UNITED STATES GOVERNMENT
MEMORANDUM

October 31, 2018

To: Public Information
From: Plan Coordinator, LP, Plans Section
(GM235D)

Subject: Public Information copy of plan

Control #	-	N-10008
Type	-	Initial Development Operations Coordinations Document
Lease(s)	-	OCS-G01520 Block - 204 Ship Shoal Area OCS-G35948 Block - 205 Ship Shoal Area
Operator	-	Fieldwood Energy LLC
Description	-	Wells A and B and Revision of Air Emissions for Platform A
Rig Type	-	Not Found

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
Lead Regulatory
Specialist

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
FIXED/A		3941 FSL, 3052 FEL	G01520/SS/204
WELL/A	G35948/SS/205	3941 FSL, 3052 FEL	G01520/SS/204
WELL/B	G35948/SS/205	3676 FSL, 3065 FEL	G01520/SS/204

N10008
RA

FIELDWOOD ENERGY

February 19, 2018

Bureau of Ocean Energy Management
1201 Elmwood Park Boulevard
New Orleans, LA 70123-2394

RECEIVED
FEB 21 2018
BOEM
Plans Section, GOM OCS Region,
New Orleans, LA

Attn: Michelle Uli Picou
Chief, Plans Section

Subject: Fieldwood Energy Offshore LLC
Initial Joint DOCD
Ship Shoal Blocks 204 and 205
Leases OCS-G 01520 and OCS-G 35948

In accordance with 30 CFR 550.200 Subpart B and NTL 2009-G07, Fieldwood Energy Offshore LLC (Fieldwood) hereby submits for your review and approval an Initial Joint Development Operations Coordination Document for the drilling and completion of two (2) Well Locations in Lease OCS-G 35948, Ship Shoal Block 205.

Enclosed you will find one Proprietary Copy and one Public Copy along with a CD containing electronic copies of the plan.

If you should have any questions or concerns, please contact me by phone at (713) 969-1310 or via e-mail at melissa.guidry@fwellc.com.

Sincerely,

Melissa Guidry

Melissa Guidry
Sr. Regulatory Specialist

Enclosures

Melissa Guidry

From: notification@pay.gov
Sent: Monday, February 19, 2018 2:11 PM
To: Melissa Guidry
Subject: Pay.gov Payment Confirmation: BOEM Development/DOCD Plan - BD

Your payment has been submitted to Pay.gov and the details are below. If you have any questions regarding this payment, please contact Brenda Dickerson at (703) 787-1617 or BseeFinanceAccountsReceivable@bsee.gov.

Application Name: BOEM Development/DOCD Plan - BD
Pay.gov Tracking ID: 267S9R94
Agency Tracking ID: 75426523227
Transaction Type: Sale
Transaction Date: 02/19/2018 03:10:42 PM EST

Account Holder Name: Fieldwood Energy LLC

Transaction Amount: $8,476.00
Card Type: MasterCard
Card Number: **********8170

Region: Gulf of Mexico
Contact: Melissa Guidry 713-969-1310
Company Name/No: Fieldwood Energy Offshore LLC, 03035
Lease Number(s): 01520, 35948, , ,
Area-Block: Ship Shoal SS, 204: Ship Shoal SS, 205: , : , : ,
Type-Wells: Initial Plan, 2

THIS IS AN AUTOMATED MESSAGE. PLEASE DO NOT REPLY.

PUBLIC COPY

N10008
RA

FIELDWOOD ENERGY

INITIAL JOINT DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

SHIP SHOAL BLOCK 204
SHIP SHOAL BLOCK 205

LEASE NOS. OCS-G 01520 & OCS-G 35948

OFFSHORE, LOUISIANA

Prepared By:

Melissa Guidry
Fieldwood Energy LLC
2000 W. Sam Houston Pkwy S., Suite 1200
Houston, Texas 77056
713-969-1310 – Direct Line
melissa.guidry@fwellc.com

Date of Submittal: February 19, 2018
Estimated Start-up Date: September 1, 2018

SECTION A
CONTENTS OF PLAN
(30 CFR 550.211 AND 550.241)

A. PLAN INFORMATION FORM

This proposed Joint Development Operations Coordination Document Plan is for the drilling and completion of Well Locations A and B, in Lease OCS-G 35948, Ship Shoal Block 205. An OCS Plan Information Form – "Form BOEM-0137" is included under this section with further activity description as **Attachment A-1**.

B. LOCATION

A Well Location Map showing the proposed surface of each proposed well is included in this plan along with a Bathymetry Map showing the water depths across the lease block as **Attachment A-2.**

There will not be any anchors associated with the proposed operations.

C. DRILLING UNIT

Fieldwood will use a Jack up drilling rig and will comply with all of the regulations of the ABS, IMO and USCG. All drilling operations will be conducted under the provisions of 30 CFR, Part 250, Subpart D, and other applicable regulations and notice to lessees, including those regarding the avoidance of potential drilling hazards and safety and pollution prevention control. Such measures as inflow detection and well control, monitoring for loss of circulation and seepage loss, and casing design will be our primary safety measures.

Pollution prevention measures include installation of curbs, gutters, drip pans, and drains on drilling deck areas to collect all contaminants and debris. All discharges will be in accordance with applicable EPA NPDES permits.

Storage Tanks and/or Production Vessels with 25 bbls or more

Type of Storage Tank	Type of Facility	Tank Capacity (bbls)	Number of Tanks	Total Capacity (bbls)	Fluid Gravity (API)
Fuel Oil (Marine Diesel)	Jack-up	1418	2	2836	32.4°

D. SERVICE FEE

A Pay.gov receipt in the amount of $8476.00 is enclosed to cover the cost and processing fee for the proposed operations being conducted under this plan.

E. POLLUTION PREVENTION MEASURES (FLORIDA ONLY)

According to NTL 2008-G04, pollution prevention measures are not required for these proposed operations.

F. ADDITIONAL MEASURES

Fieldwood does not propose additional safety, pollution prevention, or early spill detection measures beyond those required by 30 CFR 250.

U.S. Department of the Interior
Bureau of Ocean Energy Management

OMB Control Number: 1010-0151
OMB Approval Expires: 12/31/18

OCS PLAN INFORMATION FORM

General Information

Type of OCS Plan:		Exploration Plan (EP)	Development Operations Coordination Document (DOCD)	X

Company Name: Fieldwood Energy Offshore LLC	BOEM Operator Number: 03035
Address:	Contact Person: Melissa Guidry
2000 W. Sam Houston Pkwy S, Ste 1200	Phone Number: 713-969-1310
Houston, Texas 77042	E-Mail Address: melissa.guidry@fwellc.com

If a service fee is required under 30 CFR 550.125(a), provide the	Amount paid	$8476	Receipt No.	267S9R94

Project and Worst Case Discharge (WCD) Information

Lease(s): OCS G35948	Area: SS	Block(s): 205	Project Name (If Applicable):

Objective(s)		Oil	X	Gas		Sulphur		Salt	Onshore Support Base(s): Fourchon, LA

Platform/Well Name: SS 205	Total Volume of WCD: 8318 BOPD	API Gravity: 50°
Distance to Closest Land (Miles): 37 miles	Volume from uncontrolled blowout: 7408 BOPD	

