will be dispatched from a support base located in Fourchon, Louisiana. The boats will normally move to the block via the most direct route from Fourchon, Louisiana; however, boats operating in the field may travel from other facilities nearby. Following is an estimate of trips to the proposed operation.

	Drilling Operations
Crew Boat	7 trips per week
Supply Boat	5 trips per week
Helicopter	1 trip per week

Production Operations

No additional flights because Mobil will operate.

B. Onshore Support Base

The proposed activities will utilize a support base located at Fourchon, Louisiana. This base provides 24-hour service, a radio tower with phone patch, dock space, office space, parking lot, equipment and supply storage space, drinking and drill water, etc. The proposed activities will help to maintain this base at its present level of activity. No expansion of the physical facilities or the creation of new jobs is expected to result from the work planned in conjunction with this block.

The first socioeconomic data base report will be submitted when the MMS and the states of Alabama, Louisiana, and Mississippi identify the specific parameters to be addressed in these semi-annual reports.

C. New or Unusual Technology

No new or unusual technology will be required for this operation.

EXHIBIT 16

D. Vicinity Map

Grand Isle Block 90 (surface location) is located approximately 40 miles from the nearest Louisiana coastline. Water depth at the proposed surface location is approximately 220 feet.

E. Proposed Means to Transport Oil & Gas to Shore, Routes and Quantities

Oil and gas will be transported from an existing platform (Mobil's Grand Isle 90 "A" Platform) via an existing pipeline. There it will be treated. The oil and gas will then be transported via pipeline to a point onshore.

II. DESCRIPTION OF AFFECTED ENVIRONMENT

A. Commercial Fishing

The Gulf of Mexico provides nearly 20% of the commercial fish landings and one-third of the recreational fishing activities in the continental U.S. Commercial landings of all fisheries in the Gulf during 1994 totaled nearly 2.2 billion pounds, valued at $806 million. Cameron, Louisiana, was the second U.S. port in quantity of commercial fish landings in 1988, followed by Pascagoula, Mississippi, and Empire-Venice, Dulac-Chauvin, and Intracoastal City, Louisiana.

Louisiana ranked first among Gulf states in total commercial fishery landings for 1994 with nearly 1.7 billion pounds landed, valued at $339.7 million. Nationally, the Louisiana catch ranked second in volume and third in value. Menhaden represents the highest quantity finfish landed and shrimp represents the highest value landed. In addition, each of the following 11 species accounted for landings valued at over $1 million: spotted seatrout, red snapper, vermilion snapper, bluefin tuna, yellowfin tuna, black drum, blue crab, American oyster, shark, mullet and swordfish.

Louisiana is the most productive state in the Gulf of Mexico in terms of commercial fisheries because of its extensive estuaries, coastal marshes, and nutrient input from the Mississippi and Atchafalaya Rivers. Coastal Louisiana contains approximately 60% of the estuaries and marshes in the Gulf of Mexico. Over 90% of the blue crab harvest, which amounts to 49.1 million pounds (25% of total national landings), comes from estuary nursery areas.

B. Shipping

The establishment of a series of safety fairways or traffic separation schemes (TSSs), and anchorage areas provide unobstructed approach for vessels using U.S. ports. Shipping safety fairways are lanes or corridors in which no fixed structure, whether temporary or permanent, is permitted. TSSs increase navigation safety by separating opposing lanes of vessel traffic. Fairway anchorage are areas contiguous to and associated with a fairway, in which fixed structures may be permitted within certain spacing limitations.

Fairways play an important role in the avoidance of collisions on the OCS, particularly in the case of the large oceangoing vessels, but no all vessels stay within the fairways. Many others, such as fishing boats and OCS support vessels, travel through areas with high concentration of fixed structures. In such cases, the most important mitigation factor is the requirement for adequate marking and lighting of structures. After a structure has been in place for a while, it often becomes a landmark and an aid to navigation for vessels that operate in the area on a regular basis. Most ocean going vessels are equipped with radar capable of aiding navigation in all weather conditions. This has contributed to safe navigation in the OCS.

Grand Isle 91 is clear of all shipping fairways and anchorage areas. The drilling rig, platform and each of the marine vessels servicing these operations will be equipped with all U.S. Coast Guard required navigational safety aids to alert ships of its presence in all weather conditions.

C. Pleasure Boating, Sport Fishing and Recreation

The northern Gulf of Mexico coastal zone is one of the major recreational regions of the United States, particularly in connection with marine fishing and beach-related activities. The coastal beaches, barrier islands, estuarine bays and sounds, river deltas, and tidal marshes are extensively and intensively utilized for recreational activity by residents of the Gulf South and tourists from throughout the National. Publicly owned and administered areas such as National seashores, parks, beaches, and wildlife lands, as well as specially designated preservation areas such as historic and natural sites and landmarks, wilderness areas, wildlife sanctuaries, and scenic rivers attract residents and visitors throughout the year. Commercial and private recreational facilities and establishments, such as resorts, marinas, amusement parks, and ornamental gardens, also serve as primary interest areas and support services for people who seek enjoyment from the recreational resources associated with the Gulf.

The two major recreational areas most directly associated with offshore leasing and potentially affected by it are the offshore marine environment and the coastal shorefront of the adjoining states. The only major recreational activity occurring on the OCS is offshore marine recreational fishing and diving. Major sport species sought and caught offshore include snappers, groupers, seatrout, croakers, mackerels, amberjack, cobia, dolphin, tarpon, and billfishes. Studies, report, and conference proceedings published by the MMS and others have documented a substantial recreational fishery including scuba diving, directly associated with oil and gas production platforms. The recreational fishing associated with oil and gas structures stems from their function as high profile artificial fishing reefs. A report on the 1984 Marine Recreational Fishery Statistics Surveys presented by NMFS at the Sixth Annual Gulf of Mexico Information Transfer Meeting indicates a majority of the offshore recreational fishing in the Central and Western Gulf of Mexico is directly associated with the oil and gas structures. There are currently about 4500 offshore oil and gas structures in the Central and Western Gulf of Mexico. Many other studies have demonstrated that when oil and gas structures are accessible to marine recreational fishermen and scuba divers, they are a major attraction for marine recreational activities and a positive influence on tourism and coastal economics. Throughout the Gulf of Mexico Region, there is high interest in acquiring, relocating, and retaining selected oil and gas structure in the marine environmental as

dedicated artificial reefs to enhance marine fisheries when the structures are no longer useful for oil and gas production.

With the exception of Grand Isle and vicinity and a stretch of beach area in Cameron Parish, (Peveto/Constance/Ocean View Beaches, Holly Beach, Hackberry Beach) Louisiana has very limited beach area suitable for recreation. Most of it is very narrow, of poor recreational quality and generally inaccessible by automobile. Some of the highest quality beach areas in coastal Louisiana are found along the barrier islands chain off Terrebonne Parish. Several additional significant recreational resources are found along the Gulf Coast. Louisiana has ornamental gardens, scenic roads, rivers, and trails.

D. Potential or Known Cultural Resources

Archaeological resources are any objects or features which are man-made or modified by human activity. Significant archaeological resources are either historic or prehistoric and, as defined by 36 CFR 60.6, generally include properties greater than 50 years old which are associated with events that have made a significant contribution to the broad patterns of our history; are associated with the lives of persons significant in the past; embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values; represent a significant and distinguishable entity whose components may lack individual distinction; or have yielded, or may be likely to yield, information important in pre-history or history.

Geographic features that have high probability for associated prehistoric sites in the Central and Western Gulf include barrier islands and backbarrier embayments, river channels and associated floodplans and terraces, and salt-dome features.

No Archaeological Report was required for Grand Isle 90 or 91. In the event that any archaeological resource is discovered while operations are being conducted on the lease, its discovery will be immediately reported and every reasonable effort will be made to preserve it pending further instructions.

E. Ecologically Sensitive Features

Barrier beaches are a common landform along the Gulf Coast and stretch in an irregular chain from Florida to Texas. These elongated, narrow landforms are composed of sand and other loose sediments transported by waves, currents, storm surges, and wind. Barrier landforms are a young coastal feature. The term "barrier" identifies the structure as one that protects other features, such as bays, estuaries, and marshes, from direct impacts of the open ocean. By separating coastal waters from the ocean, barriers contribute to the amount of estuarine habitat along the coast. As much as two-thirds of the top value Atlantic and Gulf Coast species of fish area considered to be directly dependent during some stage of their life on conditions in these estuaries.

Another benefit of both the island and their adjacent marshes and bays is that of providing habitats for a large number of birds and other animals, including several threatened or

Another benefit of both the island and their adjacent marshes and bays is that of providing habitats for a large number of birds and other animals, including several threatened or endangered species, for example, the loggerhead turtle, the southern bald eagle, alligators, and brown pelicans.

Louisiana has the most rapidly retreating beaches in the nation. The average retreat for the Fourchon beach over the last 100 years has been in excess of 60 ft/yr. The statewide average according to Dolan et al. (1982) is in excess of 12 ft/yr. Beaches along the deltaic plain in Louisiana fit into one of three categories, depending on the stage of the deltaic cycle that the landmass is experiencing. When a major distributary of the Mississippi River is abandoned, subsidence results in a local seal level transgression that transforms the active delta into an erosional headland with flanking barriers. Fourchon Beach is an example of an eroding headland beach. With increased age and subsidence, the barrier shoreline evolves into a transgressive barrier island arc that is separated from the mainland by a lagoon. Isles Derniers is an example of this phenomenon. Eventually with continued subsidence and sediment deprivation, the island ceases to exist.

The importance of coastal wetlands to the coastal environment has been well documented. Coastal wetlands are characterized by high organic productivity, high detritus production, and efficient nutrient recycling. They provide habitat for a great number and wide diversity of invertebrates, fish, reptiles, birds, and mammals. Wetlands are particularly important as nursery grounds for juvenile forms of many important fish species. The Louisiana coastal wetlands support over two-thirds of the Mississippi Flyway wintering waterfowl population and the largest fur harvest in North America.

Louisiana contains most of the Gulf coastal wetlands. The deterioration of coastal wetlands, particularly in Louisiana, is an issue of concern. In Louisiana, the annual rate of wetlands loss has been measured at 130 km^2 for the period 1955-1978. Several factors contribute to wetlands loss in Coastal Louisiana, including sediment deprivation (a result of a 50% decrease in the suspended sediment load of the river since the 1950s and the channelization of the river, which has prevented overbank sediment deposition), subsidence and sea-level rise, and the construction of pipeline and navigation canals through the wetlands.

In Mississippi and Alabama, the mainland marshes behind Mississippi Sound occur as discontinuous wetlands associated with estuarine environments. The wetlands of Mississippi are more stable than those in Louisiana, reflecting the more stable substrate and more active sedimentation per unit of wetland areas. Most of the wetlands in Alabama occur on the Mobile River delta or along northern Mississippi Sound. On a percentage basis, wetlands loss has occurred more rapidly in Alabama during 1955 and 1979 than it did in Louisiana.

A recent study funded by MMS entitled "Causes of Wetland Loss in the Coastal Central Gulf of Mexico," examined coastal ecosystems of the Northern Gulf of Mexico region and how wetland habitats have changed as a result of natural processes and man's activities thereon. The study's primary focus was on assessing and quantifying the direct and indirect impacts of OCS-related activities on wetland areas. Canal construction for pipelines and navigation has been the major OCS-related impacting factor.

The shelf and shelf edge of the Central and Western Gulf are characterized by topographic features is important because they support hard-bottom communities of high biomass, high diversity, and high numbers of plant and animal species; they support, either as shelter, food, or both, large numbers of commercially and recreationally important fishes; they are unique to the extent that they are small isolated areas of communities in the vast Gulf of Mexico; they provide a relatively pristine area suitable for scientific research; and they have an aesthetically attractive intrinsic value.

Live bottoms are regions of high productivity characterized by a firm substrate with high diversity or density of epibota. These communities are scattered across the west Florida shelf in the shallow waters with depth zonation apparent in dominant communities, and within restricted regions of the Central Gulf of Mexico. Live bottoms also include biological assemblages consisting of sea fans, sea whips, hydroids, ascidians, or corals living upon and attached to naturally occurring hard or rocky formations with rough, broken or smooth topography; or areas whose lithotome favors the accumulation of turtles, fishes, seagrass, algae, and other fauna.

Chemosynthetic clams, mussels, and tube worms, similar to the hydrothermal vent communities of the eastern Pacific have been discovered in the deep waters of the Gulf and have been the subject of numerous MMS site-specific reviews. These cold-water communities are associated with seismic wipe-out zones and hydrocarbons-seep areas between water depths of 400 and 1000 meters.

Seven distinct biotic zones on the banks of the Gulf have been identified. None of the banks contain all of the seven zones. The Western Gulf of Mexico lists 23 topographic features. None of those listed are in or near the vicinity of the proposed operations in Grand Isle 91.

F. Pipelines and Cables

There is one pipeline in the vicinity of Grand Isle 90 and 91. As a prudent operator, TDC will avoid all pipelines and/or cables in the vicinity of the proposed operations.

G. Other Mineral Uses

The activities proposed for Grand Isle 91 will have no direct or indirect impact on other mineral uses.

H. Ocean Dumping

Ocean dumping is prohibited in this area.

EXHIBIT 16

I. Endangered and Threatened Species and Critical Habitat

Although a large number of endangered and threatened species inhabit the Gulf Coast States and their adjoining waters, only a small percentage occupy coastal and marine habitats. An even smaller number are likely to be affected by OCS oil and gas exploration and production.

The Fish and Wildlife Service and the National Marine Fisheries Service have noted fourteen protected species, among them the seven whale species and one candidate species, the Gulf sturgeon have been selected for description and analysis because of the potential frequency or severity of their interactions with proposed OCS oil and gas development.

Five of the protected species – the Alabama beach mouse, Perdido Key mouse, Mississippi sandhill crane, jaguarundi, and ocelot – could be impacted only by onshore development because of their primary habitat is not on the OCS.

Four federally listed endangered turtle species (Kemp's ridley, green, hawksbill, and leatherback turtles) and one threatened species (loggerhead turtle) occur in the Gulf of Mexico.

The Kemp's ridley sea turtle is the rarest of all the marine turtle species occurring in the northern Gulf of Mexico. Female Kemp's ridley sea turtles appear to inhabit nearshore areas, utilizing the littoral zone along the Gulf Coast. Congregations of female Kemp's have been recorded off the mouth of the Mississippi River.

The loggerhead sea turtle occurs throughout the world and is the most common marine turtle in the U.S. The majority of nesting in the Gulf of Mexico occurs in Florida from the Keys to Tampa Bay. Nesting has also been reported on Gulf Shore and Dauphin Island, Alabama and Ship Island, Mississippi. Chandeleur Islands off the Louisiana coast may be the most important nesting areas for the northern Gulf of Mexico.

Six Federally listed endangered whale species have been reported in the Gulf of Mexico – the blue, fin, humpback, right, sie, and sperm whales. Generally, these large cetaceans inhabit the continental slope and deep oceanic waters; occasionally, they are sighted nearshore. Right whales are the most endangered cestacean in the Gulf of Mexico.

The piping plover is endangered in the Great Lakes watershed and threatened elsewhere. The largest numbers and highest densities of birds were found in the Western and Central Gulf of Mexico. The preferred feeding habits appear to be sandflats adjacent to passes and inlets, mudflats near sandy beaches, overwash sandy mudflats, and barrier islands with overwash areas.

Brown pelicans remain listed as endangered in Mississippi, Louisiana and Texas. Nesting occurs in colonies on coastal islands. Three brown pelican rookeries occur in Louisiana and a small active rookery in Texas. Brown pelicans inhabit the coast, rarely venturing into freshwater or flying more then 32 km offshore.

