UNITED STATES GOVERNMENT MEMORANDUM

December 19, 2005

To:

Public Information (MS 5030)

From:

Plan Coordinator, FO, Plans Section (MS

5231

Subject:

Public Information copy of plan

Control #

N-08575

Туре

Initial Development Operations Coordinations Document

Lease(s)

OCS-G05052 Block - 83 South Pass Area

OCS-G26144 Block -

74 South Pass Area

Operator -

Arena Offshore, LLC

Description -

Wells A, C, A007(ST01) & A010(ST01)

Rig Type

PLATFORM

Attached is a copy of the subject plan.

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

Michelle Griffitt Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
WELL/A	G26144/SP/74	4052 FNL, 5015 FEL	G05052/SP/83
WELL/A007ST01	G26144/SP/74	4062 FNL, 5021 FEL	G05052/SP/83
WELL/A010ST01	G26144/SP/74	4061 FNL, 5038 FEL	G05052/SP/83
WELL/C	G26144/SP/74	4054 FNL, 5041 FEL	G05052/SP/83

DEC 2 0 2005

October 8, 2005

U.S. Department of the Interior Minerals Management Service 16855 Northchase Dr. Houston, Texas 77060

Attention:

Mr. Nick Wetzel

Plans Unit





Arena Offshore, LLC 4200 Research Forest Drive, Suite 230 The Woodlands, TX 77381

281-681-9501 281-681-9502 Fax

RE: Initial Development Operations Coordination Document for Lease OCS-G 26144, South Pass Block 74, OCS Federal Waters, Gulf of Mexico, Offshore, Louisiana

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 an Initial Development Operations Coordination Document (Plan) for Lease OCS-G 26144, South Pass Block 74, Offshore, Louisiana. Excluded from the Public Information copies are certain geologic and geophysical discussions and attachments.

Enclosed are two Proprietary Information copies (one hard copy and one CD) and three Public Information copies (one hard copy and two CD's) of the Plan.

Contingent upon receiving regulatory approvals and based on equipment and personnel availability, Arena anticipates operations under this Plan commencing as early as May 21, 2006.

Should additional information be required, please contact the undersigned, or our regulatory consultant, R.E.M. Solutions, Inc., Attention: Natalie Schumann at 281.492.3243.

Sincerely,

Arena Offshore, LLC

Michael J. Miracovic 199

Michael J. Minarovic Managing Director

MJM:CJG Attachments

Public Information

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

Michael J. Minarovic mike@arenaenergy.com

INITIAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

LEASE OCS-G 26144

SOUTH PASS BLOCK 74

PROJECT NAME: NA

PREPARED BY:

Natalie Schumann R.E.M. Solutions, Inc. 17171 Park Row, Suite 390 Houston, Texas 77084 281.492.8562 (Phone) 281.492.6117 (Fax) natalie@remsolutionsinc.com

DATED:

October 8, 2005

SECTION A Plan Contents

A. <u>Description</u>, <u>Objectives and Schedule</u>

Lease OCS-G 26144, South Pass Block 74 was acquired by Valiant Energy, L.L.C. at the Central Gulf of Mexico Lease Sale No. 190 held on March 17, 2004. The lease was issued with an effective date of July 1, 2004 and a primary term ending date of June 30, 2009.

The current lease operatorship and ownership are as follows:

Area/Block Lease No.	Operator	Ownership
South Pass Block 74 Lease OCS-G 26144	Valiant Energy, L.L.C.	Valiant Energy, L.L.C.

Arena Offshore, LLC (Arena) is in the process of being designated operator of Lease OCS-G 26144, South Pass Block 74.

This proposed Initial Development Operations Coordination Document (Plan) provides for the drilling and completion of Well Locations A and C, sidetrack drilling and completion of existing Lease OCS-G 05052, Wells No. A007 and A010 into South Pass Block 74 from our existing South Pass Block 83 A Platform, and commencement of production. Included as *Attachment A-1* is a geological discussion of the trapping features.

B. Location

Included as Attachments A-2 and A-3 are Form MMS-137 "OCS Plan Information Form" and Well Location Plats.

C. <u>Drilling Unit</u>

Arena will utilize the H&P Rig No. 107 platform type drilling rig for the proposed drilling, and completion operations 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, 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, and O; and as further clarified by MMS Notices to Lessees.

SECTION A Contents of Plan - Continued

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 (PINC) 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.

D. Production Facility

The operations proposed in this Plan will be conducted from Arena's existing South Pass Block 83 A Platform which was originally installed in 1990 and consists of existing well slots to accommodate the proposed well operations.

Arena will be making modifications to the existing surface safety system by the removal of certain unused equipment, and installation of new equipment; to ultimately consist of production separators, generators, glycol reboiler and compressor.

Included as Attachments A-4 and A-5 are the Structure Elevation View Drawing and the Platform Assessment Form.

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, 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, and O; and as further clarified by MMS Notices to Lessees.

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SECTION A Contents of Plan - Continued

- 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)

OMB Control Number: 1010-0049 OMB Approval Expires: August 31, 2006

OCS PLAN INFORMATION FORM

(General Information											
Тур	oe of OCS Plan	Explo	ration Plan (EP)		X Development Operations Coordination Document (DOCD)							
Cor	npany Name: Arena Offsho	re, L	LC		MMS Operation Number: 02628							
Address: 4200 Research Forest Drive						t Perso	on: Natalie Scl	numann at	R.E	.M. Sol	ıtion	s, Inc.
The Woodlands, Texas 77381 Pho							er: (281) 492-3	3242				
					E-Mail	Addre	ess: natalie@re	msolution	sinc.	com		
Lea	se(s): OCS-G 26144	Are	ea: SP	Block(s):	74	Pı	roject Name (If Ap	plicable): I	NA			
Obj	jective(s): Oil X Gas		Sulphur Salt	Onshore	e Base: 1	Fourch	hon, LA Distar	nce to Close	est L	and (Mi	les):2	2
		De	scription of Prop	posed Ac	tivities	(Mar	k all that apply)				
	Exploration drilling				X	Deve	elopment drilling					
X	Well completion					Instal	llation of production	on platform	1			
	Well test flaring (for more that	n 48	hours)			Instal	llation of production	on facilities	3			
	Installation of caisson or platf	orm :	as well protection st	tructure		Instal	llation of satellite	structure				
	Installation of subsea wellhea	ds an	d/or manifolds			Com	mence production					
	Installation of lease term pipe	lines				Other	r (Specify and desc	cribe)				
Hav	ve you submitted or do you pla	n to s	ubmit a Conservation	on Informa	ation Do	cumei	nt to accompany th	uis plan?		Yes	X	No
Do	you propose to use new or unu	sual	technology to condu	uct your ac	tivities?)				Yes	X	No
Do	you propose any facility that w	∕ill se	rve as a host facility	y for deep	water su	ibsea d	levelopment?			Yes	X	No
Do	you propose any activities that	may	disturb an MMS-de	esignated l	nigh-pro	babilit	ty archaeological a	rea?		Yes	X	No
Ha		•		s been pre	viously	review	ved and approved l	oy MMS?	X	Yes		No
weepowa.ww	That can of the surface focultons of your proposed activities occur provides by terrowed and approved by terror.											
			Tentative So	chedule o	of Prop	osed 2	Activities Start Date	End D	ate	- T		
Dri		opose	ed Activity	chedule o	of Prop	osed		End D: 07-01-		- T		Days
	Pro	opose ell Lo	ed Activity ocation A	chedule o	of Prop	osed 2	Start Date		-06	- T	o. of	Days ays
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			Proposed V	Vell/Structur	e Location 💮 👑			11.		
Well or Structur	e Name/N	umber (If r	enaming well or structu	ire, reference p	orevious name):	Sub	sea Comple	etion		
<u> </u>		,.	Well Location A							
Anchor Radius	(if applicat	ole) in feet:	NA				Yes	X	No	
	Surface l	Location		7	Bottom-Hole Location	on (For	Wells)	5.	- J.	
Lease No.	OCS-G 5	OCS-G 5052			OCS-G 26144					
Area Name	South Pa	iss			South Pass				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Block No.	Block 83				Block 74					
Blockline , ; Departures	N/S Depa	arture	4,052.00° FNL		N/S Departure:					
(in feet)	E/W Dep	arture	5,015.00' FEL		E/S Departure:					
Lamber X-Y	X: 2,669,	945.00			X:					
coordinates	Y: 48,582	2.00'			Y:					
Latitude/ Longitude	Latitude:	28°47'00.4	408"		Latitude:					
	Longitud	e: 89°14,3 2	2.086"		Longitude:		,			
	TVD (Fe	et):		MD (Feet):		Wat	ter Depth (I	eet):	167°	
Anchor Loca	tions for	Drilling R	Rig or Construction l	Barge (If and	hor radius supplie	d above	, not nece	ssary)	
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate				of Anchor n Seafloor	
NA			X=		Y=					
			X=		Y=	**				
			X=		Y=	•				
			X=		Y=					
			X=		Y=	<u> </u>				
		1	X=		Y=					
			X=	····	Y=					
			X=		Y=					

Paperwork Reduction Act of 1995 Statement: The Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35) requires us to inform you that MMS collects this information as part of an applicant's Exploration Plan or Development Operations Coordination Document submitted for MMS approval. We use the information to facilitate our review and data entry for OCS plans. We will protect proprietary data according to the Freedom of Information Act and 30 CFR 250.196. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget Control Number. The use of this form is voluntary. The public reporting burden for this form is included in the burden for preparing Exploration Plans and Development Operations Coordination Documents. We estimate that burden to average 580 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Mail Stop 4230, Minerals Management Service, 1849 C Street, N.W., Washington, DC 20240.

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3			Proposed V	Vell/Structu	re Location				
Well or Structur	e Name/N	umber (If r	enaming well or structon Well Location C	-	previous name):	Subse	ea Compl	etion	
Anchor Radius	(if applical	ble) in feet:	NA				Yes	X	No
	Surface	Location		22.	Bottom-Hole Locatio	n (For W	/ells)	77.4	Misi C
Lease No.	OCS-G 5	052			OCS-G 26144	,			·
Area Name	South Pa	iss			South Pass	**			
Block No.	Block 83				Block 74				
Blockline Departures	N/S Depa	arture	4,054.00' FNL		N/S Departure:				
(in feet)	E/W Dep	arture	5,041.00' FEL	ı	E/S Departure:				
Lamber X-Y	X: 2,669,	,919.00'			X:		·		
coordinates	Y: 48,580	0.00'			Y:				
Latitude/ Longitude	Latitude:	28°47'00.3	393"		Latitude:				
	Longitud	le: 89°14'32	2.378"		Longitude:			·	
	TVD (Fe	et):		MD (Feet):		Wate	r Depth (Feet): 4	67'
Anchor Loca	tions for	Drilling R	ig or Construction	Barge (If an	chor radius supplied	above,	not nece	ssary)	
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate				of Anchor n Seafloor
NA			X=		Y=				
			X=		Y=				
			X=		Y=				·
		1.10	X=		Y=				
			X=		Y=				
			X=		Y=				
			X=		Y=	• ••			
	 -	<u> </u>	V-		V-				

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MMS Form MMS-137 (August 2003 – Supersedes all previous editions of form MMS-137, which may not be used.) Page 3 of 5