Have you previously provided information to verify the calculations and assumptions for your WCD?		Yes	X	No
If so, provide the Control Number of the EP or DOCD with which this information was provided				
Do you propose to use new or unusual technology to conduct your activities?		Yes	X	No
Do you propose to use a vessel with anchors to install or modify a structure?		Yes	X	No
Do you propose any facility that will serve as a host facility for deepwater subsea development?		Yes	X	No

Description of Proposed Activities and Tentative Schedule (Mark all that apply)

Proposed Activity	Start Date	End Date	No. of Days
Development drilling - Well Location A	02/01/19	03/03/19	30
Development drilling - Well Location B	03/04/19	04/03/19	30
Well completion	04/04/19	05/14/19	40
Well test flaring (for more than 48 hours)			
Installation or modification of structure			
Installation of production facilities			
Installation of subsea wellheads and/or manifolds			
Installation of lease term pipelines			
Commence production	05/15/19		
Other (Specify and attach description)			

Description of Drilling Rig

X	Jackup		Drillship		Caisson		Tension leg platform
	Gorilla Jackup		Platform rig	X	Fixed platform		Compliant tower
	Semisubmersible		Submersible		Spar		Guyed tower
	DP Semisubmersible		Other (Attach Description)		Floating production system		Other (Attach Description)

Drilling Rig Name (If Known):

Description of Structure

Description of Lease Term Pipelines

From (Facility/Area/Block)	To (Facility/Area/Block)	Diameter (Inches)	Length (Feet)

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name): SS 204 A					Previously reviewed under an approved EP or DOCD?	X	Yes		No
Is this an existing well or structure?		Yes X		No	If this is an existing well or structure, list the Complex ID or API No.	20630_1			
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	X	No

WCD info	For wells, volume of uncontrolled blowout (Bbls/day): 7408	For structures, volume of all storage and pipelines (Bbls): 910	API Gravity of fluid 50°

	Surface Location	**Bottom-Hole Location (For Wells)**	**Completion (For multiple completions, enter separate lines)**
Lease No.	OCS G01520	OCS	OCS OCS
Area Name	Ship Shoal		
Block No.	204		
Blockline Departures (in feet)	N/S Departure: F S L 4002'	N/S Departure: F____ L	N/S Departure: F____ L N/S Departure: F____ L N/S Departure: F____ L
	E/W Departure: F E L 2845'	E/W Departure: F____ L	E/W Departure: F____ L E/W Departure: F____ L E/W Departure: F____ L
Lambert X-Y coordinates	X: 2075155'	X:	X: X: X:
	Y: -49906'	Y:	Y: Y: Y:
Latitude/ Longitude	Latitude 28° 31' 45.2274"	Latitude	Latitude Latitude Latitude
	Longitude -91° 5' 57.678"	Longitude	Longitude Longitude Longitude
Water Depth (Feet): 110'		MD (Feet): / TVD (Feet):	MD (Feet): / TVD (Feet): MD (Feet): / TVD (Feet): MD (Feet): / TVD (Feet):
Anchor Radius (if applicable) in feet:			

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name): Well Loc A					Previously reviewed under an approved EP or DOCD?		Yes	X	No
Is this an existing well or structure?		Yes X		No	If this is an existing well or structure, list the Complex ID or API No.				
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	X	No
WCD info	For wells, volume of uncontrolled blowout (Bbls/day): 7408				For structures, volume of all storage and pipelines (Bbls): 910		API Gravity of fluid 50°		

	Surface Location	**Bottom-Hole Location (For Wells)**	**Completion (For multiple completions, enter separate lines)**
Lease No.	OCS G01520	OCS	OCS OCS
Area Name	Ship Shoal		
Block No.	204		
Blockline Departures (in feet)	N/S Departure: F_S_ L 3941'	N/S Departure: F____ L	N/S Departure: F____ L N/S Departure: F____ L N/S Departure: F____ L
	E/W Departure: F_E_ L 3052'	E/W Departure: F____ L	E/W Departure: F____ L E/W Departure: F____ L E/W Departure: F____ L
Lambert X-Y coordinates	X: 2074947.68'	X:	X: X: X:
	Y: -49966.750'	Y:	Y: Y: Y:
Latitude/ Longitude	Latitude 28° 31' 44.632"	Latitude	Latitude Latitude Latitude
	Longitude -91° 6' .005"	Longitude	Longitude Longitude Longitude
Water Depth (Feet): 110'		MD (Feet): / TVD (Feet):	MD (Feet): / TVD (Feet): MD (Feet): / TVD (Feet): MD (Feet): / TVD (Feet):
Anchor Radius (if applicable) in feet:			

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	

OCS PLAN INFORMATION FORM (CONTINUED)

Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

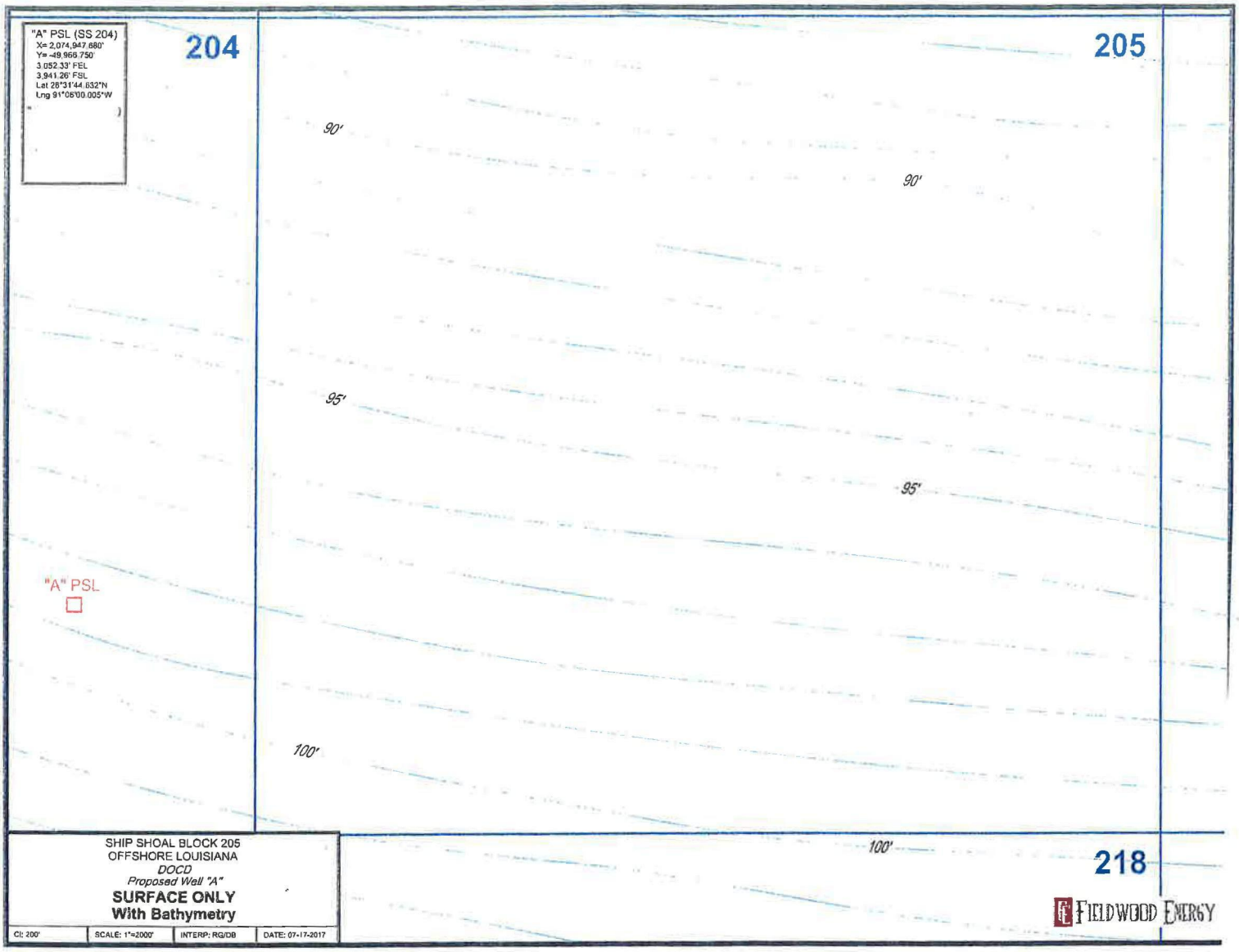
Well or Structure Name/Number (If renaming well or structure, reference previous name): Well Loc B			Previously reviewed under an approved EP or DOCD?		Yes	X	No
Is this an existing well or structure?		Yes X		No	If this is an existing well or structure, list the Complex ID or API No.		
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?						Yes X	No

WCD info	For wells, volume of uncontrolled blowout (Bbls/day): 7408	For structures, volume of all storage and pipelines (Bbls): 910	API Gravity of fluid 50°

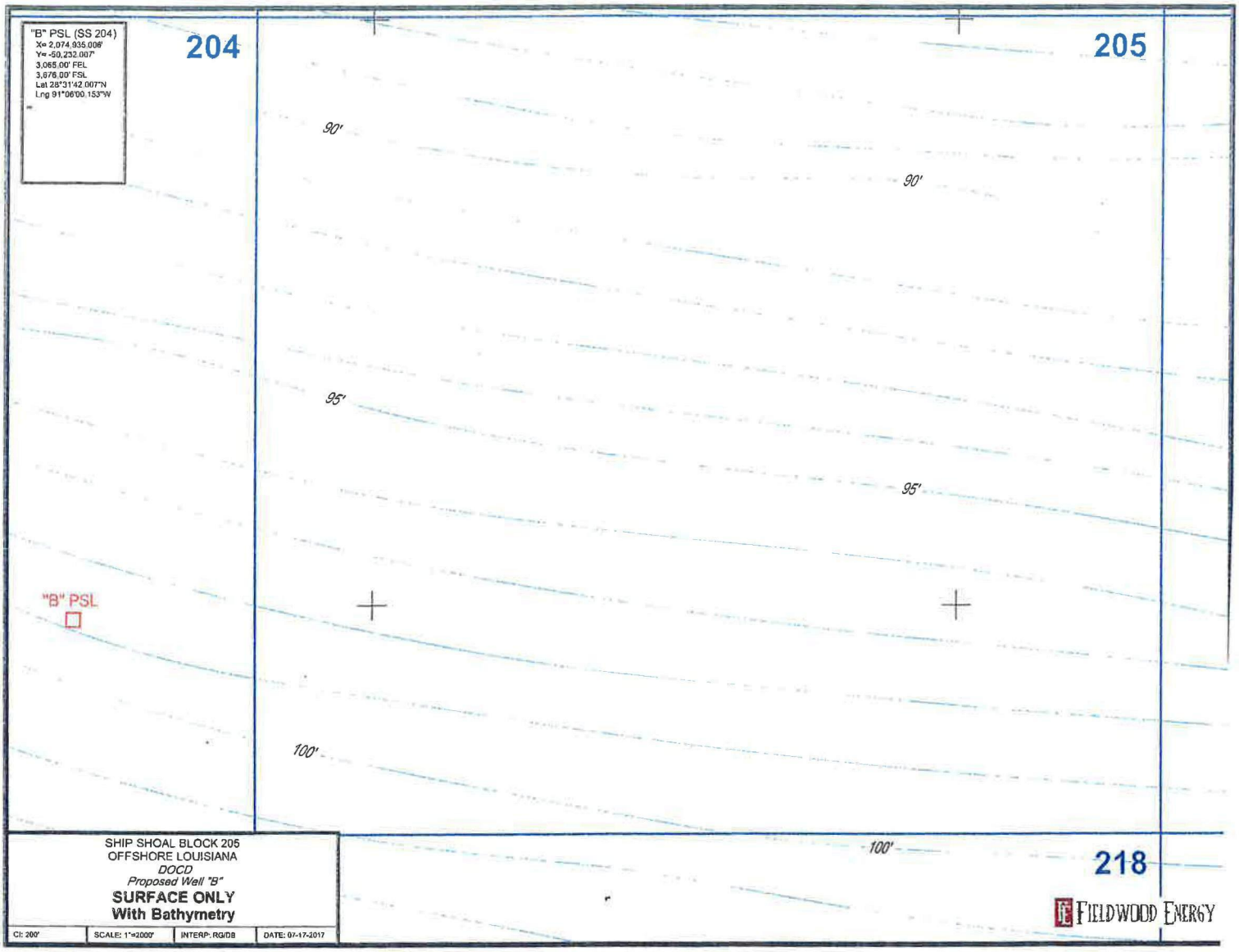
	Surface Location	**Bottom-Hole Location (For Wells)**	**Completion (For multiple completions, enter separate lines)**
Lease No.	OCS G01520	OCS	OCS OCS
Area Name	Ship Shoal		
Block No.	204		
Blockline Departures (in feet)	N/S Departure: F S L 3676'	N/S Departure: F____ L	N/S Departure: F____ L N/S Departure: F____ L N/S Departure: F____ L
	E/W Departure: F E L 3065'	E/W Departure: F____ L	E/W Departure: F____ L E/W Departure: F____ L E/W Departure: F____ L
Lambert X-Y coordinates	X: 2074935.006'	X:	X: X: X:
	Y: -50232.007'	Y:	Y: Y: Y:
Latitude/ Longitude	Latitude 28° 31' 42.007"	Latitude	Latitude Latitude Latitude
	Longitude -91° 6' 00.153"	Longitude	Longitude Longitude Longitude
Water Depth (Feet): 110'		MD (Feet): / TVD (Feet):	MD (Feet): / TVD (Feet): MD (Feet): / TVD (Feet): MD (Feet): / TVD (Feet):
Anchor Radius (if applicable) in feet:			

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	
			X =	Y =	



Attachment A-2


"B" PSL (SS 204)
X= 2,074,935.008'
Y= -50,232.007'
3,065.00' FEL
3,676.00' FSL
Lat 28°31'42.007"N
Lng 91°06'00.153"W
204
205
90'
90'
95'
95'
"B" PSL
100'
100'
218
SHIP SHOAL BLOCK 205
OFFSHORE LOUISIANA
DOCD
Proposed Well "B"
SURFACE ONLY
With Bathymetry
CI: 200'
SCALE: 1"=2000'
INTERP: RG/DB
DATE: 07-17-2017
FIELDWOOD ENERGY

SECTION B
GENERAL INFORMATION
(30 CFR 550.213 and 550.243)

A. APPLICATIONS AND PERMITS

Application/Permit	Issuing Agency	Status
Rig Move Reports	USCG/MWA/NGA/BSEE	Pending
APD	BSEE	Pending

B. DRILLING FLUIDS

Type of Drilling Fluid	Estimated Volume of Drilling Fluid
Water-based (seawater, freshwater, barite)	3103 bbls
Oil-based (diesel, minerals, oil)	25,207 bbls
Synthetic-based (internal olefin, ester)	28,311 bbls

C. PRODUCTION
Proprietary Data.

D. OIL CHARACTERISTICS
According to NTL 2008-G04, oil characteristics information is not required.

E. NEW OR UNUSUAL TECHNOLOGY
Fieldwood does not propose to use new techniques or unusual technology to carry out these proposed development activities; however, the best available and safest technologies (BAST) as referenced in Title 30 CFR 250 will be incorporated as standard operational procedures.

F. BONDING STATEMENT
The bond requirements for the activities and facilities proposed in this DOCD are satisfied by a $3,000,000.00 areawide bond, furnished and maintained according to 30 CFR 556.901; NTL No. 2015-BOEM-N04, "Guidelines Financial Assurance,-“ and additional security under 30 CFR 556.901(d) - (f) and NTL No. 2016-BOEM-N01, “Requiring Additional Security.”

F. BONDING STATEMENT

The bond requirements for the activities and facilities proposed in this DOCD are satisfied by a $3,000,000.00 areawide bond, furnished and maintained according to 30 CFR 556.901; NTL No. 2015-BOEM-N04, "Guidelines Financial Assurance,-" and additional security under 30 CFR 556.901(d) - (f) and NTL No. 2016-BOEM-N01, "Requiring Additional Security."

G. OIL SPILL FINANCIAL RESPONSIBILITY (OSFR)

Fieldwood Energy Offshore LLC (BOEM company number 03035) has demonstrated oil spill financial responsibility for the facilities proposed in this DOCD according to 30 CFR Part 253; and NTL No. 2008-N05, "Guidelines for Oil Spill Financial Responsibility for Covered Facilities".

H. DEEPWATER WELL CONTROL STATEMENT

According to NTL 2008-G04, a deepwater well control statement is not required.

I. SUSPENSION OF PRODUCTION

Fieldwood has not filed and does not anticipate filing any requests for Suspensions of Production for Lease OCS-G 35948.

J. BLOWOUT SCENARIO

Estimated Flow Rate: - 7408 bbls/day

Maximum Duration of blowout (60 days)

Total Volume (7408 x 60 days) = 444, 480 bbls

The duration of the blowout will be a function of the well bridging over – the ability of surface intervention – or as a last resort would be drilling a relief well. The expected timeframes for the different outcomes would be: 1) Bridging over in 2-3 days, 2) surface intervention 7 to 14 days and 3) a relief well 60 days.

Discussion of potential for well to bridge over

The SS 205 wells are abnormal pressured oil wells; the primary target is an unconsolidated oil sand. Due to the pressure drop caused by an uncontrolled blowout would result in formation failure and a reasonably high chance of bridging over. Typical GOM wells usually result in a strong chance of sanding up or bridging over due to the high amount of solids that would be produced resulting from formation collapse as the pressure in the wellbore is reduced. We typically expect 24 – 48 hours to bridge over. Bridging over is the common outcome of conventional GOM wells. This is usually the period where equipment is being moved to location for a surface intervention.

Discussion of likelihood for surface intervention to stop blowout
Surface intervention would be viable as long as the surface wellhead and or tree are not damaged beyond use. If the blowout results in a fire which destroys the surface equipment surface intervention could be limited or not an option. Surface intervention would be the first line of defense after a blowout occurs – the actual intervention technique chosen will depend on actual conditions and ability to access the existing well. There can be simple solutions such as rig up and set a plug in the casing or to more complex solutions such as stabbing over a new BOP and closing the well. The actual solution will depend on actual conditions. A surface intervention is faster than a relief well and is usually started as conditions permit and can be done while relief well planning is being conducted. Fieldwood Energy would immediately consult with a well control company (such as Wild Well or Boots and Coots) and begin surface intervention planning and relief well planning. Typical blowouts can be controlled with surface intervention. The easy access to the wellhead and BOP makes this option viable in most cases.

RELIEF WELL

Name of Specific rig identified for relief well
The Enterprise 264 is a specific rig that could drill the relief well. The water depth is 107' which will not limit rig selection. The Enterprise 264 is a 250' MC class rig.

Rig under contract
Fieldwood Energy LLC does not have a rig under contract.

Rig package constraints
The water depth is 107' and the well is not complex or ultra-deep therefore most jackups would be capable to be used.

Estimated time to drill Relief Well
The total time to drill the relief well is 50 days

Time to acquire rig
5 days will be required to acquire the rig and make it available for tow. It may have to suspend operations that are currently ongoing.

Time to move rig onsite
The tow time will be 5 days.

Drilling Time
The drilling time will be 50 days.

Statement whether the possibility of using a nearby platform was considered, if feasible
It is preferred to drill relief wells from an open water location rather than a platform location; it gives the best option on designing a simple intercept well and allows a greater choice on rig availability.

WCD Calculations

Submitted for EP or DOCD – Yes, see attached

Submitted for Regional OSRP – Yes, see attached

Used appropriate WCD scenario from OSRP – Yes, drilling/production greater than 10 miles from shore.

WCD scenario volume from OSRP has not changed - Correct

Other

Measures to enhance ability to prevent and to reduce the likelihood of a blowout

The key to preventing blowouts is early detection. Using good oil field practices will minimize blow out risks. Keeping the BOP's in good working condition is the first step. Monitoring during the drilling process is key to early detection, watching for flow increases and or pit gains, checking for flow on connections, maintaining the MW correctly, utilizing a trip tank on all trips are all part of a successful strategy to catch kicks early and properly handling a small kick is much easier than successfully circulating out a large kick. Keeping all rig personnel properly trained in how to respond to well control events is also part of a successful strategy. This starts at the lowest level – the man on the shaker is the first to see flow change – the driller must be confident that when there is doubt shut it in and figure it out after it's shut in. This keeps kick sizes small. Other blowouts can occur during the non-drilling phase – flow after cementing is a common issue – utilizing good cementing techniques, designing a cement slurry with additives that help to prevent flow after cementing – and following good practices. These are abnormal pressured wells and we will utilize liner top packers on the liners.

Measure to enhance ability to conduct effective and early intervention in the event of a blowout

Fieldwood Energy LLC has a working relationship with several well control experts, Wild Well or Boots and Coots. They would be brought in to provide expert advice on implementing surface intervention and provide onsite supervision to any operation. Surface intervention equipment is readily available – rental BOP's and skid units for pumping.

Arrangements for drilling relief wells

Fieldwood Energy LLC has a working relationship with several well control experts, Wild Well or Boots and Coots. They would be brought in to provide expert advice on drilling a relief well.

Any other measures.

None.

SECTION C
GEOLOGICAL AND GEOPHYSICAL INFORMATION
(30 CFR 550.214 AND 550.244)

A. GEOLOGICAL DESCRIPTION
PROPRIETARY DATA

B. STRUCTURE CONTOUR MAPS
Current structure contour maps drawn on the top of each prospective hydrocarbon sand, showing the entire lease block, the location of each proposed wells, and the locations of geological cross-sections is included as proprietary data.

C. INTERPRETED 3-D SEISMIC LINES
Attached to one Proprietary Information copy of this plan are interpreted 3-D seismic lines. These lines are migrated, annotated with depth scale, and are within 500' of the surface locations of the proposed wells.

D. GEOLOGICAL STRUCTURE CROSS-SECTIONS
Interpreted geological structure cross-sections showing the location and depth of each proposed well and at least one key horizon and the objective sands labeled using standard biostratigrahic terms is included as proprietary data.

E. SHALLOW HAZARDS REPORT
The proposed operations will be conducted from a previously approved surface location; therefore, a shallow hazards report is not being provided.

F. SHALLOW HAZARDS ASSESSMENT
The proposed operations will be conducted from a BOEM previously approved surface location; therefore, a shallow hazards assessment is not being provided.

G. HIGH-RESOLUTION SEISMIC LINES
The proposed operations will be conducted from a previously approved surface location; therefore annotated high-resolution survey lines are not being submitted.

H. STRATIGRAPHIC COLUMN
A generalized biostratigraphic/lithostratigraphic column depicting each well from the seafloor to total depth, with each objective horizon labeled, is included as proprietary data.

I. TIME VS DEPTH TABLES
Appropriate tables providing seismic travel time versus depth for the proposed well locations in areas where there is no well control is included as proprietary data.

SECTION D
HYDROGEN SULFIDE INFORMATION
(30 CFR 550.215 AND 550.245)

A. CONCENTRATION
Fieldwood does not anticipate encountering any H_2S during the proposed operations.

B. CLASSIFICATION
In accordance with Title 30 CFR 250.490(c), Fieldwood requests that the area of the proposed activities in Ship Shoal Block 205 be classified by the BOEM as H_2S absent.

C. H2S CONTINGENCY PLAN
According to NTL 2008-G04, an H2S Contingency Plan is not required.

D. MODELING REPORT
According to NTL 2008-G04, an H2S modeling report is not required.

SECTION E
MINERAL RESOURCE CONSERVATION INFORMATION
(30 CFR 550.246)

(A) TECHNOLOGY & RESERVOIR ENGINEERING PRACTICES & PROCEDURES
PROPRIETARY DATA

(B) TECHNOLOGY AND RECOVERY PRACTICES AND PROCEDURES
PROPRIETARY DATA

(C) RESERVOIR DEVELOPMENT
PROPRIETARY DATA

SECTION F
BIOLOGICAL, PHYSICAL & SOCIOECONOMIC INFORMATION
(30 CFR 550.516 AND 550.547)

A. CHEMOSYNTHETIC COMMUNITIES REPORT
This DOCD does not propose activities that could disturb seafloor areas in water depths of 300 meters (984 feet) or greater; therefore, chemosynthetic information is not required.

B. TOPOGRAPHIC FEATURES MAP
Activities proposed in this DOCD do not fall within 305 meters (1000 feet) of the "no activity zone", therefore no map is required.

C. TOPOGRAPHIC FEATURES STATEMENT (SHUNTING)
All activities proposed under this DOCD will be conducted outside all Topographic Feature Protective Zones, therefore shunting of drill cuttings and drilling fluids is not required.

D. LIVE BOTTOMS (PINNACLE TREND) MAP
Ship Shoal Blocks 205 is not located within 200 feet of any pinnacle trend feature with vertical relief equal to or greater than 8 feet; therefore, live bottom information is not required.

E. LIVE BOTTOMS (LOW RELIEF) MAP
Ship Shoal Blocks 205 is not located within 200 feet of any pinnacle trend feature with vertical relief equal to or greater than 8 feet; therefore, live bottom (low relief) maps are not required.

F. POTENTIALLY SENSITIVE BIOLOGICAL FEATURES
Ship Shoal Block 204 & 205 are not located within 61 meters (200 feet) of potentially sensitive biological features; therefore, biologically sensitive area maps are not required.

G. REMOTELY OPERATED VEHICLE (ROV) SURVEYS
These proposed operations do not take place in deep water; therefore an ROV survey is not required.

H. THREATENED AND ENDANGERED SPECIES, CRITICAL HABITAT, AND MARINE MAMMAL INFORMATION
Under Section 7 of the Endangered Species Act (ESA) all federal agencies must ensure that any actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species, or destroy or adversely modify its designated critical habitat.

In accordance with the 30 CFR 250, Subpart B, effective May 14, 2007, and further outlined in Notice to Lessees (NTL) 2008-G04, lessees/operators are required to address site-specific information on the presence of federally listed threatened or endangered species and critical habitat designated under the ESA and marine mammals protected under the Marine Mammal Protection Act (MMPA) in the area of proposes activities under this plan.

NOAA Fisheries currently lists the Sperm Whale, Leatherback Turtle, Green Turtle, Hawksbill Turtle, and the Kemp's Ridley Turtle as endangered and the Loggerhead Turtle and Gulf Sturgeon as threatened. Currently there are no designated critical habitats for the listed species in the Gulf of Mexico Outer Continental Shelf, however, it is possible that one or more of these species could be seen in the area of our operations.

I. ARCHAEOLOGICAL REPORT

Review of the data obtained during the shallow hazard study previously submitted does not indicate the presence of any historic period shipwrecks.

J. AIR AND WATER QUALITY INFORMATION

According to NTL 2008-G04, Air and Water Quality Information is not required.

K. SOCIOECONOMIC INFORMATION

According to NTL 2008-G04, Socioeconomic Information is not required.

SECTION G
WASTES AND DISCHARGES INFORMATION
(30 CFR 550.217 AND 550.248)

(a) Projected generated wastes and (b) Projected ocean discharges

Type of Fluid	Estimated Volume of Fluid	Discharge Method
Water-based (fluids generated while using water-based drilling fluids)	17,763 bbls	Overboard (not to exceed 1000 bbls per hour)
Cuttings wetted with water-based fluid (cuttings generated while using water-based drilling fluid)	2,156 bbls	Overboard (not to exceed 1000 bbls per hour)

C. MODELING REPORT

According to NTL 2008-G04, a modeling report is not required for these operations.

SECTION H
AIR EMISSIONS INFORMATION
(30 CFR 550.218 AND 550.249)

EMISSIONS WORKSHEETS AND SCREENING QUESTIONS

Screen Procedures for DOCD's	Yes	No
Is any calculated Complex Total (CT) Emission amount (tons) associated with your proposed development 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
Do your emission calculations include any emission reduction measures or modified emission factors?		x
Does or will the facility complex associated with your proposed development and production activities process production from eight or more wells?		x
Do you expect to encounter H_2S at concentrations greater than 20 parts per million (ppm)?		x
Do you propose to flare or vent natural gas in excess or criteria set for the under 250.1105(a)(2) and (3)?		x
Do you propose to burn produced hydrocarbon liquids?		X
Are your proposed development and production activities located within 25 miles (40 kilometers) from shore?		X
Are your proposed development and production activities located within 124 miles (200 kilometers) of the Breton Wilderness Area?		x

Air Pollutant	Plan Emission Amounts[1] (tons)	Calculated Exemption Amounts[2] (tons)	Calculated Complex Total Emission Amounts[3] (tons)
Carbon Monoxide (CO)	306.48	37888.51	238.74
Particular matter (PM)	11.51	1238.76	2.48
Sulphur dioxide (SO_2)	51.29	1238.76	9.86
Nitrogen oxides (NO_x)	643.97	1238.76	333.48
Volatile organic compounds (VOC)	49.41	1238.76	40.10

Enclosed as **Attachment H-1** are the emissions worksheets prepared in accordance with 30 CFR 550.303(d).

DOCD AIR QUALITY SCREENING CHECKLIST

OMB Control No. 1010-0151
OMB Approval Expires: 03/31/2018

COMPANY	Fieldwood Energy LLC
AREA	Ship Shoal
BLOCK	204
LEASE	G01520
PLATFORM	A, A-GEN, A-PRD
WELL	n/a
COMPANY CONTACT	Melissa Guidry
TELEPHONE NO.	713-969-1310
REMARKS	n/a

LEASE TERM PIPELINE CONSTRUCTION INFORMATION:		
YEAR	NUMBER OF PIPELINES	TOTAL NUMBER OF CONSTRUCTION DAYS
2019		
2020		
2021		
2022		
2033		
2024		
2025		
2026		
2027		
2028		
2029		

AIR EMISSIONS CALCULATIONS - FIRST YEAR

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL		CONTACT			PHONE	REMARKS					
Fieldwood Energy LLC	Ship Shoal	204	G01520	A, A-GEN, A-PRD	n/a			Melissa Guidry		713-969-1310	n/a					
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	16975	819.8925	19677.42	24	100	11.96	54.89	411.29	12.34	89.74	14.36	65.87	493.55	14.81	107.68
	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	10	27	1.46	6.68	50.03	1.50	10.92	0.20	0.90	6.75	0.20	1.47
	VESSELS>600hp diesel(supply)	2065	99.7395	2393.75	10	27	1.46	6.68	50.03	1.50	10.92	0.20	0.90	6.75	0.20	1.47
	VESSELS>600hp diesel(tugs)	4400	212.52	5100.48	8	2	3.10	14.23	106.61	3.20	23.26	0.02	0.11	0.85	0.03	0.19
PIPELINE INSTALLATION	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
	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
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
PRODUCTION	RECIP.<600hp diesel (crane A)	238	11.4954	275.89	2	365	0.52	0.77	7.34	0.59	1.59	0.19	0.28	2.68	0.21	0.58
	RECIP.<600hp diesel (crane A-PRD)	160	7.728	185.47	2	365	0.35	0.52	4.93	0.39	1.07	0.13	0.19	1.80	0.14	0.39
	RECIP.<600hp diesel (survival capsule A)	30	1.449	34.78	1	52	0.07	0.10	0.93	0.07	0.20	0.00	0.00	0.02	0.00	0.01
	RECIP.<600hp diesel (backup generator A)	50	2.415	57.96	24	100	0.11	0.16	1.54	0.12	0.33	0.13	0.19	1.85	0.15	0.40
	RECIP.>600hp diesel	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel (crew boat)	2265	109.3995	2625.59	6	156	1.60	7.32	54.88	1.65	11.97	0.75	3.43	25.68	0.77	5.60
	SUPPORT VESSEL diesel (supply boat)	2265	109.3995	2625.59	10	156	1.60	7.32	54.88	1.65	11.97	1.25	5.71	42.81	1.28	9.34
	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
	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.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 (generator 1 A-GEN)	697	4978.671	119488.10	24	185		0.00	15.35	0.21	13.20		0.01	34.08	0.48	29.31
	RECIP.4 cycle rich nat gas (generator 2 A-GEN)	697	4978.671	119488.10	24	185		0.00	15.35	0.21	13.20		0.01	34.08	0.48	29.31
	RECIP.4 cycle rich nat gas (compressor 1 A-PRD)	1970	14071.71	337721.04	24	365		0.01	43.39	0.61	37.32		0.04	190.06	2.66	163.45
	RECIP.4 cycle rich nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	BURNER nat gas (steam generator A-GEN)	0.5	476.19	11428.57	24	365	0.00	0.00	0.05	0.00	0.04	0.02	0.00	0.21	0.01	0.18
	BURNER nat gas (glycol reboiler A-GEN)	0.5	476.19	11428.57	24	365	0.00	0.00	0.05	0.00	0.04	0.02	0.00	0.21	0.01	0.18
	MISC.	**BPD**	**SCF/HR**	**COUNT**												
	TANK- Oil Tank	800			24	365				1.00					4.38	
	FLARE-		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	PROCESS VENT-Intermittent venting, i.e. upsets, blowdowns, etc.		210000		0.2	100				714.00					7.14	
	PROCESS VENT- Comp Scrub Condensate Flash @ Chemilec Treater		35		24	365				0.12					0.52	
	PROCESS VENT- Chemielec Oil Treater Oil Flash		500		24	365				1.70					7.45	
	PROCESS VENT- Super Skimmer Oil Flash from LP Water Stream		5		24	365				0.02					0.07	
	PROCESS VENT- LP Water Flash off Chemielec Oil Treater		120		24	365				0.41					1.79	
	PROCESS VENT- Water Flash off Super Skimmer		120		24	365				0.41					1.79	
	FUGITIVES-			4907.0		365				2.45					10.75	
	GLYCOL STILL VENT -		420		24	365				0.00					0.01	
DRILLING WELL TEST	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
	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
2019	**YEAR TOTAL**						**22.23**	**98.68**	**816.65**	**744.16**	**225.77**	**17.25**	**77.64**	**841.39**	**55.33**	**349.56**
EXEMPTION CALCULATION	**DISTANCE FROM LAND IN MILES**											**1238.76**	**1238.76**	**1238.76**	**1238.76**	**37888.51**
	37.2															

AIR EMISSIONS CALCULATIONS - COMPLEX TOTALS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL			CONTACT			PHONE	REMARKS				
Fieldwood Energy LLC	Ship Shoal	204	G01520	A, A-GEN, A-PRD	n/a			Melissa Guidry			713-969-1310	n/a				
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	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
	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)	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
	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
PIPELINE INSTALLATION	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
	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
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
PRODUCTION	RECIP.<600hp diesel (crane A)	238	11.4954	275.89	2	365	0.52	0.77	7.34	0.59	1.59	0.19	0.28	2.68	0.21	0.58
	RECIP.<600hp diesel (crane A-PRD)	160	7.728	185.47	2	365	0.35	0.52	4.93	0.39	1.07	0.13	0.19	1.80	0.14	0.39
	RECIP.<600hp diesel (survival capsule A)	30	1.449	34.78	1	52	0.07	0.10	0.93	0.07	0.20	0.00	0.00	0.02	0.00	0.01
	RECIP.<600hp diesel (backup generator A)	50	2.415	57.96	24	100	0.11	0.16	1.54	0.12	0.33	0.13	0.19	1.85	0.15	0.40
	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 boat)	2265	109.3995	2625.59	6	156	1.60	7.32	54.88	1.65	11.97	0.75	3.43	25.68	0.77	5.60
	SUPPORT VESSEL diesel (supply boat)	2265	109.3995	2625.59	10	156	1.60	7.32	54.88	1.65	11.97	1.25	5.71	42.81	1.28	9.34
	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
	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.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 (generator 1 A-GEN)	697	4978.671	119488.10	24	185		0.00	15.35	0.21	13.20		0.01	34.08	0.48	29.31
	RECIP.4 cycle rich nat gas (generator 2 A-GEN)	697	4978.671	119488.10	24	185		0.00	15.35	0.21	13.20		0.01	34.08	0.48	29.31
	RECIP.4 cycle rich nat gas (compressor 1 A-PRD)	1970	14071.71	337721.04	24	365		0.01	43.39	0.61	37.32		0.04	190.06	2.66	163.45
	RECIP.4 cycle rich nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	BURNER nat gas (steam generator A-GEN)	0.5	476.19	11428.57	24	365	0.00	0.00	0.05	0.00	0.04	0.02	0.00	0.21	0.01	0.18
	BURNER nat gas (glycol reboiler A-GEN)	0.5	476.19	11428.57	24	365	0.00	0.00	0.05	0.00	0.04	0.02	0.00	0.21	0.01	0.18
	MISC.	**BPD**	**SCF/HR**	**COUNT**												
	TANK- Oil Tank	800			24	365				1.00					4.38	
	FLARE-		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	PROCESS VENT-Intermittent venting, i.e. upsets, blowdowns, etc.		210000		0.2	100				714.00					7.14	
	PROCESS VENT- Comp Scrub Condensate Flash @ Chemilec Treater		35		24	365				0.12					0.52	
	PROCESS VENT- Chemielec Oil Treater Oil Flash		500		24	365				1.70					7.45	
	PROCESS VENT- Super Skimmer Oil Flash from LP Water Stream		5		24	365				0.02					0.07	
	PROCESS VENT- LP Water Flash off Chemielec Oil Treater		120		24	365				0.41					1.79	
	PROCESS VENT- Water Flash off Super Skimmer		120		24	365				0.41					1.79	
	FUGITIVES-			4907.0		365				2.45					10.75	
	GLYCOL STILL VENT -		420		24	365				0.00					0.01	
DRILLING WELL TEST	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
	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
2020-2029	**YEAR TOTAL**						**4.25**	**16.21**	**198.69**	**725.62**	**90.94**	**2.48**	**9.86**	**333.48**	**40.10**	**238.74**
EXEMPTION CALCULATION	**DISTANCE FROM LAND IN MILES**											**1238.76**	**1238.76**	**1238.76**	**1238.76**	**37888.51**
	37.2															

AIR EMISSIONS CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL
Fieldwood Energ	Ship Shoal	204	G01520	A, A-GEN, A-PRD	n/a

Year	Emitted Substance				
	PM	SOx	NOx	VOC	CO
2019	17.25	77.64	841.39	55.33	349.56
2020	2.48	9.86	333.48	40.10	238.74
2021	2.48	9.86	333.48	40.10	238.74
2022	2.48	9.86	333.48	40.10	238.74
2023	2.48	9.86	333.48	40.10	238.74
2024	2.48	9.86	333.48	40.10	238.74
2025	2.48	9.86	333.48	40.10	238.74
2026	2.48	9.86	333.48	40.10	238.74
2027	2.48	9.86	333.48	40.10	238.74
2028	2.48	9.86	333.48	40.10	238.74
2029	2.48	9.86	333.48	40.10	238.74
Allowable	1238.76	1238.76	1238.76	1238.76	37888.51

SECTION I
OIL SPILLS INFORMATION
(30 CFR 550.219 AND 550.250)

A. OIL SPILL RESPONSE PLANNING

The proposed activities are in the Central Planning Area of the GOM. Therefore, a site-specific Oil Spill Response Plan (OSRP) is not required for this plan.

B. REGIONAL OSRP INFORMATION

All of the proposed activities and facilities in this Revised DOCD will be covered by the Oil Spill Response Plan filed by Fieldwood Energy LLC (BOEM Operator Number 03295) in accordance with 30 CFR 254. The Fieldwood OSRP was approved on January 25, 2018. The latest revision was approved on July 26, 2018.

SPILL RESPONSE SITES

Primary Response Equipment Location	Preplanned Staging Location
Houma, LA Harvey, LA Leeville, LA	Houma, LA Harvey, LA Leeville, LA Port Fourchon, LA

C. OSRO INFORMATION

Fieldwood utilizes the Clean Gulf Associates (CGA) and the Marine Spill Response Corporation's (MSRC) STARS network as the primary providers for oil spill removal equipment. The MSRC STARS network provides for the closest available personnel, as well as an MSRC supervisor to operate the equipment.

D. WORST-CASE SCENARIO COMPARISON

The proposed activities are greater than ten miles seaward of the coastline, therefore, the "far-shore" worst case scenario is provided as the "drilling and/or production" worst case scenario.

Category	Drilling		Production	
	Regional OSRP WCD	DOCD WCD	Regional OSRP WCD	DOCD WCD
Type of Activity	>10 Mile Drilling	>10 Mile Drilling	>10 Mile Production	>10 Mile
Facility Location (Area/Block)	GC200	SS204	MC 948	SS204
Facility Designation	TA009	Platform A	Well No. 002 ST	Platform A
Distance to Nearest Shoreline (miles)	88	77	67	77
Volume				
Storage tanks (total)		660	0	660
Lease term pipelines		200	1445	200
Flowlines		50	0	50
Uncontrolled blowout	181,127	7408	40,435	930
Total Volume	181,127	8318	41,880	1840
Type of Oil(s) (crude, condensate, diesel)	Crude	Condensate	Crude	Condensate
API Gravity	30.3°	50°	30°	50°

** Please be advised that the calculations and assumptions for GC200 Regional OSRP WCD were submitted under Plan Control No. S-7899.

Fieldwood has determined that the worst-case scenario from the activities proposed in this Joint DOCD do not supersede the worst-case scenario from our approved Regional OSRP, therefore Fieldwood will not replace the worst-case scenario in our Regional OSRP.

I hereby certify that Fieldwood has the capability to respond, to the maximum extent practicable, to a worstcase discharge, or a substantial threat of such a discharge, resulting from the activities proposed in this Joint DOCD.

In accordance with NTL 2015-N01, supporting documentation for the calculations and assumptions used to determine the worst case discharge for the activities proposed in this plan is included as **Attachment I-1**.

E. OIL SPILL RESPONSE DISCUSSION (NEPA ANALYSIS)

The Oil Spill Response Discussion is enclosed as **Attachment I-1.**

SPILL RESPONSE DISCUSSION

For the purpose of NEPA and Coastal Zone Management Act analysis, the largest spill volume originating from the proposed activity would be a well blowout during drilling operations, estimated to be 8,318 barrels of condensate with an API gravity of 50°.

Land Segment and Resource Identification

Trajectories of a spill and the probability of it impacting a land segment have been projected utilizing information in the BOEM Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on the BOEM website. The results are shown in **Figure 1.** The BOEM OSRAM identifies a 1% probability of impact to the shorelines of Terrebonne Parish, Louisiana within 3 days. Terrebonne Parish includes the eastern portion of Atchafalaya National Wildlife Refuge across to Timbalier Bay. The Terrebonne parish also includes the area along the Gulf Coast including Caillou Bay, Isles Dernieres and Terrebonne Bay. The entire parish is classified as an EPA National Estuary. This area is primarily marshland, broken up by numerous small bays and freshwater lakes.

Response

Fieldwood Energy LLC will make every effort to respond to the Worst Case Discharge as effectively as practicable. A description of the response equipment under contract to contain and recover the Worst Case Discharge is shown in **Figure 2.**

Using the estimated chemical and physical characteristics of condensate, an ADIOS weathering model was run on a similar product from the ADIOS oil database. The results indicate 52% or approximately 4,325 barrels of condensate would be evaporated/dispersed within 24 hours, with approximately 3,993 barrels remaining.

Natural Weathering: SS 204, Platform A	**Barrels of Oil**
WCD Volume	8,318
Less 52% natural evaporation/dispersion	4,325
Remaining volume	3,993

Figure 2 outlines equipment, personnel, materials and support vessels as well as temporary storage equipment available to respond to the worst case discharge. The volume accounts for the amount remaining after evaporation/dispersion at 24 hours. The list estimates individual times needed for procurement, load out, travel time to the site and deployment. **Figure 2** also indicates how operations will be supported.

Fieldwood Energy LLC's Oil Spill Response Plan includes alternative response technologies such as dispersants. Strategies will be decided by Unified Command based on a safety analysis, the size of the spill, weather and potential impacts. Although unlikely, if aerial dispersants are utilized, 8 sorties (9,600 gallons) from two of the DC-3 aircrafts and 4 sorties (8,000 gallons)

Attachment Q-1

from the Basler aircraft would provide a daily dispersant capability of 7,540 barrels. Slick containment boom and sorbent boom would be immediately called out and on-scene as soon as possible. Offshore response strategies may include collection of condensate with sorbent boom (inside hard boom), attempting to skim utilizing CGA spill response equipment, with a total derated skimming capacity of 107,672 barrels. Temporary storage associated with skimming equipment equals 4,649 barrels. If additional storage is needed, various storage barges with a total capacity 107,000 bbls may be mobilized and centrally located to provide temporary storage and minimize off-loading time. **Safety is first priority. Air monitoring will be accomplished and operations deemed safe prior to any containment/skimming attempts.**

If the spill went unabated, shoreline impact in Terrebonne Parish, Louisiana would depend upon existing environmental conditions. Shoreline protection would include the use of CGA's near shore and shallow water skimmers with a totaled derated skimming capacity of 41,268 barrels. Temporary storage associated with skimming equipment equals 550 barrels. If additional storage is needed, various storage barges with a total capacity 46,000 bbls may be mobilized and centrally located to provide temporary storage and minimize off-loading time. Onshore response may include the deployment of shoreline boom on beach areas, or protection and sorbent boom on vegetated areas. Letters of Intent from AMPOL and OMI Environmental will ensure access to 165,000 feet of 18" shoreline protection boom. **Figure 2** outlines individual times needed for procurement, load out, travel time to the site and deployment. Strategies would be based upon surveillance and real time trajectories that depict areas of potential impact given actual sea and weather conditions. Applicable Area Contingency Plans (ACPs), Geographic Response Plans (GRPs), and Unified Command (UC) will be consulted to ensure that environmental and special economic resources are correctly identified and prioritized to ensure optimal protection. Shoreline protection strategies depict the protection response modes applicable for oil spill clean-up operations. As a secondary resource, the State of Louisiana Initial Oil Spill Response Plan will be consulted as appropriate to provide detailed shoreline protection strategies and describe necessary action to keep the oil spill from entering Louisiana's coastal wetlands. The UC should take into consideration all appropriate items detailed in Tactics discussion of this Appendix. The UC and their personnel have the option to modify the deployment and operation of equipment to allow for a more effective response to site-specific circumstances. Fieldwood Energy LLC's contract Spill Management Team has access to the applicable ACP(s) and GRP(s).

Based on the anticipated worst case discharge scenario, Fieldwood Energy LLC can be onsite with contracted oil spill recovery equipment with adequate response capacity to contain and recover surface hydrocarbons, and prevent land impact, to the maximum extent practicable, within an estimated 60 hours (based on the equipment's Effective Daily Recovery Capacity (EDRC)).

Initial Response Considerations

Actual actions taken during an oil spill response will be based on many factors to include but not be limited to:

- Safety
- Weather
- Equipment and materials availability
- Ocean currents and tides
- Location of the spill
- Product spilled
- Amount spilled
- Environmental risk assessments
- Trajectory and product analysis
- Well status, i.e., shut in or continual release

Fieldwood Energy LLC will take action to provide a safe, aggressive response to contain and recover as much of the spilled oil as quickly as it is safe to do so. In an effort to protect the environment, response actions will be designed to provide an "in-depth" protection strategy meant to recover as much oil as possible as far from environmentally sensitive areas as possible. Safety will take precedence over all other considerations during these operations.

Coordination of response assets will be supervised by the designation of a SIMOPS group as necessary for close quarter vessel response activities. Most often, this group will be used during source control events that require a significant number of large vessels operating independently to complete a common objective, in close coordination and support of each other. This group must also monitor the subsurface activities of each vessel (ROV, dispersant application, well control support, etc.). The SIMOPS group leader reports to the Source Control Section Chief.

In addition, these activities will be monitored by the spill management team (SMT) and Unified Command via a structured Common Operating Picture (COP) established to track resource and slick movement in real time.

Upon notification of a spill, the following actions will be taken:

- Information will be confirmed
- An assessment will be made and initial objectives set
- OSROs and appropriate agencies will be notified
- ICS 201, Initial Report Form completed
- Initial Safety plan will be written and published
- Unified Command will be established
    - Overall safety plan developed to reflect the operational situation and coordinated objectives
    - Areas of responsibility established for Source Control and each surface operational site
    - On-site command and control established

Offshore Response Actions

Equipment Deployment

Surveillance

- Surveillance Aircraft: within two hours of QI notification, or at first light
- Provide trained observer to provide on site status reports
- Provide command and control platform at the site if needed
- Continual surveillance of oil movement by remote sensing systems, aerial photography and visual confirmation
- Continual monitoring of vessel assets using vessel monitoring systems

Dispersant application assets

- Put ASI on standby
- With the FOSC, conduct analysis to determine appropriateness of dispersant application (refer to Section 18)
- Gain FOSC approval for use of dispersants on the surface
- Deploy aircraft in accordance with a plan developed for the actual situation
- Coordinate movement of dispersants, aircraft, and support equipment and personnel
- Confirm dispersant availability for current and long range operations
- Start ordering dispersant stocks required for expected operations

Containment boom

- Call out early and expedite deployment to be on scene ASAP
- Ensure boom handling and mooring equipment is deployed with boom
- Provide continuing reports to vessels to expedite their arrival at sites that will provide for their most effective containment
- Use Vessels of Opportunity (VOO) to deploy and maintain boom

Oceangoing Boom Barge

- Containment at the source
- Increased/enhanced skimmer encounter rate
- Protection booming

In-situ Burn assets

- Determine appropriateness of in-situ burn operation in coordination with the FOSC and affected SOSC
- Determine availability of fire boom and selected ignition systems
- Start ordering fire boom stocks required for expected operations
- Contact boom manufacturer to provide training & tech support for operations, if required
- Determine assets to perform on water operation
- Build operations into safety plan
- Conduct operations in accordance with an approved plan
- Initial test burn to ensure effectiveness

Dedicated off-shore skimming systems
General

- Deployed to the highest concentration of oil
- Assets deployed at safe distance from aerial dispersant and in-situ burn operations

CGA HOSS Barge

- Use in areas with heaviest oil concentrations
- Consider for use in areas of known debris (seaweed, and other floating materials)

CGA 95' