

UNITED STATES GOVERNMENT
MEMORANDUM

September 26, 2003

To: Public Information (MS 5034)
From: Plan Coordinator, FO, Plans Section (MS 5231)

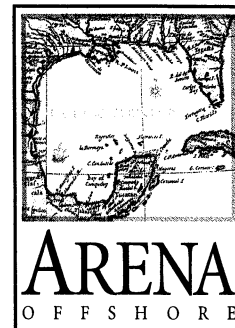
Subject: Public Information copy of plan
Control # - N-07898
Type - Initial Exploration Plan
Lease(s) - OCS-G24415 Block - A 515 High Island Area
Operator - Arena Offshore, LLC
Description - Wells A, B, C, and D
Rig Type - JACKUP

Attached is a copy of the subject plan.

It has been deemed submitted as of this date and is under review for approval.


Karen Duhlap
Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
WELL/A	G24415/HI/A 515	4500 FSL, 2800 FEL	G24415/HI/A 515
WELL/B	G24415/HI/A 515	3069 FSL, 2640 FEL	G24415/HI/A 515
WELL/C	G24415/HI/A 515	3500 FSL, 700 FEL	G24415/HI/A 515
WELL/D	G24415/HI/A 515	7000 FNL, 2000 FEL	G24415/HI/A 515



September 10, 2003

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

Arena Offshore, LLC
4200 Research Forest Drive, Suite 230
The Woodlands, TX 77381
281-681-9501
281-681-9502 Fax

Attention: Mr. Nick Wetzel
Plans Unit

RE: Initial Exploration Plan for Lease OCS-G 24415, High Island Block A-515, OCS Federal Waters, Gulf of Mexico, Offshore, Texas

Gentlemen:

In accordance with the provisions of Title 30 CFR 250.203 and that certain Notice to Lessees (NTL 2003-G17), Arena Offshore, LLC (Arena) hereby submits for your review and approval nine (9) copies of an Initial Exploration Plan (Plan) for Lease OCS-G 24415, High Island Block A-515, OCS Federal Waters, Gulf of Mexico, Offshore, Texas. Five (5) copies are "Proprietary Information", and four (4) copies are "Public Information".

Excluded from the Public Information copies are certain geologic and geophysical discussions and attachments.

Contingent upon receiving regulatory approvals and based on equipment and personnel availability, Arena anticipates operations under this Plan commencing as early as October 15, 2003.

Should additional information be required, please contact the undersigned, or our regulatory consultant, R.E.M. Solutions, Inc., Attention: Connie Goers at 281.492.8562.

Sincerely,

ARENA OFFSHORE, LLC

Michael J. Minarovic
Manager

MJM:CJG:cag
Attachments

Public Information

ARENA OFFSHORE, LLC
4200 Research Forest Drive, Suite 230
The Woodlands, Texas 77381

Michael J. Minarovic
mike@arenaenergy.com

INITIAL EXPLORATION PLAN

LEASE OCS-G 24415

HIGH ISLAND BLOCK A-515

PROJECT NAME: NONE ASSIGNED

PREPARED BY:

Connie Goers
R.E.M. Solutions, Inc.
17171 Park Row, Suite 390
Houston, Texas 77084
281.492.8562 (Phone)
281.492.6117 (Fax)
connie@remolutionsinc.com

DATED:

September 10, 2003

SECTION A PLAN CONTENTS

A. Description, Objectives and Schedule

Lease OCS-G 24415, High Island Block A-515 was acquired by Triumph Energy, L.L.C. at the Western Gulf of Mexico Lease Sale No. 184 held on August 21, 2002. The lease was issued with an effective date of October 1, 2002 and a primary term ending date of September 30, 2007.

The current lease operatorship and ownership are as follows:

Area/Block Lease No.	Operator	Ownership
High Island Block A-515	Arena Offshore, LLC	Triumph Energy, L.L.C.

Triumph Energy, L.L.C. has executed a Designation of Operator Form in favor of Arena Offshore, LLC which is in the process of being submitted to the Minerals Management Service Adjudication Unit under separate cover.

Arena Offshore, LLC (Arena) proposes to drill, complete, potentially test and install a minimal well protector structures over Well Locations A through D in High Island Block A-515. Information pertaining to the geological targets, including a narrative of trapping features, is included as ***Attachment A-1***.

Arena proposes to conduct these operations as outlined in the following activity schedule:

<i>Proposed Activity</i>	<i>Start Up Date</i>	<i>Completion Date</i>
Drill Well Location A	10/15/2003	10/24/2003
Complete Well Location A	10/25/2003	11/03/2003
Test Well Location A	11/04/2003	11/06/2003
Install Well Protector Structure A	11/07/2003	11/11/2003
Drill Well Location B	11/12/2003	11/21/2003
Complete Well Location B	11/22/2003	12/01/2003
Test Well Location B	12/02/2003	12/04/2003
Install Well Protector Structure B	12/05/2003	12/09/2003
Drill Well Location C	01/01/2004	01/10/2004
Complete Well Location C	01/11/2004	01/20/2004
Test Well Location C	01/21/2004	01/23/2004
Install Well Protector Structure C	01/24/2003	01/28/2004
Drill Well Location D	01/29/2004	02/02/2004
Complete Well Location D	02/03/2004	02/12/2004
Test Well Location D	02/13/2004	02/15/2004
Install Well Protector Structure D	02/16/2004	02/20/2004

SECTION A

Contents of Plan - Continued

B. Location

Included as *Attachments A-2 and A-3* is Form MMS-137 "OCS Plan Information Form" and the bathymetry map detailing the proposed well surface location disturbance areas.

C. Drilling Unit

Arena will utilize a typical jack-up type drilling rig for the proposed drilling, potential completion and testing operations, and installation of the well protector structures provided for in this Plan. Actual rig specifications will be included with the Applications for Permit to Drill.

Safety of personnel and protection of the environment during the proposed operations is of primary concern with Arena, and mandates regulatory compliance with the contractors and vendors associated with the proposed operations as follows:

Minerals Management Service regulations contained in Title 30 CFR Part 250, Subparts C, D, E, G and O mandate the operations comply with well control, pollution prevention, construction and welding procedures as described in Title 30 CFR Part 250, Subparts C, D, E, G and O; and as further clarified by MMS Notices to Lessees.

Minerals Management Service conducts periodic announced and unannounced onsite inspections of offshore facilities to confirm operators are complying with lease stipulations, operating regulations, approved plans, and other conditions; as well as to assure safety and pollution prevention requirements are being met. The National Potential Incident of Noncompliance (PINIC) List serves as the baseline for these inspections.

U. S. Coast Guard regulations contained in Title 33 CFR mandate the appropriate life rafts, life jackets, ring buoys, etc., be maintained on the facility at all times.

U. S. Environmental Protection Agency regulations contained in the NPDES General Permit GMG290000 mandate that supervisory and certain designated personnel on-board the facility be familiar with the effluent limitations and guidelines for overboard discharges into the receiving waters.

Geological Targets and Trapping Features

**Attachment A-1
(Proprietary Information)**

OCS Plan Information Form

**Attachment A-2
(Public Information)**

OCS PLAN INFORMATION FORM
 (USE SEPARATE FORM FOR EACH LEASE)

EXPLORATION PLAN	<input checked="" type="checkbox"/>	DEVELOPMENT OPERATIONS COORDINATION DOCUMENT		DEVELOPMENT & PRODUCTION PLAN	
OPERATOR:	Arena Offshore, LLC			ADDRESS:	4200 Research Forest Drive, Suite 500
MMS OPERATOR NO.:	02628				The Woodlands, Texas 77381
CONTACT PERSON:	Connie Goers / R.E.M. Solutions, Inc.			PHONE NO.	281.492.8562
PROPOSED START DATE:	10/15/2003	RIG TYPE:	JU	DISTANCE TO CLOSEST LAND (IN MILES):	89
NEW OR UNUSUAL TECHNOLOGY	YES	NO	<input checked="" type="checkbox"/>	ONSHORE SUPPORT BASE:	Galveston, Texas
NARRATIVE DESCRIPTION PROPOSED ACTIVITIES:	Drill, complete, test Well Location A through D and install well protector structures.				
	PROJECT NAME, IF APPLICABLE:				NA

PROPOSED WELL/STRUCTURE LOCATIONS

WELL / STRUCTURE NAME	SURFACE LOCATION			BOTTOM-HOLE LOCATION (FOR WELLS)		
Well Location A Name:	CALLS:	4500' F S L and	2800' F E L OF	CALLS:		
	LEASE OCS BLOCK	G 24415 A-515	, High Island AREA,	LEASE OCS BLOCK	G 24415 A-515	, High Island AREA,
	X:	3,552,196		X:		
	Y:	139,140		Y:		
	LAT:	28.128075368		LAT:		
	LONG:	94.183529661		LONG:		
	TVD (IN FEET):			MD (IN FEET):	WATER DEPTH: 200'	
Well Location B Name:	CALLS:	3069' F S L and	2640' F E L OF	CALLS:		
	LEASE OCS BLOCK	G 24415 A-515	, High Island AREA,	LEASE OCS BLOCK	G 24415 A-515	, High Island AREA,
	X:	3,552,356		X:		
	Y:	137,704		Y:		
	LAT:	28.124112376		LAT:		
	LONG:	94.183217161		LONG:		
	TVD (IN FEET):			MD (IN FEET):	WATER DEPTH: 200'	
Well Location C Name:	CALLS:	3500' F S L and	700' F E L OF	CALLS:		
	LEASE OCS BLOCK	G 24415 A-515	, High Island AREA,	LEASE OCS BLOCK	G 24415 A-515	, High Island AREA,
	X:	3,554,296		X:		
	Y:	138,140		Y:		
	LAT:	28.125089503		LAT:		
	LONG:	94.177148623		LONG:		
	TVD (IN FEET):			MD (IN FEET):	WATER DEPTH: 199'	

OCS PLAN INFORMATION FORM
 (USE SEPARATE FORM FOR EACH LEASE)