The Eskimo curlew is one of the rarest native North American birds in the wild. Only 18 birds were reported between 1983-1987. Most of these sightings occur in coastal Texas. The birds migrate through and concentrate in the Gulf Coast marshes during the spring on their way from South America to Canada. The drastic population decline, which was first reported in the late 1800's, appears due to over harvest, habitat loss, and short-term climatic changes.

The whooping crane breeding population winters along the Texas coast from November to April. The birds occupy the coastal marshes along Texas gulf coast counties; portions of which are located in the Arkansas National Wildlife Refuge.

A marine mammal, the West Indian manatee, is an aquatic herbivore and one of the five living species of the order Sirenia. It inhabits low-energy coastal areas throughout the northern Gulf of Mexico; however, it is known to winter only in south and central Florida.

The Gulf sturgeon – a subspecies of the Atlantic sturgeon – is mostly found along major rivers, estuaries, and offshore waters between the Mississippi River and the Suwannee River. It was listed as a threatened species for protection under the Endangered Species Act on September 30, 1991.

J. Socioeconomic

The offshore oil exploration industry including oil companies, drilling contractors, and oilfield suppliers provide a major input to Louisiana's economy. A number of ports in the Central and Western Gulf have developed into important centers for offshore support. The most active of these in Louisiana are (from east to west) Venice, Morgan City, Intracoastal City, and Cameron, Louisiana. The onshore support base for operations in Grand Isle 91 is Cameron, Louisiana.

III. UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

A. Water Quality

Operational discharges (drilling fluids, drill cuttings, deck drainage, produced water, and sanitary and domestic wastes) or accidental oil spills may temporarily degrade some measures of water quality adjacent to the proposed surface location. The impact level from these factors is considered to be low.

B. Effects on Marine Organisms

Some organisms will be killed and some will be temporarily functionally impaired as a result of operational discharges. The most affected groups will be plankton and benthos immediately around the proposed surface locations. Damage will be both mechanical and toxicological. These impacts are considered to be localized, short term and reversible at the population level.

An oil spill could affect a broad spectrum of marine organisms. However, most effects would be localized and short term. Any effects on mammals and turtles would be significant.

C. Effects on Threatened or Endangered Species

Anchoring, pipe and structure emplacement, dredging, operational discharges and some oil spill impacts will result in disturbances of the seagrass and benthic fauna and food sources utilized by these species. The impacts on these species is estimated to be moderate to low.

D. Wetlands and Beach

In the unlikely event of a spill occurring and reaching shore, organisms in wetland and beach habitats could be killed or functionally impaired. Human community disruption could also occur. Although all such effects would be localized, any effects on endangered species and/or critical habitats would be significant.

Marine debris education and training and several legal and operations changes affecting oil and gas operations are reducing accidental loss of solid waste from most offshore operations.

E. Air Quality

Air quality degradation may occur from onshore and offshore operational emissions as a result of drilling operations. The major impact producing factors on air quality from OCS-related activity are due to combustion, evaporation, or venting of hydrocarbons. The air quality at the lease site will be degraded temporarily during operations, as a result from support vessels (boats and helicopters). Anticipated emissions are expected to be below MMS guidelines limits and air quality should return to normal once operations are measurably completed. Offshore activities probably will not affect onshore air quality because of the distance between the structure and shore. Air quality at the onshore base will be only insignificantly reduced by onshore activities. Any such effect will be temporary.

F. Commercial Fishing

The major impact producing factors on fishing activities from the proposed operations is structure placement, oil spills and underwater OCS obstructions such as pipelines and debris.

Oil spills that contact the coastal marshes, bays, estuaries, and open Gulf areas with high concentrations of floating eggs and larvae have the greatest potential for damage to commercial fisheries. The majority of the Gulf's fishes are estuarine dependent. An oil spill could seriously affect commercial fisheries such as menhaden, shrimp, and blue crab that use these areas as nursery or spawning grounds.

The emplacement of one structure eliminates approximately 9 acres of commercial trawling space, and underwater OCS obstructions cause gear conflicts which result in such losses as trawls, shrimp catch, business downtime, and vessel damage.

Commercial fishery resources may also be affected by the discharge of drilling muds which may contain material toxic to marine fishes; however, this is only at concentrations four to five orders of magnitude higher than those found more than a few meters from the discharge point. Further dilution is extremely rapid in offshore waters.

In conclusion, although these factors impact the commercial fisheries industries, the level of impact is expected to be very negligible.

G. Ship Navigation

Very little interference can be expected between the drilling unit, structures and marine vessels utilized during development operations and ship that use established fairways. However, at night and during rough weather, fog, and heavy seas, ships not using established fairways could collide with the structures. Approved aids to navigation will be installed on the drilling rig and all marine vessels servicing these operations in accordance USCG regulations.

H. Cultural Resources

The greatest impact to a historic and/or prehistoric cultural resource as a result of the proposed action would result from a contact between an OCS offshore activity (drilling rig emplacement) and a historic shipwreck and/or prehistoric site located on the OCS.

The cultural resource surveys required prior to an operator beginning oil and gas activities in a lease block are estimated to be 90 percent effective as identifying possible sites.

There is only a small probability that an unknown cultural resource exists in the lease area.

I. Recreation and Aesthetic Values

The platform and marine vessels may represent an obstacle to some sport fisherman, but such an effect is expected to be negligible and not permanent.

Even though existing regulations and orders prohibit indiscriminate littering of the marine environment with trash, offshore oil and gas operations involving men, machines, equipment, and supplies is bound to result in some littering of the ocean. Human nature and accidents associated with offshore operations will contribute some floatable debris to the ocean environment which will eventually come ashore on major recreational beaches.

The effects that normal operations or a minor oil spill would have on any fish stocks important to sport fishermen are also considered to be negligible.

A minor oil spill and/or non-petroleum floating debris could foul beaches inshore of the lease area. The fouling of the beaches would be an aesthetic detriment that could adversely affect

recreation. Any effects on each recreation could adversely affect tourism, and consequently, the local economy.

IV. SUMMARY

The proposed activity will be carried out and completed with the guarantee of the following items:

A. The best available and safest technologies will be utilized throughout the project. This includes meeting all applicable requirements for equipment types, general project layout, safety systems, and equipment and monitoring systems.

B. All operations are covered by a Minerals Management Service approved Oil Spill Contingency Plan.

C. All applicable Federal, State, and Local requirements regarding air emission and water quality and discharge for the proposed activities, as well as any other permit conditions, will be complied with.

D. The proposed activities described in detail in the Initial Development Operations Coordination Document will comply with Louisiana's Coastal Management Program and will be conducted in a manner consistent with such program.

EXHIBIT 16

REFERENCES

1. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 110 and 112, Gulf of Mexico OCS Region, OCS EIS, MMS 86-0087.

2. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 110 and 112, Gulf of Mexico OCS Region, OCS EIS, MMS 86-0087, visuals.

3. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 113, 115, and 116, Gulf of Mexico OCS Region, OCS EIS, MMS 87-0077.

4. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 118 and 122, Gulf of Mexico OCS Region, OCS EIS, MMS 88-0044.

5. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 123 and 125, Gulf of Mexico OCS Region, OCS EIS, MMS 89-0053.

6. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 131, 135 and 137, Gulf of Mexico OCS Region, OCS EIS, MMS 90-0042.

7. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 147 and 150, Gulf of Mexico OCS Region, OCS EIS, MMS 93-0065.

8. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 152 and 155, Gulf of Mexico OCS Region, OCS EIS, MMS 94-0058.

9. Final Environmental Impact Statement, Proposed Oil and Gas Lease Sales 157 and 161, Gulf of Mexico OCS Region, OCS EIS, MMS 95-0058.

Exhibit 17

Bonding Information

Exhibit 18

Cultural Resource Assessment