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			Proposed V	Vell/Structu	re Location				
Well or Structur	e Name/N	•	enaming well or structu	-	previous name):	Subsea Co	mpletion		
		Wel	Location A007 (S	ST01)	_				
Anchor Radius (if applical	ole) in feet:	NA		ALL CONTROL OF THE CO	Yes	X	No	
	Surface l	Location			Bottom-Hole Location	ı (For Wells)		44	
Lease No.	OCS-G 5	052			OCS-G 26144	,			
Area Name	South Pa	ss			South Pass		-··-	,	
Block No.	Block 83				Block 74				
Blockline Departures	N/S Depa	rture	4,062.00° FNL		N/S Departure:				
(in feet)	E/W Dep	arture	5,021.00' FEL		E/S Departure:				
Lamber X-Y	X: 2,669,	939.00'			X:				
coordinates	Y: 48,572	2.00'			Y:				
Latitude / Longitude	Latitude:	28°47'00.3	310"		Latitude:				
	Longitud	e: 89°14'32	2.155"		Longitude:				
	TVD (Fe	et):		MD (Feet):		Water Dep	th (Feet): 4	167'	
Anchor Locat	ions for l	Drilling R	ig or Construction 1	Barge (If an	chor radius supplied	above, not n	ecessary)	
Anchor Name or No.	Area	Block	X Coordinate	A A A MANAGEMENT	Y Coordinate	2 Anna Charles		of Anchor n Seafloor	
NA			X=		Y=	· · ·			
			X=		Y=				
,			X=		Y=				
		,	X=		Y=				
			X=		Y=				
			X=		Y=				
			X=		Y=				
			X=		V=				

Paperwork Reduction Act of 1995 Statement: The Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35) requires us to inform you that MMS collects this information as part of an applicant's Exploration Plan or Development Operations Coordination Document submitted for MMS approval. We use the information to facilitate our review and data entry for OCS plans. We will protect proprietary data according to the Freedom of Information Act and 30 CFR 250.196. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget Control Number. The use of this form is voluntary. The public reporting burden for this form is included in the burden for preparing Exploration Plans and Development Operations Coordination Documents. We estimate that burden to average 580 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Mail Stop 4230, Minerals Management Service, 1849 C Street, N.W., Washington, DC 20240.

MMS Form MMS-137 (August 2003 – Supersedes all previous editions of form MMS-137, which may not be used.) Page 4 of 5

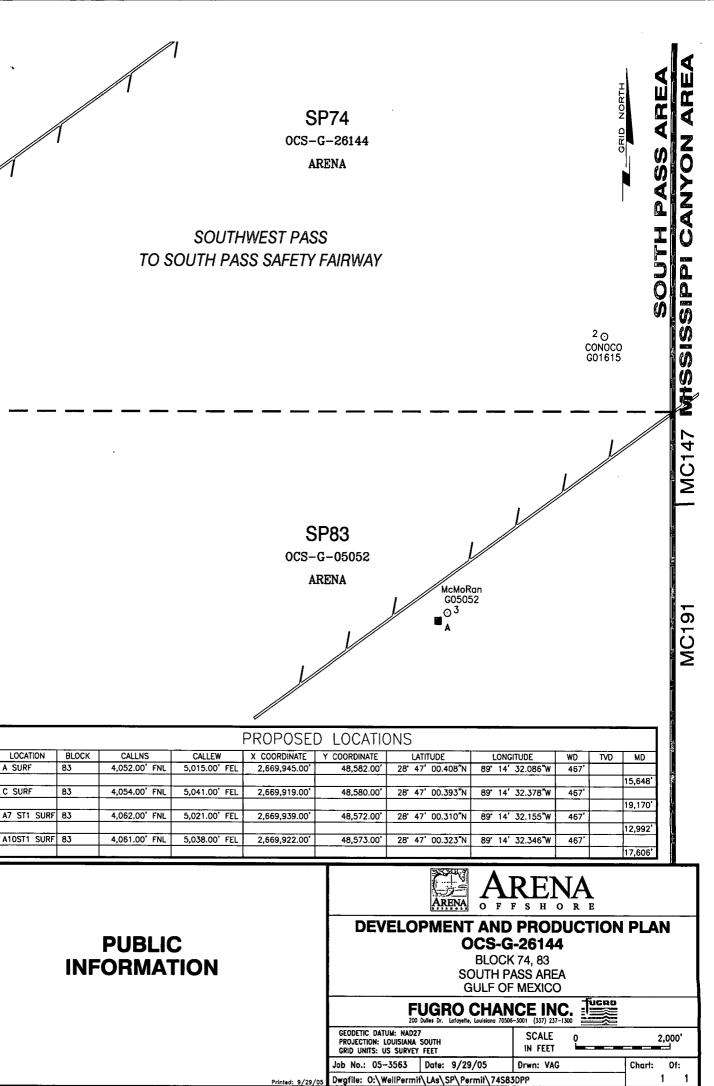
•			Proposed N	Well/Structu	re Location 🐛 🐳				
Well or Structur	e Name/N	•	enaming well or structor Location A001 (S	•	previous name):	Sub	osea Com	pletion	
Anchor Radius	(if applical	ole) in feet:	NA				Yes	X	No
	Surface	Location			Bottom-Hole Location	ı (For	Wells)		11. 11.
Lease No.	OCS-G 5	052			OCS-G 26144				
Area Name	South Pa	ISS			South Pass				
Block No.	Block 83				Block 74				
Blockline Departures	N/S Depa	arture	4,061.00° FNL	,	N/S Departure:				
(in feet)	E/W Dep	arture	5,038.00' FEL		E/S Departure:				
Lamber X-Y	X: 2,669,	922.00'			X:		,		
coordinates	Y: 48,573	3.00'			Y:				
Latitude / Longitude	Latitude:	28°47'00.3	223"		Latitude:				
	Longitud	e: 89°14'32	2.346"		Longitude:				
7.00	TVD (Fe	et):		MD (Feet):		Wa	ter Depth	(Feet): 4	67'
Anchor Loca	tions for	Drilling R	ig or Construction	Barge (If an	chor radius supplied	above	e, not ne	cessary)	
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate				of Anchor 1 Seafloor
NA			X=		Y=				
			X=		Y=				
			X=		Y=				
			X=		Y=				
			X=		Y=			.,	
			X=	· · ·	Y=				
			X=		Y=				
		1	Y=		V=		,		

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MMS Form MMS-137 (August 2003 – Supersedes all previous editions of form MMS-137, which may not be used.) Page 5 of 5

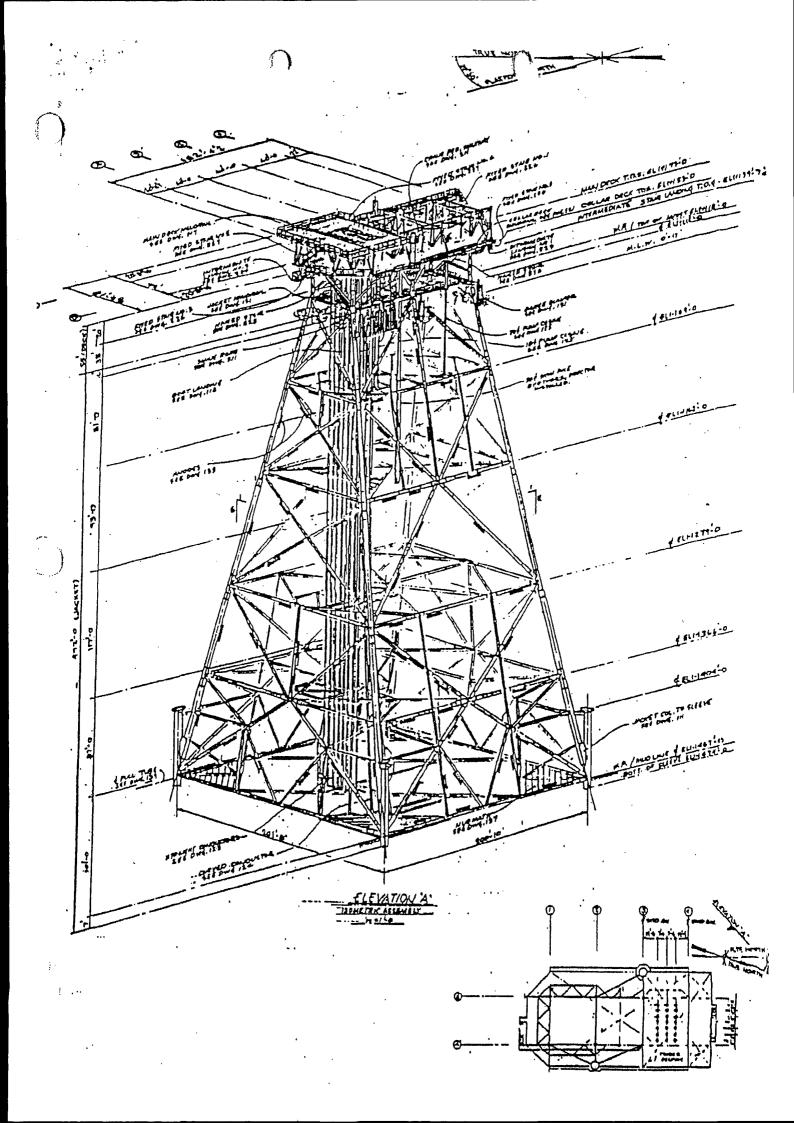
Well Location Plat

Attachment A-3 (Public Information)



Structure Elevation Drawing

Attachment A-4 (Public Information)



Platform Assessment

Attachment A-5 (Public Information)

South Pass Block 83 A Platform

Complex ID No. 23848

Platform Assessment

1. Was the structure installed within the last 5 years? If so, do your proposed activities require a structural modification that would increase loading on the structure beyond the original design?

Platform A was installed in 1990

2. Will the structure change from unmanned to manned?

Platform is currently manned. No changes.

3. Are you adding facilities to the structure which will result in 10% or greater change from original design parameters?

No.

4. Will your proposed activities increase loading on structure resulting in 10% or greater change from original design parameters?

No.

5. Is your deck height adequate according to API RP2A-WSD Section 17.2.4?

Yes

6. Has the structure undergone an annual topside inspection? Was any damage discovered by this inspection?

Yes in 2004. Undergoing 2005 inspection as result of Hurricanes Katrina and Rita

7. Has the structure undergone an underwater inspection within the last 5 years? Was any damage discovered by this inspection?

Level II and III scheduled 2005

SECTION B General Information

A. Contact

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

Natalie Schumann R.E.M. Solutions, Inc. 17171 Park Row, Suite 390 Houston, Texas 77084 281.492.8562 (Phone) 281.492.6117 (Fax) natalie@remsolutionsinc.com

B. Project Name

Arena does not typically provide project names to their development activity.

C. <u>Production Rates and Life of Reserves</u>

Arena estimates the life of reserves for the proposed development activity to be ____ years, with the following estimated combined production rates:

Product	Average Rates	Peak Rates
Gas		
Condensate		

D. New or Unusual Technology

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

E. Bonding Information

In accordance with Title 30 CFR Part 256, Subpart I, Arena Offshore, LLC has on file with the Minerals Management Service Gulf of Mexico Regional Office a \$3,000,000 Areawide Development Bond.

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

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.

Minerals Management Service did not invoke any stipulations for the surface location (Lease OCS-G 5052) South Pass Block 83.

Special Conditions

The existing surface disturbance activity in South Pass Block 83 is located immediately adjacent to the existing Southwest Pass Shipping Fairway. Arena will continue to conduct all operations in a safe manner to avoid any conflict of surface use operations.

H. Related OCS Facilities and Operations

As addressed earlier in this Plan, Arena will be utilizing our existing South Pass Block 83 A platform to process the produced hydrocarbons. The separated and measured gas and liquid hydrocarbons will depart the structure via an existing 3-inch condensate pipeline (Segment No. 9465) and 10-inch gas pipeline (Segment No. 9467) to subsea tie-in points in South Pass Block 54, for ultimate delivery to shore. The anticipated flow rates and shut-in times for the pipelines are as follows:

Origination Point	Flow Rates	Shut In Time
Platform No. A		

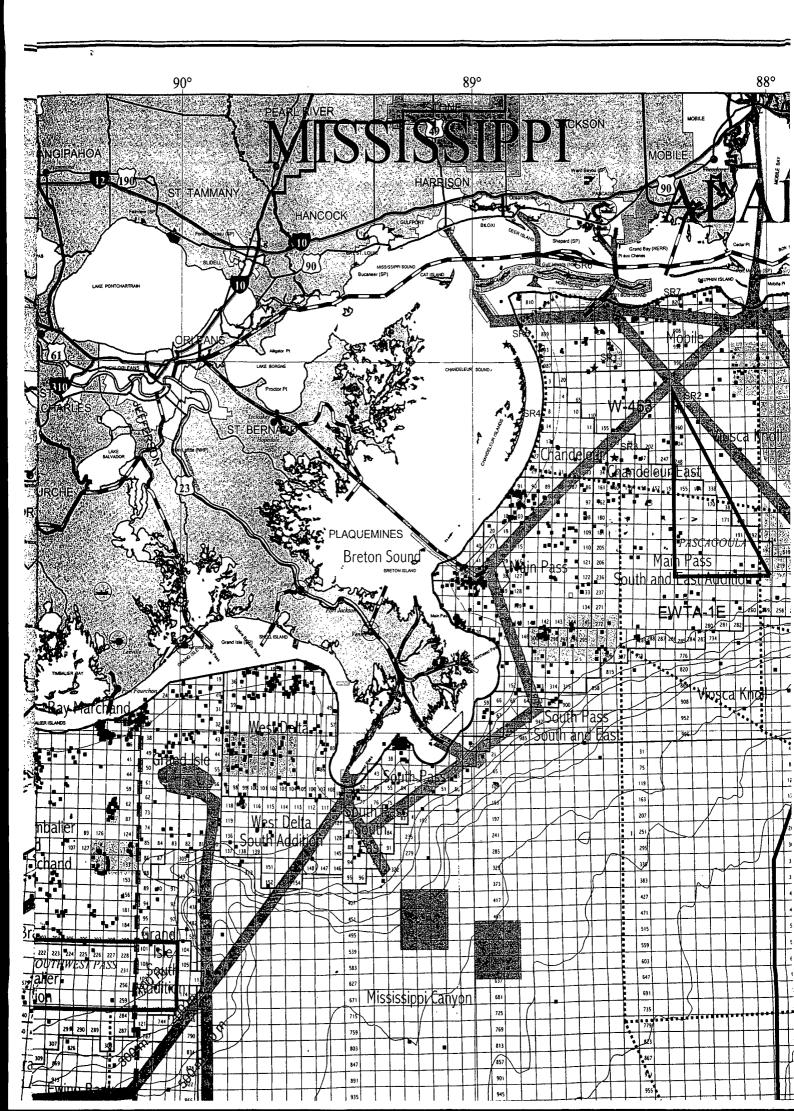
I. Transportation Information

Produced hydrocarbons from the respective structure addressed above will be further transported via transmission pipelines for ultimate delivery to onshore operations systems.

Arena does not anticipate installation of any new and/or modified onshore facilities to accommodate the production of South Pass Block 74.

Vicinity Plat

Attachment B-1 (Public Information)



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 bottom hole location for the respective wells provided for in this Plan.

B. Interpreted Deep Seismic Lines

Included as Attachment C-2, are page size copies of the migrated and annotated (shot point, time lines, well paths) of the deep seismic line within 500 feet of the surface location.

C. Geological Structure Cross Sections

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

D. Shallow Hazards Report

A high resolution geophysical survey report was previously conducted for the existing surface location in South Pass Block 83 A Platform, for the purpose of evaluating geologic conditions and inspect for potential hazards or constraints to lease development.

Copies of these reports have been previously submitted to the Minerals Management Service under separate cover.

E. Shallow Hazards Assessment

The proposed operations will be conducted from an existing surface location under a previously approved Plan of Exploration; therefore a shallow hazards analysis is not required.

F. High Resolution Seismic Lines

The proposed operations will be conducted from an existing surface location under a previously approved Plan of Exploration; therefore shallow hazard lines are not required.

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-4*.

H. Hydrogen Sulfide Classification

In accordance with Title 30 CFR 250.490, Arena requests that South Pass Block 74 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:

Lease	Area/Block	Well No.

Structure Maps

Attachment C-1 (Proprietary Information)

Deep Seismic Lines

Attachment C-2 (Proprietary Information)

Cross Section Maps

Attachment C-3 (Proprietary Information)

Stratigraphic Column

Attachment C-4 (Proprietary Information)

SECTION D Biological and 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 existing surface location in South Pass Block 83 is 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.

The existing surface location in South Pass Block 83 is not located within the vicinity of a proposed live bottom area.

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.

The existing surface location in South Pass Block 83 is not located within an area where ROV Surveys are required.

SECTION D

Biological and Physical Information-Continued

E. Archaeological Reports

This requirement provides protection of prehistoric and historic archaeological resources by requiring remote sensing surveys in areas designated to have a high probability for archaeological resources.

MMS has issued NTL 2005-G07, this requirement provides protection of prehistoric and historic archaeological resources by requiring remote sensing surveys in areas designated to have a high probability for archaeological resources.

The existing surface location in South Pass Block 83 is classified by MMS as a low probability area for archaeological resources; therefore, an archaeological survey is 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 associated with the existing surface location in South Pass Block 83 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

Associated solid and liquid wastes generated during the proposed activities addressed in this Plan are well treatment/completion/workover fluids, with associated wastes such as chemicals, cement wastes, sanitary and domestic waste, trash and debris, ballast water, storage displacement water, deck drainage, hydraulic fluids, used oil, oily water and filters, and other miscellaneous minor discharges.

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

5

In accordance with NTL 2003-G17, overboard discharges generated by the activities are not required for submittal in this Plan.

C. Disposed Wastes

The wastes detailed in *Attachment E-1* 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 Platform, 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 Table

Attachment E-1 (Public Information)

Arena Offshore, LLC South Pass Block 74 (Surface Location in South Pass Block 83) Examples of Wastes and Discharges Information

Table 1. Disposal Table (Wastes to be disposed of, not discharged)

	Tuble is Disposar Tuble (wastes to be disposed oi, not discharged)							
Type of Waste Approximate Composition	Amount*	Rate per day	Location of Disposal Facility	Treatment and/or Storage, Transport and Disposal Method				
Waste Oil	200 bbl/yr	0.5 bbl/yr	Fourchon, LA	Pack in drums and transported to an onshore Incineration site				
Trash and debris	1,000 ft ³	3 ft ³ /day	Fourchon, LA	Transport in storage bins on crew boat to disposal facility				
Chemical product wastes	50 bbl/yr	2 bbl/day	Fourchon, LA	Transport in containers to shore location				
Chemical product wastes	100 bbl	2 bbl/day	Fourchon, LA	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 4, 2005, Minerals Management Service approved Arena Offshore, LLC's (Arena's) Regional Oil Spill Response Plan (OSRP). Arena Offshore LLC is the only entity covered under this OSRP. Activities proposed in this Initial Development Operations Coordination Document will be covered by 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)

Category	Current Regional OSRP WCD	Proposed Development WCD
Type of Activity	Production	Drilling/Production
Facility Surface Location	Eugene Island Block 100	South Pass Block 83
Facility Description	Platform A-TK	Platform "A"
Distance to Nearest Shoreline (Miles)	21 Miles	
Volume: Storage Tanks (total) Facility Piping (total)	10,000	400 160
Lease Term Pipeline Uncontrolled Blowout (day) Potential 24 Hour Volume	500 10,000	191 960 960
(Bbls.)	•	
Type of Liquid Hydrocarbon	Oil	Condensate
API Gravity	43.9	50°

SECTION F Oil Spill Response and Chemical Information-Continued

Since Arena has the capability to respond to the worst-case discharge (WCD) spill scenario included in its Regional OSRP approved on March 4, 2005, and since the worst-case scenario determined for our DOCD 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 DOCD.

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

٤

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)
Houma, LA	Fourchon, LA
·	Grand Isle, LA

F. Diesel Oil Supply Vessels

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

G. Support Vessel Fuel Tanks

The following table details the vessel and fuel tanks on supply, service and/or crew vessels to be used to support the proposed activities:

Type of Vessel	Number in Field Simultaneously	Estimated Maximum Fuel Tank Capacity (bbls)
Supply Vessels	2	500
Crew Vessels	1	500

H. Produced Liquid Hydrocarbon Transportation Vessels

Arena is not proposing to conduct any well testing operations on the proposed well operations under this Plan

SECTION F Oil Spill Response and Chemical Information (Continued)

I. Oil and Synthetic-Based Drilling Fluids

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

J. Oil Characteristics

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

K. Blowout Scenario

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

L. Spill Discussion for NEPA Analysis

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

M. Pollution Prevention Measures

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

N. FGBNMS Monitoring Plans

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

SECTION G Air Emissions Information

The primary air pollutants associated with OCS development activities are:

Carbon Monoxide

3

- 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) providing for the drilling, completion and production activities.

B. Screening Questions

As evidenced by Attachment G-1, the worksheets were completed based on the number of wells to be produced from the existing structure and located within the 200 kilometer of Breton Wildlife Area..

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 Quality Emissions Report

Attachment G-1 (Public Information)

DOCD AIR QUALITY SCREENING CHECKLIST

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

COMPANY	Arena Offshore, LLC
AREA	South Pass
BLOCK	74
LEASE	G26144
PLATFORM	A
WELL	A, C and A007 and A010
COMPANY CONTACT	Natalie Schumann
TELEPHONE NO.	281.492.3243
REMARKS	Drill, complete and produce four wells from existing South Pass Block 83 A Platform

LEASE TE	RM PIPELINE CONSTRI	UCTION INFORMATION:
YEAR	NUMBER OF PIPELINES	TOTAL NUMBER OF CONSTRUCTION DAYS
2004		
2005		
2006		NA NA
2007		
2008		
2009		

Screening Questions for DOCD'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		l x l
using the following formulas: $CT = 3400D^{2/3}$ for CO, and $CT = 33.3D$ for the	1	^
other air pollutants (where D = distance to shore in miles)?		
Does your emission calculations include any emission reduction measures or		l x l
modified emission factors?		^`
Does or will the facility complex associated with your proposed development and	X	
production activities process production from eight or more wells?		
Do you expect to encounter H ₂ S at concentrations greater than 20 parts per million		x
(ppm)?	<u> </u>	
Do you propose to flare or vent natural gas in excess of the criteria set forth under		x
250.1105(a)(2) and (3)?		^
Do you propose to burn produced hydrocarbon liquids?		X
Are your proposed development and production activities located within 25 miles	l x	
from shore?		
Are your proposed development and production activities located within 200	X	
kilometers of the Breton Wilderness Area?		

Air Pollutant	. Plan	 Calculated → 		Calculated
	Emission	Exemption		 Complex Total
		- Amounts ²		Emission
and the second second	(tons)	(tons)		Amounts ³
		50.00	÷	(tons)
Carbon monoxide (CO)	103.99	26694.84		
Particulate matter (PM)	13.94	732.6		
Sulphur dioxide (SO ₂)	63.46	732.6		
Nitrogen oxides (NOx)	476.13	732.6		
Volatile organic compounds (VOC)	14.92	732.6		

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

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

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

AIR EMISSION CALCULATIONS - FIRST YEAR

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL			CONTACT		PHONE	REMARKS					
Arena Offshore, LLC	South Pass	74	G26144		A, C and A00	7 and A010		Natalie Schuma	nn	281.492.3243						
OPERATIONS	EQUIPMENT	RATING	MAX. FUEL			TIME	i .		N POUNDS P				ES	TIMATED TO	NS	-
	Diesel Engines	HP	GAL/HR	GAL/D												
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
		MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	PM	sox	NOx	Voc	CO	PM	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	6635	320,4705	7691.29	24	194	4.68	21.45	160.76	4.82	35.07	10.89	49.95	374.25	11.23	81.65
	PRIME MOVER>600hp diesel	0	0	0.00	o	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	o	0.00	Ö	Ö	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	o	0.00	ō	Ö	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	BURNER diesel	0			ō	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	Ō	ō	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	2600	125.58	3013.92	6	194	1.83	8.41	63.00	1.89	13.74	1.07	4,89	36,66	1.10	8.00
	VESSELS>600hp diesel(supply)	2600	125.58	3013.92	10	194	1.83	8.41	63.00	1.89	13.74	1.78	8.15	61,11	1.83	13.33
	VESSELS>600hp diesel(tugs)	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
			l				1	1		1						
PIPELINE	PIPELINE LAY 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
INSTALLATION	SUPPORT VESSEL 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
	PIPELINE BURY 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
	SUPPORT VESSEL 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
									l							
FACILITY	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
INSTALLATION	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
PRODUCTION	RECIP.<600hp diesel-Generator	150	7.245	173.88	24	31	0.33	0.49	4.63	0.37	1.00	0.12	0.18	1.72	0.14	0.37
	RECIP.<600hp diesel-Crane	210	10.143	243.43	2	31	0.46	0.68	6.48	0.52	1.40	0.01	0.02	0.20	0.02	0.04
•	RECIP.>600hp dieset	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.02	0.00 0.16
	SUPPORT VESSEL diesel(crew)	2600	125.58	3013.92	6 10	4	1,83 1,83	8.41	63.00 63.00	1.89	13.74	0.02 0.04	0.10	0.76 1.26	0.02	0.16
	SUPPORT VESSEL diesel(supply)	2600 0	125.58	3013.92 0.00	0	4 0	1.83	8.41 0.00	0.00	1.89 0.00	13.74 0.00	0.04	0.17 0.00	0.00	0.04	0.27
	TURBINE nat gas	0	0	0.00	0			0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.2 cycle lean nat gas RECIP.4 cycle lean nat gas	0	0	0.00	0		}	0.00	0.00	0.00	0.00	ł	0.00	0.00	0.00	0.00
	RECIP 4 cycle rich nat gas	0	ő	0.00	0			0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	BURNER nat gas-Reboller	5	4761.90	114285.71	24	31	0.04	0.00	0.48	0.03	0.40	0.01	0.00	0.00	0.00	0.00
	MISC.	BPD	SCF/HR	COUNT		- 31	0.04	0.00	0.40	0.03	0.40	0.01	0.00	0.10	0.01	0.13
	TANK-	0	001711	000111	0	0		T	Γ	0.00	T		r		0.00	1
	FLARE-		0		Ö	ŏ		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	PROCESS VENT-		ŏ		ő	ŏ		0.00	1	0.00	0.00		0.55	0.00	0.00]
	FUGITIVES-			0.0		ŏ	į]	ļ	0.00]		0.00	j
	GLYCOL STILL VENT-		218667		24	31	1]		1.44]				0.54	
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		Ō	Ō		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
2006	YEAR TOTAL		1		-		12.84	56.25	424.32	14.74	92.86	13.94	63.46	476.13	14.92	103.99
											L	L				<u> </u>
EXEMPTION	DISTANCE FROM LAND IN															1
CALCULATION	MILES											732.60	732.60	732.60	732.60	26694.84
	22.0											l	l			1

AIR EMISSIONS CALCULATIONS - SECOND YEAR

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	T	T	CONTACT		PHONE	REMARKS					
Arena Offshore, LLC	South Pass	74	G26144	Α	A, C and A007 a	and A010		Natalie Schuma	nn	281,492,3243	#REF!					
OPERATIONS	EQUIPMENT	RATING		ACT, FUEL		TIME		<u> </u>	A POUNDS P				ES	TIMATED TO	NS	
	Diesel Engines	HP	GAL/HR	GAL/D			1									
	Nat. Gas Engines	HP	SCF/HR	SCF/D												
	Burners	MMBTU/HR	SCF/HR	SCF/D	HR/D	DAYS	PM	SOx	NOx	voc	СО	PM	sox	NOx	VOC	СО
DRILLING	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	l	o	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	l ō	Ō	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	lo	Ò	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)	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
	VESSELS>600hp diesel(tugs)	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
PIPELINE	PIPELINE LAY 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
INSTALLATION	SUPPORT VESSEL diesel	ŏ	ŏ	0.00	l ŏ	ŏ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PIPELINE BURY BARGE diesel	Ō	Ō	0.00	l o	ō	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	o	0.00	0	o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	О	lo	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
Ī	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
FACILITY	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
INSTALLATION	MATERIAL TUG diesel	Ŏ	Ō	0.00	0	Ö	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	Ö	Ŏ	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
PRODUCTION	RECIP.<600hp diesel-Generator	150	7,245	173.88	24	365	0.33	0.49	4.63	0.37	1.00	1.45	2.12	20.26	1.62	4.38
	RECIP.<600hp diesel-Crane	210	10.143	243.43	2	365	0.46	0.68	6.48	0.52	1.40	0.17	0.25	2.36	0.19	0.51
i	RECIP.>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
	SUPPORT VESSEL diesel(crew)	2600	125.58	3013.92	6	52	1.83	8.41	63.00	1.89	13.74	0.29	1.31	9.83	0.29	2.14
	SUPPORT VESSEL diesel(supply	2600	125.58	3013.92	10	52	1.83	8.41	63.00	1.89	13.74	0.48	2.19	16.38	0.49	3.57
	TURBINE nat gas	0	0	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	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	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	0 5	0	0.00	0	0 365	224	0.00 0.00	0.00 0.48	0.00 0.03	0.00 0.40	0.16	0.00 0.01	0.00 2.09	0.00	0.00 1.75
1	BUPNER net gas-Reboiler	BPD BPD	4761.90 SCF/HR	114285.71 COUNT	24	365	0.04	0.00	0.46	0.03	0.40	0.16	0.01	2.09	0.11	1.75
	MISC.	0	SCF/RK	COUNT	0	0	 	1	I	0.00	1		T		0.00	Τ
	IFLARE-		C		Ö	lö		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	PROCESS VENT-		Ö		Ö	lő] 0.00	0.00	0.00	0.00		0.00	0.00	0.00	1 0.00
	FUGITIVES-			0.0		ŏ	1	1		0.00			1		0.00	
1	GLYCOL STILL VENT-		C		0	ŏ		1		0.00				1	0.00	İ
DRILLING	OIL BURN	0			O	Ö	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		Ō	Ō		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
2007	YEAR TOTAL	1					4.49	17.98	137.57	4.69	30.29	2.54	5.88	50.92	2.71	12.37
					l	L		L		İ			ļ		· · ·-· · · · · · · · · · · · · · · · ·	
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES	l										732.60	732.60	732.60	732.60	26694.84
JALUGE AND THE	22.0	1										L	I .			l
		-				*						·				

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	Emissions	Effluents	Physical	Wastes	Accidents	Other
Resources	(air, noise, light, etc.)	(muds, cuttings, other discharges to the water column or seafloor	Disturbances To the seafloor (rig or anchor emplacement, etc.)	Sent to Shore for Treatment Or disposal	(e.g. oil spills, chemical spills, H2S releases)	IPF's identified
Site Specific at Offshore		acanoor				
Location						
Designated topographic						
feature						
Pinnacle Trend area live					_	
bottoms					· ·	1
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	X					
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			N 1 (8)		X	
Wetlands					X	
Shorebirds and coastal						
nesting birds		-			X	
Coastal wildlife refuges					X	
Wilderness areas	<u> </u>				X	<u> </u>
Other Resources						ļ
						ļ

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 South Pass Block 83 are located approximately 22 miles away from the closest designated topographic feature (Sackett 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 South Pass Block 83 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 South Pass Block 83 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 depth at the existing surface location in South Pass Block 83, A Platform is 467 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.

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.

Environmental Impact Analysis-Continued

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 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 (NTL'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 crease 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.

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. 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 22 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

Environmental Impact Analysis-Continued

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.

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 22 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 2002-052 indicate there is little risk of contact or impact to the coastline and associated environmental resources.

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. Wetlands

An accidental oil spill release from the proposed activities could cause impacts to wetlands. However, due to the distance from shore (approximately 22 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 2002-052 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 22 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 2002-052 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 22 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

Environmental Impact Analysis-Continued

in the publication of OCS EIA /EA MMS 2002-052 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.

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 22 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 2002-052 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 and a report prepared in accordance with 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.

SECTION H Environmental Impact Analysis-Continued

Alternatives

4

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

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.

Environmental Impact Analysis-Continued

References

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

Document	Author	Dated
MMS Environmental Impact Statement Report No. 2002-15	Minerals Management Service	2002
NTL 2003-N06 "Supplemental Bond Procedures"	Minerals Management Service	2003
NTL 2004-G01 "Implementation of Seismic Survey Mitigation Measures and Protected Species Observer Program"	Minerals Management Service	2004
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 2005-G07 "Archaeological Resource Surveys and Reports"	Minerals Management Service	2005
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 98-16 "Hydrogen Sulfide Requirements"	Minerals Management Service	1998
NPDES General Permit GMG290000	EPA – Region VI	2004
Regional Oil Spill Response Plan	Arena Offshore, LLC	2005

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 Louisiana is enclosed as **Attachment I-1**.

Arena Offshore, Inc. has considered all of Louisiana's enforceable policies and certifies the consistency for the proposed operations.

Louisiana Coastal Zone Consistency Statement

Attachment I-1 (Public Information)

COASTAL ZONE MANAGEMENT CONSISTENCY CERTIFICATION

INITIAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

SOUTH PASS BLOCK 74

LEASE OCS-G 26144

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

By:	Arena Offshore, LLC
Signed By:	Kali A Acpal
Dated:	10/4/05