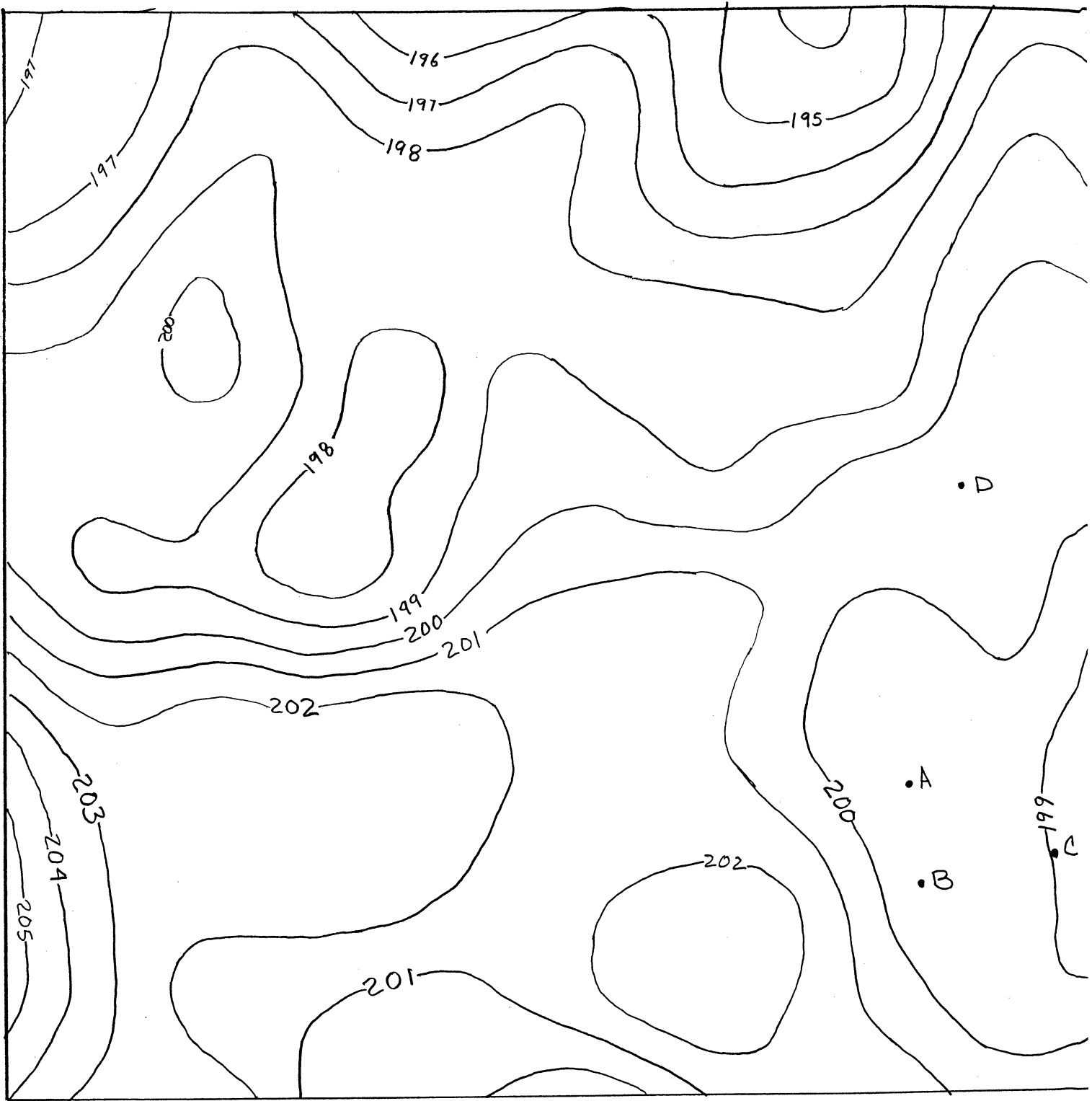
EXPLORATION PLAN	<input checked="" type="checkbox"/>	DEVELOPMENT OPERATIONS COORDINATION DOCUMENT		DEVELOPMENT & PRODUCTION PLAN	
OPERATOR:	Arena Offshore, LLC			ADDRESS:	4200 Research Forest Drive, Suite 500
MMS OPERATOR NO.:	02628				The Woodlands, Texas 77381
CONTACT PERSON:	Connie Goers / R.E.M. Solutions, Inc.			PHONE NO.	281.492.8562
PROPOSED START DATE:	10/15/2003		RIG TYPE:	JU	
				DISTANCE TO CLOSEST LAND (IN MILES): 89	
NEW OR UNUSUAL TECHNOLOGY	YES		NO	<input checked="" type="checkbox"/>	ONSHORE SUPPORT BASE: Galveston, Texas
NARRATIVE DESCRIPTION PROPOSED ACTIVITIES:	Drill, complete, test Well Location A through D and install well protector structures.				
					PROJECT NAME, IF APPLICABLE: NA

PROPOSED WELL/STRUCTURE LOCATIONS

WELL / STRUCTURE NAME	SURFACE LOCATION	BOTTOM-HOLE LOCATION (FOR WELLS)
Well Location D Name:	CALLS: 7000' F N L and 2000' F E L OF LEASE OCS G 24415 , High Island AREA, BLOCK A-515	CALLS: LEASE OCS G 24415 , High Island AREA, BLOCK A-515
	X: 3,552,996	X:
	Y: 143,480	Y:
	LAT: 28.139910739	LAT:
	LONG: 94.180495409	LONG:
TVD (IN FEET):	MD (IN FEET):	WATER DEPTH: 200'

Bathymetry Map

**Attachment A-3
(Public Information)**



ARENA ENERGY
High Island Block A515
Bathymetry Map
1" = 2000' Scale

SECTION B

General Information

A. Contact

Questions or requests for additional information should be made to Arena's authorized representative for this project:

Connie Goers
R.E.M. Solutions, Inc.
17171 Park Row, Suite 390
Houston, Texas 77084
281.492.8562 (Phone)
281.492.6117 (Fax)
connie@remolutionsinc.com

B. Project Name

Arena has not assigned a project name to this development activity.

C. New or Unusual Technology

Arena does not propose using any new and/or unusual technology for the operations proposed in this Plan.

D. Bonding Information

In accordance with Title 30 CFR Part 256, Subpart I, Arena elected and has on file with the Minerals Management Service Gulf of Mexico Regional Office a \$50,000 Lease Operator's Bond, and is in the process of submitting under separate cover, a \$200,000 Lease Operator's Bond to the Minerals Management Service Adjudication Unit.

As deemed warranted, Minerals Management Service will contact the designated operator in the event a supplemental bond is required for the proposed operations, as outlined in Notice to Lessees (NTL) 2003-N06 to cover plugging liability of the wellbores, removal of associated well protector structures and site clearance.

Arena is aware that such bonding may be imposed, and will submit accordingly upon notification from the Minerals Management Service.

SECTION B
General Information - Continued

E. Onshore Base and Support Vessels

The proposed surface disturbance in High Island Block A-515 will be located approximately 89 miles from the nearest Texas shoreline, and approximately 90 miles from the onshore support base to be located in Galveston, Texas.

Arena will use an existing onshore base to accomplish the following routine operations:

- Loading/Offloading point for equipment supporting the offshore operations,
- Dispatching personnel and equipment, and does not anticipate the need for any expansion of the selected facilities as a result of the activities proposed in this Plan,
- Temporary storage for materials and equipment
- 24-Hour Dispatcher

Personnel involved in the proposed operations will typically use their own vehicles as transportation to and from the selected onshore base; whereas the selected vendors will transport the equipment by a combination of trucks, boats and/or helicopters to the onshore base. The personnel and equipment will then be transported to the drilling rig via the transportation methods and frequencies shown below, taking the most direct route feasible as mandated by weather and traffic conditions:

Support Vessel	Drilling and Completion Trips Per Week
Crew Boat	2
Supply Boat	3
Helicopter	3

The proposed operations are temporary in nature and do not require any immediate action to acquire additional land, expand existing base facilities.

A Vicinity Plat showing the surface location in High Island Block A-515 relative to the shoreline and onshore base is included as **Attachment B-1**.

F. Lease Stipulations

Under the Outer Continental Shelf Lands Act, the Minerals Management Service is charged with the responsibility of managing and regulating the exploration and development on the OCS.

SECTION B

General Information - Continued

As part of the regulatory process, an Environmental Impact Statement (EIS) is prepared for each lease sale, at which time mitigation measures are addressed in the form of lease stipulations, which then become part of the oil and gas lease terms and are therefore enforceable as part of that lease.

As part of this process, the designated operator proposing to conduct related exploratory and development activities, must review the applicable lease stipulations, as well as other special conditions, which may be imposed by the Minerals Management Service, and other governing agencies.

Lease OCS-G 24415, High Island Block A-515 is subject to the following such stipulation and conditions:

Marine Protected Species

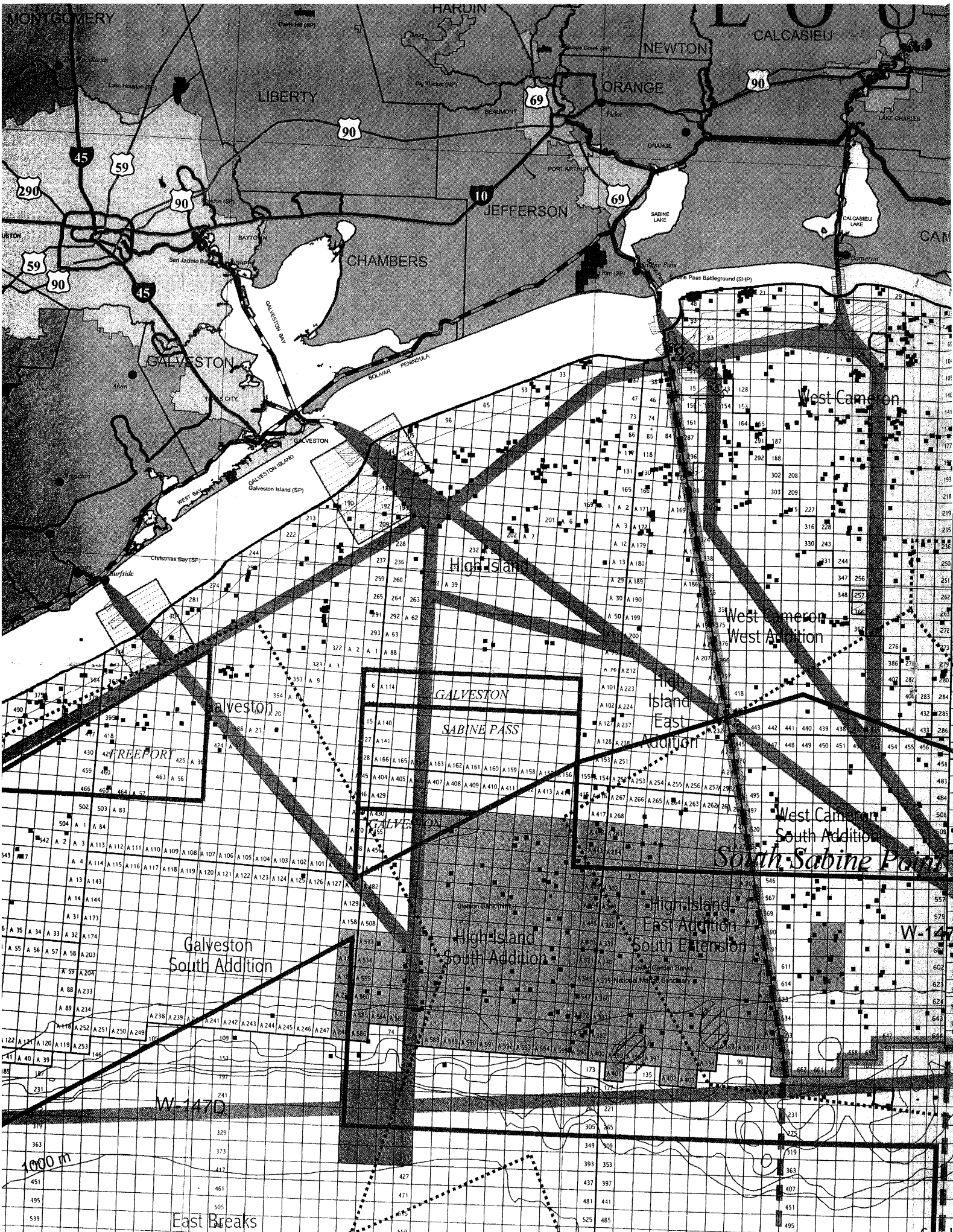
Lease Stipulation No. 6 is to reference measures to minimize or avoid potential adverse impacts to protected species (sea turtles, marine mammals, gulf sturgeon, and other federally protected species). MMS has issued Notice to Lessees NTL 2003-G08 "Implementation of Seismic Mitigation Measures", NTL 2003-G10 "Vessel Strike Avoidance and Injured/Dead Protected Species Reporting" and NTL 2003-G11 "Marine Trash and Debris Awareness and Elimination".

Special Conditions

The proposed surface disturbance in High Island Block A-515 is located within the boundary of a designated Artificial Reef Planning Area. Therefore, Arena will take the necessary precautions to conduct safe operations and avoid any potential hazards within this area.

Vicinity Plat

**Attachment B-1
(Public Information)**



MONTGOMERY

LIBERTY

90

HARDIN

ORANGE

CALCASIEU

290

59

90

10

69

90

59

45

GALVESTON

CHAMBERS

JEFFERSON

ORANGE

CALCASIEU LAKE

290

GALVESTON

GALVESTON BAY

BOLINAR PENINSULA

SABINE LAKE

LAKE CHARLES

45

GALVESTON CITY

GALVESTON

GALVESTON ISLAND (SP)

SABINE PASS

SABINE PASS BATTLEGROUND (SHP)

45

FREEPORT

High Island

High Island

High Island

West Cameron

45

Galveston

GALVESTON

SABINE PASS

High Island

West Cameron

45

Galveston

GALVESTON

GALVESTON

High Island

West Cameron

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Galveston

Galveston

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High Island

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High Island

High Island

High Island

West Cameron

45

East Breaks

High Island

High Island

High Island

West Cameron

45

1000 m

SECTION C

Geological, Geophysical & H2S Information

A. Structure Contour Maps

Included as *Attachment C-1* are current structure maps (depth base and expressed in feet subsea) depicting the entire lease coverage area; drawn on the top of each prospective hydrocarbon sand. The maps depict each proposed bottom hole location and applicable geological cross section.

B. Interpreted Deep Seismic Lines

Included as *Attachment C-2* in this Plan is a copy of a letter transmitting migrated and annotated (shot point, time lines, well paths) of the deep seismic lines within 500 feet of the proposed surface locations.

C. Geological Structure Cross Sections

Interpreted geological cross sections depicting the proposed well locations and depth of the proposed wells are included as *Attachment C-3*. Such cross sections correspond to each seismic line being submitted.

D. Shallow Hazards

Thales GeoSolutions, Inc. conducted a high resolution geophysical survey in High Island Block A-515 during June and July 2003 on behalf of Arena. The purpose of the survey was to evaluate geologic conditions and inspect for potential hazards or constraints to lease development.

Copies of these reports are being submitted to the Minerals Management Service under separate cover.

E. Shallow Hazards Assessment

A shallow hazards analysis has been prepared for the proposed surface locations, evaluating seafloor and subsurface geologic and manmade features and conditions, and is included as *Attachment C-4*.

F. High Resolution Seismic Lines

Included as *Attachment C-5* is a copy of a letter being submitted under separate cover, transmitting a copy of the annotated high resolution survey data lines for each surface location disturbance proposed in this Plan.

SECTION C

Geological, Geophysical & H2S Information-Continued

G. Stratigraphic Column

A generalized biostratigraphic/lithostratigraphic column from the seafloor to the total depth of the proposed wells is included as *Attachment C-6*.

H. Time Vs. Depth Tables

Arena has determined that there is existing sufficient well control data for the target areas proposed in this plan; therefore, tables providing seismic time versus depth for the proposed well locations are not required.

I. Hydrogen Sulfide Classification

In accordance with Title 30 CFR 250.417, Arena requests that High Island Block A-515 be classified by the Minerals Management Service as an area where the absence of hydrogen sulfide has been confirmed based on the following wells which were drilled to the stratigraphic equivalent of the wells proposed in this Plan is included as *Attachment C-7*.

Structure Maps

**Attachment C-1
(Proprietary Information)**

Deep Seismic Lines

**Attachment C-2
(Proprietary Information)**

Cross Section Maps

**Attachment C-3
(Proprietary Information)**

Shallow Hazards Statement

**Attachment C-4
(Public Information)**

4200 Research Forest Drive
Suite 500
The Woodlands, Texas 77381
August 25, 2003

Minerals Management Service
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123

Re: High Island Block A515

To Whom It May Concern:

The Hazard Survey prepared by Thales GeoSolutions for Arena Energy dated August 2003 was interpreted for drilling hazards at four locations in High Island Block A515.

Location 'A' 2800'EL and 4500'SL of Block A515

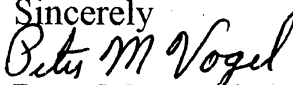
Location 'B' 2640'EL and 3069'SL of Block A515

Location 'C' 700'EL and 3500'SL of Block A515

Location 'D' 2000'EL and 7000'NL of Block A515

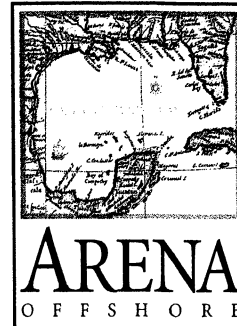
The Hazard Survey indicated that there are no shallow gas pockets or anomalies within several thousand feet of locations A, B, or C and that location D is 800' removed from an interpreted gas pocket. The survey also indicates that locations B, C, and D are well removed from any magnetic anomalies as well as the pipelines mapped by the magnetometer data, however, location A is positioned 300' north-west of the HIOS 30" gas pipeline. Location D is near an area where an 8' deep pale channel has been interpreted. This feature has not been listed as a drilling hazard because it is believed to be filled with sandy silt.

In conclusion, the interpretation showed that there are no shallow gas accumulations, faults or slumps, or magnetic events that would be a hazard to drilling operations for the above listed locations.

Sincerely

Peter M. Vogel
Geophysicist
Arena Energy

Shallow Hazards Lines Submittal Letter

**Attachment C-5
(Public Information)**



September 10, 2003

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

Arena Offshore, LLC
4200 Research Forest Drive, Suite 230
The Woodlands, TX 77381
281-681-9501
281-681-9502 Fax

Attention: Nick Wetzel
Plans Unit

RE: High Resolution Geophysical Survey and Deep Seismic Lines Applicable to Initial Exploration Plan for Lease OCS-G 24415, High Island Block A-515, OCS Federal Waters, Gulf of Mexico, Offshore, Texas

Gentlemen:

Arena Offshore, LLC (Arena) has submitted under separate cover this date, an Initial Exploration Plan (Plan) covering Lease OCS-G 24415, High Island Block A-515, Offshore, Texas.

In further support of the referenced Plan, Arena is enclosing one copy each of the closest north-south and east-west shallow hazard line data sets for each surface location addressed in this Plan.

Should you have any questions or requests for additional information, please contact the undersigned, or our regulatory consultant, Connie Goers, R.E.M. Solutions, Inc. at 281.492.8563.

Sincerely,

ARENA OFFSHORE, LLC

Michael J. Minarovic /c/jg

Michael J. Minarovic
Manager

MJM:CJG:cag
Enclosures

Stratigraphic Column

**Attachment C-6
(Proprietary Information)**

H2S Classification

**Attachment C-7
(Public Information)**

HI A515 H2S Classification

HI A515 has no indications of H2S on the block. Two wells have been drilled on the block to date. The Tenneco A-1 was drilled in 1980 and produced from a shallow Pleistocene sand at 3200 TVD. This well did not have any H2S produced with the gas. The Tenneco #2 well was drilled in 1987 and found the 1600' sand gas bearing. This sand is one of the objectives for the proposed development. The Tenneco #2 had no indications of H2S during the drilling of the well.

SECTION D

Biological & Physical Information

A. Chemosynthetic Information

The proposed seafloor disturbing activities are in water depths less than 400 meters (1312 feet); therefore, this section of the Plan is not applicable.

B. Topographic Features Information

MMS and the National Marine Fisheries Service (NMFS) have entered into a programmatic consultation agreement for Essential Fish Habitat that requires that no bottom disturbing activities, including anchors or cables from a semi-submersible drilling rig, may occur within 500 feet of the no-activity zone of a topographic feature. If such proposed bottom disturbing activities are within 500 feet of a no activity zone, the MMS is required to consult with the NMFS.

The activities proposed in this Plan are not affected by a topographic feature.

C. Live Bottom (Pinnacle Trend) Information

Certain leases are located in areas characterized by the existence of live bottoms. Live bottom areas are defined as seagrass communities; those areas that contain biological assemblages consisting of sessile invertebrates living upon and attached to naturally occurring hard or rocky formations with rough, broken, or smooth topography; and areas where the lithotope favors the accumulation of turtles, fishes, or other fauna. These leases contain a Live Bottom Stipulation to ensure that impacts from nearby oil and gas activities on these live bottom areas are mitigated to the greatest extent possible.

For each affected lease, the Live Bottom Stipulation requires that you prepare a live bottom survey report containing a bathymetry map prepared by using remote sensing techniques. This report must be submitted to the Gulf of Mexico OCS Region (GOMR) before you may conduct any drilling activities or install any structure, including lease term pipelines in accordance with NTL 99-G16.

High Island Block A-515 is not located within the vicinity of a proposed live bottom area.

SECTION D
Biological & Physical Information - Continued

D. Remotely Operated Vehicle (ROV Surveys)

Pursuant to NTL No. 2003-G03, operators may be required to conduct remote operated vehicle (ROV) surveys during pre-spudding and post-drilling operations for the purpose of biological and physical observations.

High Island Block A-515 is not located within an area where ROV Surveys are required.

E. Archaeological Reports

High Island Block A-515 is not located within a (high probability historic, high probability pre-historic) area for potential cultural resources; therefore an archaeological report was not required.

SECTION E

Wastes and Discharge/Disposal Information

The Minerals Management Service (MMS), U. S. Coast Guard (USCG) and the U.S. Environmental Protection Agency (EPA) regulate the overboard discharge and/or disposal of operational waste associated with drilling, completing, testing and/or production operations from oil and gas exploration and production activities.

Minerals Management Service regulations contained in Title 30 CFR 250.300 require operators to "prevent the unauthorized discharge of pollutants into offshore waters". These same regulations prohibit the intentional disposal of "equipment, cables, chains, containers, or other materials" offshore. Small items must be stored and transported in clearly marked containers and large objects must be individually marked. Additionally, items lost overboard must be recorded in the facility's daily log and reported to MMS as appropriate.

U. S. Coast Guard regulations implement the Marine Pollution Research and Control Act (MARPOL) of 1987 requiring manned offshore rigs, platforms and associated vessels prohibit the dumping of all forms of solid waste at sea with the single exception of ground food wastes, which can be discharged if the facility is beyond 12 nautical miles from the nearest shore. This disposal ban covers all forms of solid waste including plastics, packing material, paper, glass, metal, and other refuse. These regulations also require preparation, monitoring and record keeping requirements for garbage generated on board these facilities. The drilling contractor must maintain a Waste Management Plan, in addition to preparation of a Daily Garbage Log for the handling of these types of waste. MODU's are equipped with bins for temporary storage of certain garbage. Other types of waste, such as food, may be discharged overboard if the discharge can pass through 25-millimeter type mesh screen. Prior to off loading and/or overboard disposal, an entry will be made in the Daily Garbage Log stating the approximate volume, the date of action, name of the vessel, and destination point.

U. S. Environmental Protection Agency regulations address the disposal of oil and gas operational wastes under three Federal Acts. The Resource Conservation and Recovery Act (RCRA) which provides a framework for the safe disposal of discarded materials, regulating the management of solid and hazardous wastes. The direct disposal of operational wastes into offshore waters is limited under the authority of the Clean Water Act. And, when injected underground, oil and gas operational wastes are regulated by the Underground Injection Control program. If any wastes are classified as hazardous, they are to be properly transported using a uniform hazardous waste manifest, documented, and disposed at an approved hazardous waste facility.

A National Pollutant Discharge Elimination System (NPDES) permit, based on effluent limitation guidelines, is required for any discharges into offshore waters. Arena has requested coverage under the Region VI NPDES General Permit GMG290000 for discharges associated with exploration and development activities in High Island Block A-515 and will take applicable steps to ensure all offshore discharges associated with the proposed operations will be conducted in accordance with the permit.

SECTION E

Wastes and Discharge/Disposal Information-Continued

A. Composition of Solid and Liquid Wastes

The major operational solid waste in the largest quantities generated from the proposed operations will be the drill cuttings, drilling and/or completion fluids. Other associated wastes include waste chemicals, cement wastes, sanitary and domestic waste, trash and debris, ballast water, storage displacement water, rig wash and deck drainage, hydraulic fluids, used oil, oily water and filters, and other miscellaneous minor discharges.

These wastes are generated into categories, being solid waste (trash and debris), nonhazardous oilfield waste (drilling fluids, nonhazardous waste including cement and oil filters), and hazardous wastes (waste paint or thinners).

The type of discharges included in this permit application allow for the following effluents to be discharged overboard, subject to certain limitations, prohibitions and recordkeeping requirements.

B. Overboard Discharges

The wastes detailed in *Attachment E-1* are those wastes generated by our proposed activities and released into the receiving waters of the Gulf of Mexico at the associated well location.

C. Disposed Wastes

The wastes detailed in *Attachment E-2* are those wastes generated by our proposed activities that are disposed of by means of offsite release, injection, encapsulation, or placement at either onshore or offshore permitted locations for the purpose of returning them back to the environment.

Arena will manifest these wastes prior to being offloaded from the MODU, and transported to shore for disposal at approved sites regulated by the applicable State. Additionally, Arena will comply with any approvals or reporting and recordkeeping requirements imposed by the State where ultimate disposal will occur.

Waste Disposal Table

**Attachment E-1
(Public Information)**

**Arena Offshore, LLC
High Island Block A-515
Examples of Wastes and Discharges Information**

Table 1. Discharges Table (Wastes to be discharged overboard)

Type of Waste Approximate Composition	Amount to be Discharged (volume or rate)	Maximum Discharge Rate	Treatment and/or Storage, Discharge Location*, And Discharge Method
Water-based drilling fluids	7,800 bbl/well	200 bbl/hr	High Island Block A-515 Overboard
Drill cuttings associated with water-based fluids	2,000 bbl/well	1,000 bbl/hr	High Island Block A-515 Overboard
Muds, cuttings and cement at the seafloor	Gel – 5,000 bbl WBM – 8,000 bbl Cuttings – 20,000 bbl Seawater and caustic – 4,800 bbl	Not applicable	High Island Block A-515 Overboard
Sanitary wastes	20 gal/person/day	Not applicable	High Island Block A-515 Chlorinate and discharge
Domestic wastes	30 gal/person/day	Not applicable	High Island Block A-515 Remove floating solids and discharge
Deck Drainage	0-4,000 bbl/day Dependant upon rainfall	15 bbl per hour (maximum separator discharge)	High Island Block A-515 Treat for oil and grease and discharge
Well treatment, workover or completion fluids	Workover – 300 bbl/well Treatment – 250 bbl/well Completion – 300 bbl/well	200 bbl/well/every 4 years	High Island Block A-515 Discharge used fluids overboard, return excess to shore for credit.
Uncontaminated fresh or seawater	37,000 bbl (drilling)	Not applicable	High Island Block A-515 Discharged overboard.
Desalinization Unit water	700 bbl/day	Not applicable	High Island Block A-515 Discharged overboard.
Uncontaminated bilge water	2,000 bbl	260 m ³ /hr	High Island Block A-515 Discharged overboard.
Uncontaminated ballast water	20,000 bbl	2,600 m ³ /hr	High Island Block A-515 Discharged overboard.
Misc. discharges to which treatment chemicals have been added	100 bbl/day	10 bbl/hr	High Island Block A-515 Discharged overboard.
Miscellaneous discharges (permitted under NPDES) (Excess cement with cementing chemicals)	100 bbl	Not applicable	High Island Block A-515 Discharged at seafloor without treatment

Waste Disposal Table

**Attachment E-2
(Public Information)**

**Arena Offshore, LLC
High Island Block A-515
Examples of Wastes and Discharges Information**

Table 2. Disposal Table (Wastes to be disposed of, not discharged)

Type of Waste Approximate Composition	Amount*	Rate per day	Name/Location of Disposal Facility	Treatment and/or Storage, Transport and Disposal Method
Norm – contaminated wastes	1 ton	Not applicable	High Island Block A- 515	Transport to a transfer station via dedicated barge
Trash and debris	1,000 ft ³	3 ft ³ /day	Newpark Environmental Galveston, TX	Transport in storage bins on crew boat to disposal facility
Chemical product wastes	50 bbl/yr	2 bbl/day	Newpark Environmental Galveston, TX	Transport in containers to shore location
Chemical product wastes	100 bbl	2 bbl/day	Newpark Environmental Galveston, TX	Transport in barrels on crew boat to shore location

*can be expressed as a volume, weight, or rate

SECTION F

Oil Spill Response and Chemical Information

A. Regional Oil Spill Response Plan (OSRP) Information

Effective March 17, 2003, Minerals Management Service approved Arena Offshore, LLC's (Arena's) Regional Oil Spill Response Plan (OSRP). The most recent modification, dated August 26, 2003 revised Arena's potential Worst Case Discharge (WCD) for a facility located greater than 10 miles from the nearest shoreline. Activities proposed under this Initial Exploration Plan will be covered under the Regional OSRP.

B. Oil Spill Removal Organizations (OSRO)

Arena utilizes Clean Gulf Associates (CGA) as its primary provider for equipment, which is an industry cooperative owning an inventory of oil spill clean-up equipment. CGA is supported by the Marine Spill Response Corporation's (MSRC), which is responsible for storing, inspecting, maintaining and dispatching CGA's equipment. The MSRC STARS network provides for the closest available personnel, as well as an MSRC supervisor to operate the equipment.

C. Worst-Case Scenario Comparison (WCD)

<i>Category</i>	<i>Current Regional OSRP WCD</i>	<i>Proposed Exploration Plan WCD</i>
Type of Activity	Drilling/Completion/Testing	Drilling/Completion/Testing
Facility Surface Location	Eugene Island Block 100	High Island Block A-515
Facility Description	Jack-Up Rig	Jack-Up Rig
Distance to Nearest Shoreline (Miles)	21	89
Volume:		
Storage Tanks (total)	0	0
Facility Piping (total)	0	0
Lease Term Pipeline	0	0
Uncontrolled Blowout (day)	500	0
Potential 24 Hour Volume (Bbls.)	500	0
Type of Liquid Hydrocarbon	Condensate	Dry Gas
API Gravity	50°	Dry Gas

SECTION F

Oil Spill Response and Chemical Information-Continued

Due to the estimated flow rates from an exploratory well blowout are speculative and temporary in nature, Arena will not modify their Regional OSRP to change the WCD.

Since Arena has the capability to respond to the worst-case discharge (WCD) spill scenario included in its Regional OSRP approved on March 17, 2003, and since the worst-case scenario determined for our EP does not replace the worst-case scenario in our Regional OSRP, I hereby certify that Arena has the capability to respond, to the maximum extent practicable, to a worst-case discharge, or a substantial threat of such a discharge, resulting from the activities proposed in our EP.

D. Facility Tanks, Production Vessels

The following table details the *tanks* (capacity greater than 25 bbls. or more) to be used to support the proposed activities (MODU and barges):

Type of Storage Tank	Type of Facility	Tank Capacity (bbls)	Number of Tanks	Total Capacity (bbls)	Fluid Gravity (API)
Fuel Oil	MODU	250	2	500	38° (Diesel)

E. Spill Response Sites

The following locations will be used in the event and oil spill occurs as a result of the proposed activity.

Primary Response Equipment Location	Pre-Planned Staging Location(s)
Galveston, Texas	Galveston, Texas Houston, Texas

F. Diesel Oil Supply Vessels

According to NTL 2003-G17, the section of the Plan is not applicable to the proposed operations.

G. Support Vessel Fuel Tanks

According to NTL 2003-G17, this section of the Plan is not applicable to the proposed operations.

H. Produced Liquid Hydrocarbon Transportation Vessels

Arena is proposing to conduct well testing operations on the proposed well locations. This process will include flaring the produced gas hydrocarbons and burning the liquid hydrocarbons.

SECTION F

Oil Spill Response and Chemical Information - Continued

I. Oil and Synthetic-Based Drilling Fluids

Arena does not anticipate the use of oil and/or synthetic based drilling fluids for the proposed drilling activities.

J. Oil Characteristics

According to NTL G2003-G17, this section of the Plan is not applicable to the proposed operations.

K. Blowout Scenario

According to NTL G2003-G17, this section of the Plan is not applicable to the proposed operations.

L. Spill Discussion for NEPA Analysis

In the event of an uncontrolled spill release resulting from the activities proposed in this Plan, Arena's Person-In-Charge on the MODU or the Shorebase Dispatcher would most likely be the initial individuals to contact the Qualified Individual (QI) or our Spill Management Team (SMT) detailed in the Regional OSRP. The QI would immediately activate the SMT to ascertain the severity of the spill incident. Arena's SMT Incident Command Center is located at O'Brien's Oil Pollution Services office in Slidell, Louisiana.

Dependent upon the severity of the spill incident, a trajectory analysis would be conducted utilizing the MMS Oil Spill Risk Analysis Model (OSRAM) as referenced in our approved Regional OSRP. This trajectory would provide the required information on percentage and timing of potential impact to the shoreline impact areas. The SMT would then identify the areas of sensitivities at potential landfall segment(s), so additional planning may be conducted for shoreline protection strategies. If surveillance indicates a potential threat to shoreline; the appropriate equipment and personnel would be deployed, as outlined in our Regional OSRP.

An overflight may be conducted to determine the extent and dissipation rate of the spill, with potential sampling of the spill release. Mechanical recovery equipment may also be dispatched to the leading edge of the spill, as outlined in our Regional OSRP. If additional offshore response is required, the SMT would initiate the Dispersant Use Plan of the Regional OSRP and utilize the services of Airborne Support Inc.'s aircraft and personnel.

SECTION F

Oil Spill Response and Chemical Information - Continued

An overflight may be conducted to determine the extent and dissipation rate of the spill, with potential sampling of the spill release. Mechanical recovery equipment may also be dispatched to the leading edge of the spill, as outlined in our Regional OSRP. If additional offshore response is required, the SMT would initiate the Dispersant Use Plan of the Regional OSRP and utilize the services of Airborne Support Inc.'s aircraft and personnel.

M. Pollution Prevention Measures

As indicated in the volumes noted above, Arena does not anticipate a potential for initiating additional safety, pollution prevention and/or early spill detection measures beyond those already required by Title 30 CFR Part 250.

N. Flower Garden Banks National Marine Sanctuary Monitoring Plans

High Island Block A-515 is not located within the designated area of the Flower Garden Banks National Marine Sanctuary.

SECTION G

Air Emissions Information

The primary air pollutants associated with OCS exploration activities are:

- Carbon Monoxide
- Particulate Matter
- Sulphur Oxides
- Nitrogen Oxides
- Volatile Organic Compounds

These offshore air emissions result mainly from the drilling rig operations, helicopters, and support vessels. These emissions occur mainly from combustion or burning of fuels and natural gas and from venting or evaporation of hydrocarbons. The combustion of fuels occurs primarily on diesel-powered generators, pumps or motors and from lighter fuel motors. Other air emissions can result from catastrophic events such as oil spills or blowouts.

A. Calculating Emissions

Included as *Attachment G-1* is the Projected Air Quality Emissions Report (Form MMS-138) for Plan Emissions addressing drilling, potential completion and testing operations utilizing a typical jack-up type drilling unit, with related support vessels.

B. Screening Questions

As evidenced by *Attachment G-1*, the worksheets were completed based on narrative on which questions responded with a yes).

C. Emission Reduction Measures

The projected air emissions are within the exemption level; therefore, no emission reduction measures are being proposed.

D. Verification of Non-Default Emissions Factors

Arena has elected to use the default emission factors as provided in *Attachment G-1*.

E. Non-Exempt Activities

The proposed activities are within the exemption amount as provided in *Attachment G-1*.

SECTION G
Air Emissions Information-Continued

F. Review of Activities with Emissions Below the Exemption Level

The proposed activities are below the exemption amount and should not affect the air quality of an onshore area, as provided in *Attachment G-1*.

G. Modeling Report

The proposed activities are below the exemption amount and should not affect the air quality of an onshore area.

Air Emissions Report

**Attachment G-1
(Public Information)**

EXPLORATION PLAN (EP)
AIR QUALITY SCREENING CHECKLIST

OMB Control No. 1010-0049
OMB Approval Expires: September 30, 2003

COMPANY	Arena Offshore, LLC
AREA	High Island
BLOCK	A-515
LEASE	OCS-G 24415
RIG	Jack-Up
WELL	A- D
COMPANY CONTACT	Connie Goers, R.E.M. Solutions, Inc.
TELEPHONE NO.	281.492.8562
REMARKS	Drill, complete and potentially test four (4) wells.

Screening Questions for EP's	Yes	No
Is any calculated Complex Total (CT) Emission amount (in tons associated with your proposed exploration activities more than 90% of the amounts calculated using the following formulas: $CT = 3400D^{2/3}$ for CO, and $CT = 33.3D$ for the other air pollutants (where D = distance to shore in miles)?		X
Does your emission calculations include any emission reduction measures or modified emission factors?		X
Are your proposed exploration activities located east of 87.5° W longitude?		X
Do you expect to encounter H ₂ S at concentrations greater than 20 parts per million (ppm)?		X
Do you propose to flare or vent natural gas for more than 48 continuous hours from any proposed well?	X	
Do you propose to burn produced hydrocarbon liquids?	X	

Air Pollutant	Plan Emission Amounts ¹ (tons)	Calculated Exemption Amounts ² (tons)	Calculated Complex Total Emission Amounts ³ (tons)
Carbon monoxide (CO)	49.02	67775.43	NA
Particulate matter (PM)	6.05	2963.7	NA
Sulphur dioxide (SO ₂)	31.46	2963.7	NA
Nitrogen oxides (NOx)	199.83	2963.7	NA
Volatile organic compounds (VOC)	6.82	2963.7	NA

¹ For activities proposed in your EP or DOCD, list the projected emissions calculated from the worksheets.

² List the exemption amounts in your proposed activities calculated using the formulas in 30 CFR 250.303(d).

³ List the complex total emissions associated with your proposed activities calculated from the worksheets.

EMISSIONS CALCULATIONS 1ST YEAR

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL		CONTACT		PHONE	REMARKS						
Arena Offshore, LLC	High Island	A-515	OCS-G 24415	Jack-Up	A- D		Connie Goers, R.E.M. Solutions,		281.492.8562							
OPERATIONS	EQUIPMENT	RATING	MAX. FUEL	ACT. FUEL	RUN TIME		MAXIMUM POUNDS PER HOUR					ESTIMATED TONS				
	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	PM	SOx	NOx	VOC	CO	PM	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	11400	550.62	13214.88	24	56	8.04	36.86	276.21	8.29	60.26	5.40	24.77	185.61	5.57	40.50
	PRIME MOVER>600hp diesel	0	0	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	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	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	BURNER diesel	0			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	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(crew)	2065	99.7395	2393.75	8	16	1.46	6.68	50.03	1.50	10.92	0.09	0.43	3.20	0.10	0.70
	VESSELS>600hp diesel(supply)	2065	99.7395	2393.75	10	24	1.46	6.68	50.03	1.50	10.92	0.17	0.80	6.00	0.18	1.31
	VESSELS>600hp diesel(tugs)	4200	202.86	4868.64	12	4	2.96	13.58	101.76	3.05	22.20	0.07	0.33	2.44	0.07	0.53
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0	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	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(crew)	0	0	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(supply)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MISC.	BPD	SCF/HR	COUNT												
	TANK-	0			0	0				0.00					0.00	
DRILLING	OIL BURN	250			24	6	4.38	71.15	20.83	0.10	2.19	0.32	5.12	1.50	0.00	0.16
WELL TEST	GAS FLARE		208333.33		24	6		0.12	14.87	12.56	80.94		0.01	1.07	0.90	5.83
2003 YEAR TOTAL							18.28	135.07	513.75	27.01	187.42	6.05	31.46	199.83	6.82	49.02
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											2963.70	2963.70	2963.70	2963.70	67775.43
	89.0															

EMISSIONS CALCULATIONS 2ND YEAR

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL		CONTACT	PHONE	REMARKS							
Arena Offshore, LLC	High Island	A-515	OCS-G 24415	Jack-Up	A- D		Connie Goers, R.E.M. Solutions	281.492.8562								
OPERATIONS	EQUIPMENT	RATING	MAX. FUEL	ACT. FUEL	RUN TIME		MAXIMUM POUNDS PER HOUR					ESTIMATED TONS				
	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	PM	SOx	NOx	VOC	CO	PM	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	11400	550.62	13214.88	24.00	51.00	8.04	36.86	276.21	8.29	60.26	4.92	22.56	169.04	5.07	36.88
	PRIME MOVER>600hp diesel	0	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	0.00
	PRIME MOVER>600hp diesel	0	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	0.00
	PRIME MOVER>600hp diesel	0	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	0.00
	BURNER diesel	0			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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	2065	99.7395	2393.75	8.00	15.00	1.46	6.68	50.03	1.50	10.92	0.09	0.40	3.00	0.09	0.65
	VESSELS>600hp diesel(supply)	2065	99.7395	2393.75	10.00	22.00	1.46	6.68	50.03	1.50	10.92	0.16	0.73	5.50	0.17	1.20
	VESSELS>600hp diesel(tugs)	4200	202.86	4868.64	12.00	4.00	2.96	13.58	101.76	3.05	22.20	0.07	0.33	2.44	0.07	0.53
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0	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	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(crew)	0	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	0.00
	VESSELS>600hp diesel(supply)	0	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	0.00
	MISC. TANK-	BPD	SCF/HR	COUNT						0.00						0.00
		0			0	0										
DRILLING WELL TEST	OIL BURN GAS FLARE	250			24	6	4.38	71.15	20.83	0.10	2.19	0.32	5.12	1.50	0.00	0.16
			208333.33		24	6		0.12	14.87	12.56	80.94		0.01	1.07	0.90	5.83
2004 YEAR TOTAL							18.28	135.07	513.75	27.01	187.42	5.55	29.15	182.56	6.31	45.26
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											2963.70	2963.70	2963.70	2963.70	67775.43
	89.0															

SUMMARY

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL
Arena Offshore, LLC	High Island	A-515	OCS-G 24415	Jack-Up	A- D
Year	Emitted Substance				
	PM	SOx	NOx	VOC	CO
2003	6.05	31.46	199.83	6.82	49.02
2004	5.55	29.15	182.56	6.31	45.26
Allowable	2963.70	2963.70	2963.70	2963.70	67775.43

SECTION H

Environmental Impact Analysis

A. IMPACT PRODUCING FACTORS (IPF'S)

The following matrix is utilized to identify the environmental resources that could be impacted by these IPF's. An "x" has been marked for each IPF category that Arena has determined may impact a particular environmental resource as a result of the proposed activities. For those cells which are footnoted, a statement is provided as to the applicability of the proposed activities, and where there may be an effect, an analysis of the effect is provided.

Environmental Resources	Emissions (air, noise, light, etc.)	Effluents (muds, cuttings, other discharges to the water column or seafloor)	Physical Disturbances To the seafloor (rig or anchor emplacement, etc.)	Wastes Sent to Shore for Treatment Or disposal	Accidents (e.g. oil spills, chemical spills, H2S releases)	Other IPF's identified
Site Specific at Offshore Location						
Designated topographic feature					X	
Pinnacle Trend area live bottoms						
Eastern Gulf live bottoms						
Chemosynthetic communities						
Water quality		X			X	
Fisheries		X			X	
Marine mammals	X	X			X	
Sea turtles	X	X			X	
Air quality						
Shipwreck sites (known or potential)						
Prehistoric archaeological sites						
Vicinity of Offshore Location						
Essential fish habitat					X	
Marine and pelagic birds					X	
Public health and safety						
Coastal and Onshore						
Beaches						
Wetlands						
Shorebirds and coastal nesting birds						
Coastal wildlife refuges						
Wilderness areas						
Other Resources						

SECTION H

Environmental Impact Analysis-Continued

B. VICINITY OF OFFSHORE LOCATION ANALYSES

1. Designated Topographic Features

There are no anticipated effluents, physical disturbances to the seafloor, and accidents from the proposed activities that could cause impacts to topographic features. The proposed surface disturbances within High Island Block A-515 are located approximately 9 miles away from the closest designated topographic feature (Coffee Lump Bank). The crests of designated topographic features in the northern Gulf are found below 10 m. In the event of an accidental oil spill from the proposed activities, the gravity of such oil (high gravity condensate and/or diesel fuel) would rise to the surface, quickly dissipate, and/or be swept clear by the currents moving around the bank; thereby avoiding the sessile biota.

2. Pinnacle Trend Live Bottoms

There are no anticipated effluents, physical disturbances to the seafloor, and accidents from the proposed activities that could cause impacts to a pinnacle trend area. The proposed surface disturbances within High Island Block A-515 are located a significant distance (> 100 miles) from the closest pinnacle trend live bottom stipulated block. The crests of the pinnacle trend area are much deeper than 20 m. In the event of an accidental oil spill from the proposed activities, the gravity of such oil (high gravity condensate and/or diesel fuel) would rise to the surface, quickly dissipate, and/or be swept clear by currents moving around the bank; and thus not impacting the pinnacles.

3. Eastern Gulf Live Bottoms

There are no anticipated effluents, physical disturbances to the seafloor, and accidents from the proposed activities that could cause impacts to Eastern Gulf live bottoms. The proposed surface disturbances within High Island Block A-515 are located a significant distance (>100 miles) from the closest pinnacle Eastern Gulf live bottom stipulated block. In the event of an accidental oil spill from the proposed activities, the gravity of such oil (high gravity condensate and/or diesel fuel) would rise to the surface, quickly dissipate, and/or be swept clear by currents moving around the bank; and would not be expected to cause adverse impacts to Eastern Gulf live bottoms because of the depth of the features and dilutions of spills.

4. Chemosynthetic Communities

Water depths in High Island Block A-515 range from 195 feet to 206 feet. Therefore, the proposed activities are not located within the vicinity of any known chemosynthetic communities, which typically occur in water depths greater than 400 meters.

SECTION H

Environmental Impact Analysis-Continued

5. Water Quality

Accidental oil spill releases from the proposed activities, and cumulative similar discharge activity within the vicinity could potentially cause impacts to water quality. It is unlikely that an accidental oil spill release would occur from the proposed activities. In the event of such a release, the water quality would be temporarily affected by the dissolved components and small droplets. Currents and microbial degradation would remove the oil from the water column or dilute the constituents to background levels.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Arena's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill. Arena will conduct the proposed activities under EPA's Region VI NPDES General Permit GMG290000 which authorizes the discharge of certain effluents, subject to certain limitations, prohibitions and recordkeeping requirements. As such, it is not anticipated these discharges will cause significant adverse impacts to water quality.

6. Fisheries

Accidental oil spill releases from the proposed activities, and cumulative similar discharge activity within the vicinity may potentially cause some detrimental effects on fisheries. It is unlikely a spill would occur; however, such a release in open waters closed to mobile adult finfish or shellfish would likely be sublethal and the extent of damage would be reduced to the capability of adult fish and shellfish to avoid a spill, to metabolize hydrocarbons, and to excrete both metabolites and parent compounds.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Arena's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill. Arena will conduct the proposed activities under EPA's Region VI NPDES General Permit GMG290000 which authorizes the discharge of certain effluents, subject to certain limitations, prohibitions and recordkeeping requirements. As such, it is not anticipated these discharges will cause significant adverse impacts to water quality.

7. Marine Mammals

As a result of the proposed activities, marine mammals may be adversely impacted by traffic, noise, accidental oil spills, cumulative similar discharge activity, and loss of trash and debris. Chronic and sporadic sublethal effects could occur that may stress and/or weaken individuals of a local group or population and make them more susceptible to infection from

SECTION H

Environmental Impact Analysis-Continued

natural or anthropogenic sources. Few lethal effects are expected from accidental oil spill, chance collisions with service vessels and ingestion of plastic material.

The net results of any disturbance would depend on the size and percentage of the population affected, ecological importance of the disturbed area, environmental and biological parameters that influence an animal's sensitivity to disturbance and stress, and the accommodation time in response to prolonged disturbance (Geraci and St. Aubin), 1980). Collisions between cetaceans and ship could cause serious injury or death (Laist et al., 2001). Sperm whales are one of 11 whale species that are hit commonly by ships (Laist et al., 2001). Collisions between OCS vessels and cetaceans within the project area are expected to be unusual events.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Arena's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill. Arena will conduct the proposed activities under EPA's Region VI NPDES General Permit GMG290000 which authorizes the discharge of certain effluents, subject to certain limitations, prohibitions and recordkeeping requirements. As such, it is not anticipated these discharges will cause significant adverse impacts to water quality. Additionally, Arena and its contractors will conduct the proposed activities under the additional criteria addressed by MMS in Notice to Lessee's (NLT's) 2003-G10 "Vessel Strike Avoidance and Injured/Dead Protective Species" and NTL 2003-G11 "Marine Trash & Debris Awareness & Elimination".

8. Sea Turtles

As a result of the proposed activities, sea turtles may be adversely impacted by traffic, noise, accidental oil spills, cumulative similar discharges, and loss of trash and debris. Small numbers of turtles could be killed or injured by chance collision with service vessels or by eating indigestible trash, particularly plastic items accidentally lost from drilling rigs, production facilities and service vessels. Drilling rigs and project vessels (construction barges) produce noise that could disrupt normal behavior patterns and create some stress to sea turtles, making them more susceptible to disease. Accidental oil spill releases are potential threats which could have lethal effects on turtles. Contact and/or consumption of this released material could seriously affect individual sea turtles. Most OCS related impacts on sea turtles are expected to be sublethal. Chronic and/or avoidance of effected areas could cause declines in survival or productivity, resulting in gradual population declines.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Arena's Regional Oil Spill Response Plan which address

SECTION H

Environmental Impact Analysis-Continued

available equipment and personnel, techniques for containment and recovery, and removal of the oil spill. Arena will conduct the proposed activities under EPA's Region VI NPDES General Permit GMG290000 which authorizes the discharge of certain effluents, subject to certain limitations, prohibitions and recordkeeping requirements.

As such, it is not anticipated these discharges will cause significant adverse impacts to water quality. Additionally, Arena and its contractors will conduct the proposed activities under the additional criteria addressed by MMS in Notice to Lessee's (NTL's) 2003-G10 "Vessel Strike Avoidance and Injured/Dead Protective Species" and NTL 2003-G11 "Marine Trash & Debris Awareness & Elimination".

9. Air Quality

The proposed activities are located approximately 89 miles to the nearest shoreline. There would be a limited degree of air quality degradation in the immediate vicinity of the proposed activities. Air quality analyses of the proposed activities are below the MMS exemption level.

10. Shipwreck Site (Known or Potential)

There are no physical disturbances to the seafloor which could impact known or potential shipwreck sites, as the review of high resolution shallow hazards data indicate there are no known or potential shipwreck sites located within the surveyed area.

11. Prehistoric Archaeological Sites

There are no physical disturbances to the seafloor which could cause impacts to prehistoric archaeological sites, as the review of high resolution shallow hazards data and supporting studies did not reflect the occurrence of prehistoric archaeological sites.

Site Specific Offshore Location Analyses

1. Essential Fish Habitat

An accidental oil spill that may occur as a result of the proposed activities has potential to cause some detrimental effects on essential fish habitat. It is unlikely that an accidental oil spill release would occur; however, if a spill were to occur in close proximity to finfish or shellfish, the effects would likely be sublethal and the extent of damage would be reduced to the capability of adult fish and shellfish to avoid a spill, to metabolize hydrocarbons, and to excrete both metabolites and parent compounds.

SECTION H

Environmental Impact Analysis-Continued

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Arena's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

2. Marine and Pelagic Birds

An accidental oil spill that may occur as a result of the proposed activities has potential to impact marine and pelagic birds, by the birds coming into contact with the released oil. It is unlikely that an accidental oil spill release would occur.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Arena's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

3. Public Health and Safety Due to Accidents

There are no anticipated IPF's from the proposed activities that could impact the public health and safety. Arena has requested MMS approval to classify the proposed objective area as absent of hydrogen sulfide.

Coastal and Onshore Analyses

1. Beaches

An accidental oil spill release from the proposed activities could cause impacts to beaches. However, due to the distance from shore (approximately 89 miles), and the response capabilities that would be implemented, no significant adverse impacts are expected. Both historical spill data and the combined trajectory/risk calculations referenced in the publication of OCS EIA /EA MMS 2202-052 indicate there is little risk of contact or impact to the coastline and associated environmental resources.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Arena's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

SECTION H

Environmental Impact Analysis-Continued

2. Wetlands

An accidental oil spill release from the proposed activities could cause impacts to wetlands. However, due to the distance from shore (approximately 89 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. Both historical spill data and the combined trajectory/risk calculations referenced in the publication of OCS EIA /EA MMS 2202-052 indicate there is little risk of contact or impact to the coastline and associated environmental resources.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Arena's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

3. Shore Birds and Coastal Nesting Birds

An accidental oil spill release from the proposed activities could cause impacts to shore birds and coastal nesting birds. However, due to the distance from shore (approximately 89 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. Both historical spill data and the combined trajectory/risk calculations referenced in the publication of OCS EIA /EA MMS 2202-052 indicate there is little risk of contact or impact to the coastline and associated environmental resources.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Arena's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

4. Coastal Wildlife Refuges

An accidental oil spill release from the proposed activities could cause impacts to coastal wildlife refuges. However, due to the distance from shore (approximately 89 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. Both historical spill data and the combined trajectory/risk calculations referenced in the publication of OCS EIA /EA MMS 2202-052 indicate there is little risk of contact or impact to the coastline and associated environmental resources.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Arena's Regional Oil Spill Response Plan which address

SECTION H

Environmental Impact Analysis-Continued

available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

5. Wilderness Areas

An accidental oil spill release from the proposed activities could cause impacts to wilderness areas. However, due to the distance from shore (approximately 89 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. Both historical spill data and the combined trajectory/risk calculations referenced in the publication of OCS EIA /EA MMS 2202-052 indicate there is little risk of contact or impact to the coastline and associated environmental resources.

In the event of an unanticipated blowout resulting in an oil spill, it is unlikely to have an impact based on the industry wide standards for using proven equipment and technology for such responses, implementation of Arena's Regional Oil Spill Response Plan which address available equipment and personnel, techniques for containment and recovery, and removal of the oil spill.

Other Identified Environmental Resources

Arena has not identified any other environmental resources other than those addressed above.

Impacts on Proposed Activities

No impacts are expected on the proposed activities as a result of taking into consideration the site specific environmental conditions.

A High Resolution Shallow Hazards Survey was conducted, a report prepared in accordance with NTL 2003-G17 and NTL 98-20.

Based on the analysis of the referenced data, there are no surface or subsurface geological and manmade features and conditions that may adversely affect the proposed activities. Arena will institute procedures to avoid pipelines and abandoned wells within the vicinity of the proposed operations.

Alternatives

Arena did not consider any alternatives to reduce environmental impacts as a result of the proposed activities.

SECTION H

Environmental Impact Analysis-Continued

Mitigation Measures

Arena will not implement any mitigation measures to avoid, diminish, or eliminate potential environmental resources, other than those required by regulation and policy.

Consultation

Arena has not contacted any agencies or persons for consultation regarding potential impacts associated with the proposed activities. Therefore, a list of such entities is not being provided.

References

The following documents were utilized in preparing the Environmental Impact Assessment:

<i>Document</i>	<i>Author</i>	<i>Dated</i>
Shallow Hazards Survey	Thales GeoSolutions, Inc.	2003
MMS Environmental Impact Statement Report No. 2002-15	Minerals Management Service	2002
NTL 2003-G10 "Vessel Strike Avoidance and Injured/Dead Protective Species"	Minerals Management Service	2003
NTL 2003-G11 "Marine Trash & Debris Awareness & Elimination"	Minerals Management Service	2003
NTL 2002-G09 "Regional and Subregional Oil Spill Response Plans"	Minerals Management Service	2002
NTL 2003-G17 "Guidance for Submitting Exploration Plans and Development Operations Coordination Documents"	Minerals Management Service	2003
NTL 2002-G01 "Archaeological Resource Surveys and Reports"	Minerals Management Service	2002
NTL 2000-G16 "Guidelines for General Lease Surety Bonds"	Minerals Management Service	2000
NTL 98-20 "Shallow Hazards Survey Requirements"	Minerals Management Service	1998
NTL 2003-N06 "Supplemental Bond Procedures"	Minerals Management Service	2003
NTL 98-16 "Hydrogen Sulfide Requirements"	Minerals Management Service	1998
NPDES General Permit GMG290000	EPA – Region VI	1998
Regional Oil Spill Response Plan	Arena Energy, Inc.	2002

SECTION I

CZM Consistency

Under direction of the Coastal Zone Management Act (CMZA), the States of Alabama, Florida, Louisiana, Mississippi and Texas developed Coastal Zone Management Programs (CZMP) to allow for the supervision of significant land and water use activities that take place within or that could significantly impact their respective coastal zones.

A certificate of Coastal Zone Management Consistency for the State of Texas is enclosed as ***Attachment I-1***. Included as ***Attachment I-2*** are the enforceable policies from the State of Texas that are related to OCS Plan Filings.

Texas CZM Statement

**Attachment I-1
(Public Information)**

COASTAL ZONE MANAGEMENT CONSISTENCY CERTIFICATION

INITIAL EXPLORATION PLAN

HIGH ISLAND BLOCK A-515

LEASE OCS-G 24415

The proposed activities described in detail in the enclosed Plan comply with Texas' approved Coastal Zone Management Program and will be conducted in a manner consistent with such Program.

By: Arena Offshore LLC

Signed By: _____

Debbs N. Nelson

Dated: _____

September 8, 2003

Texas Coastal Zone Management
Enforceable Policies

Attachment I-2
(Public Information)

STATE OF TEXAS

COASTAL ZONE CONSISTENCY POLICIES

Category 2 – Construction, Operation and Maintenance of Oil and Gas Exploration and Development Facilities

The General Land Office (GLO) and State Mineral Board (SMB) are the management entities for oil and gas exploration and production on state submerged lands under the authority of the Texas Natural Resources Code. The GLO and SLB serve proprietary rather than regulatory roles and determine whether a proposed use of state land is appropriate. Standards and procedures for granting permits and leases for geophysical exploration for and production of oil and gas on state-owned land are established, with rules setting out provisions to prevent damage to or pollution of all lands and waters, including restrictions on the release of solid wastes, restrictions on the use of vehicles to minimize impacts to submerged lands and marshes; provisions for the protection of natural resources, including aquatic life and wildlife, from seismic and production operations; and provisions for remediation of any surface damage from operations. .

The proposed activities addressed in the Plan for High Island Block A-515 are located approximately 89 miles from the nearest Texas shoreline. Arena Offshore, LLC is proposing to utilize an existing onshore support infrastructure in Galveston, Texas. Due to the proposed activities being temporary and speculative in nature, we do not anticipate a need for new construction, operation and/or maintenance of facilities.

Category 3 – Discharges of Wastewater and Disposal of Waste from Oil and Gas Exploration and Production Activities

Under the authority of the Texas Natural Resources Code and Texas Water Code, the Railroad Commission (RRC) regulates the management of oil and gas waste and wastewater discharges from exploration and production activities. The RRC must comply with the policies for the discharge of wastewater and disposal of waste from oil and gas exploration and production activities when issuing permits and adopting rules under these authorities.

Such policies include 1) disposal of oil and gas waste in the coastal zone shall comply with the policies in the category, 2) discharge of oil and gas exploration and production wastewater in the coastal zone shall comply with policies in the category.

The proposed activities addressed in the Plan for High Island Block A-515 are located approximately 89 miles from the nearest Texas shoreline. Arena Offshore, LLC is proposing to discharge authorized effluents into the receiving waters of the Gulf of Mexico. Overboard discharges (i.e., drilling fluids and associated cuttings) associated with the proposed activities must be tested first for toxicity limitations as mandated by EPA's NPDES General Permit GMG290000. Other solid waste such as ground food will first pass through a 25-millimeter type mesh screen before being discharged overboard, as regulated by the U.S. Coast Guard's Marine Pollution Research and Control Act (MARPOL) of 1987. Solid wastes will be collected and stored on the facility, and then transported by an offshore support vessel to an authorized onshore disposal site

with the State of Texas. These wastes will be manifested and disposed as per the State of Texas regulations.

Category 4 – Construction and Operation of Solid Waste Treatment, Storage, and Disposal Facilities

Under the Texas Solid Waste Disposal Act, the Texas Natural Resources Conservation Commission (TNRCC) implements a permitting program for solid waste disposal sites. The TNRCC must comply with the policies in this category when issuing permits and adopting rules governing the construction and operations of solid waste facilities in the coastal zone. These regulations establish standards and enforcement provisions to implement the state hazardous waste program, which regulates, from the point of generation to ultimate disposal, those wastes which have been identified as hazardous by the EPA. These regulations includes standards for location of certain hazardous waste facilities, including certain prohibited locations such as wetlands, barrier islands, and peninsulas, land disposal of hazardous waste, pollution prevention through hazardous waste source reduction and hazardous waste minimization; and hazardous waste closure, correction actions, and remediation activities.

Due to the proposed activities being temporary and speculative in nature, we do not anticipate a need for new construction and operation of any solid waste treatment, storage or use of disposal facilities for the proposed activities addressed in the Plan for High Island Block A-515.

Category 5 – Prevention, Response, and Remediation of Oil Spills

The General Land Office (GLO) rules govern prevention of, response to, and remediation of coastal oil spills, and the assessment of damages to natural resources injured as the result of an unauthorized discharge of oil into coastal waters. The policies require GLO to provide for measures to prevent coastal oil spills and to ensure adequate response and removal actions.

Under the authority of the Texas Natural Resources Code, the GLO promulgated rules requiring coastal facilities that handle oil to obtain a certificate of spill prevention and response capability from the GLO. These rules require that vessels carrying oil in coastal waters have a spill prevention and response plan approved by the GLO. The rules also address spill response and remediation, establishing standards for spill response plans, requiring facilities and vessels to maintain access to adequate response equipment and qualified personnel, and providing for the FLO to subject facilities and vessels to announced and unannounced drills and inspections.

The proposed activities are located in OCS Federal Waters, Gulf of Mexico, approximately 89 miles from the nearest Texas shoreline. Protection of the environment during the proposed operations is of primary concern; with Arena mandating regulatory compliance from its contractors and vendors associated with the proposed activities.

Arena has adopted industry standards for safe well operations to prevent potential blowout situations, as well as implementing a Regional Oil Spill Response Plan to respond to a potential spill incident.

The likelihood of land and water uses in the coastal area being impacted is minimal based on the temporary nature of the proposed activities, the implementation measures Arena would employ in

the event of a blowout or oil spill, along with the wind and wave currents which could potentially divert such an unanticipated release outside the coastal areas.

Category 6 – Discharge of Municipal and Industrial Wastewater to Coastal Waters

The Texas Water Code states that it is the policy of the state to maintain the quality of water in the state consistent with public health and enjoyment, the propagation and protection of terrestrial and aquatic life, the operation of existing industries, and the economic development of the state and to require the use of all reasonable methods to implement this policy. The TNRCC is designated as the principal authority in the state on matters relating to water quality, resources protection, include the Texas Surface Water Quality Standards, the Texas State Water Quality Management Plan, and wastewater permits.

The proposed activities addressed in the Plan for High Island Block A-515 are located approximately 89 miles from the nearest Texas shoreline. Arena Offshore, LLC is proposing to discharge authorized effluents into the receiving waters of the Gulf of Mexico as regulated by EPA's NPDES General Permit GMG290000. Arena does not anticipate the need for discharging any municipal or industrial type waste from these activities into coastal waters of the State of Texas.

Category 8 – Development in Critical Areas

The TNRCC and RRC shall comply with the policies in this chapter when issuing certification and adopting rules under Texas Water Code, and the Texas Natural Resources Code, governing certification of compliance with surface water quality standards for federal actions and permits authorizing development affecting critical area.

The GLO and SLB shall comply with the policies in this category when approving oil, gas, or other mineral lease plans of operations or granting surface leases, easements, and permit and adopting rules under the Texas Natural resources Code and Texas Water Code.

The proposed activities addressed in the Plan for High Island Block A-515 are located approximately 89 miles from the nearest Texas shoreline; and due to the activities be temporary and speculative in nature, Arena does not anticipate the need for development of facilities in critical areas.

Category 9 – Construction of Waterfront Facilities and Other Structures on Submerged Lands

The GLO and SLB, in governing development on state submerged lands, shall comply with the policies in this category when approving oil, gas, and other minerals lease plans of operations and granting surface leases, easements, and permit permits and adopting rules under the Texas Natural Resources Code and Texas Water Code. These sites must be evaluated under more specific guidelines for a proposed waterfront structure including site selection to avoid restriction of water circulation, navigations, or public use of the waters, design considerations such as joint use of a moorage facility by a subdivision, motel, or multiple dwelling, and the use of a pier of a pier or catwalk in preference to solid fills to provide requirements that facilities provide proper handling of waste, refuse, and petroleum products where applicable.

The proposed activities addressed in the Plan for High Island Block A-515 are located approximately 89 miles from the nearest Texas shoreline; and due to the activities be temporary and speculative in nature, Arena does not anticipate construction of any waterfront facilities and other structures on submerged lands.

Category 10 – Dredging and Dredged Material Disposal and Placement

The TNRCC and the RRC shall comply with specified policies when issuing certification and adopting rules under the Texas Water Code and the Texas Natural Resources Code governing certification of compliance with surface water quality standards for federal action and permit authorizing dredging or the discharge or placement of dredged material. Dredging and the disposal and placement of dredged material shall avoid and otherwise minimize adverse effects to coastal waters, submerged lands, critical areas, coastal shore areas, and Gulf beaches to the greatest extent practicable. The policies in the in this category are supplemented to any further restrictions or requirements relating to the beach access and use rights of the public. In implementing this policy category, cumulative and secondary adverse effects of dredging and the disposal and placement of dredged material and the unique characteristics of affected sites shall be considered.

The proposed activities addressed in the Plan for High Island Block A-515 are located approximately 89 miles from the nearest Texas shoreline; and do not include any anticipated plans for dredging and/or disposal of material.

Category 11 – Construction in the Beach/Dune System

The GLO shall comply with the policies in this category when certifying local government dune protection and beach access plans and adopting rules under the Texas Natural Resources Code. Local governments required by the Texas Natural Resources Code to adopt dune protection and beach access plans shall comply with the applicable policies in this category when issuing beachfront construction certificates and dune protection permits.

The GLO is responsible for protecting the public's right to use and have access to and from the public beaches and for providing standards to the local governments certifying that construction on land adjacent to the Gulf of Mexico in is consistent with such public rights.

The proposed activities addressed in the Plan for High Island Block A-515 are located approximately 89 miles from the nearest Texas shoreline; and due to the activities be temporary and speculative in nature, Arena does not anticipate any construction activities impacting the beach/dune system of the State of Texas.

Category 15 – Alteration of Coastal Historic Areas

The Texas Historical Commission (THC) shall comply with the policies in this category when adopting rules and issuing permits under the Texas Natural Resources Code governing alteration of coastal historic sites by avoiding and otherwise minimizing alteration or disturbance of the site unless the site's excavation will promote historical, archaeological, educational, or scientific understanding. The THC is directed to protected and preserve the cultural resources of Texas.

Cultural resources include archaeological sites, historical sites, and shipwrecks on land or underwater.

The proposed activities addressed in the Plan for High Island Block A-515 are located approximately 89 miles from the nearest Texas shoreline; and will be located in an area determined by the Minerals Management Service as a low potential for cultural or historical resources.

Category 16 – Transportation

Texas Department of Transportation (DOT) is responsible for approving plans for the location, construction and maintenance of the state highway system and public roads and the location, construction, and maintenance of individual state highway system projects. Rules and project approvals governing transportation projects within the coastal zone must comply with the policies in this category. Standard specifications include measures for erosion and sedimentation control, waste disposal, earthwork, and revegetation during construction.

The proposed activities addressed in the Plan for High Island Block A-515 are located approximately 89 miles from the nearest Texas shoreline; and due to the activities being temporary and speculative in nature, Arena does not anticipate any construction related transportation activities within the State of Texas.

Category 17 – Emission of Air Pollutants

The Texas Natural Resource Conservation Commission (TNRCC) is charged with the responsibility under the Texas Clean Air Act to adopt any rules necessary to carry out its duties under the Act, including establishment of air quality standards and of a permitting program for air emissions. The TNRCC is also designated as the agency responsible for developing a comprehensive plan for proper control of air pollution sources.

The proposed activities addressed in the Plan for High Island Block A-515 are located approximately 89 miles from the nearest Texas shoreline. Utilizing a matrix with calculations and formulas supplied by the Minerals Management Service, the projected air emissions from the proposed activities should not have a long-term adverse impact on the State of Texas.

Category 18 – Appropriations of Water

The TNRCC has sole authority for the regulation and management of surface water rights in Texas as authorized by the Texas Water Code. The TRNCC rules and authorizations governing review and actions on application for new permits, or amendments proposing changes to existing permits for diversion or impoundments of state water with 200 stream miles of the coast, must comply with the policies. The TNRCC may place limitations and conditions such as flow stream restrictions to protect existing water rights holders, water quality, aquatic fish and wildlife habitat, inflows from bays and estuaries, and recreational uses; habitat mitigation measures; and water conservation measures.

The proposed activities addressed in the Plan for High Island Block A-515 are located approximately 89 miles from the nearest Texas shoreline. Due to the proposed activities being temporary and speculative in nature, Arena does not anticipate an impact to State Waters of Texas.

Category 20 – Major Actions

For purposes of this category, “major actions” means an individual action relating to an activity for which a federal environmental impact statement under the National Environmental Policy Act is required.

The proposed activities addressed in the Plan for High Island Block A-515 are temporary and speculative in nature, and would not be classified as a major action.

Category 22 – Administrative Policies

The Texas Coastal Zone Management Program (TCMP) recommends the local and regional governments, as well as state designated planning agencies adhere to the planning, acquisition, conservation/preservation, restoration, research/education, pollution prevention/recycling, coastal hazards areas, coastal barriers, coastal shores, water quality, public access/recreation, visual/scenic access, fisheries management, and construction/development activities within the TCMP boundary.

The proposed activities addressed in the Plan for High Island Block A-515 are located approximately 89 miles from the nearest Texas shoreline. Due to the proposed activities being temporary and speculative in nature, Arena does not anticipate an impact to the Texas Coastal Zone Management Program policies.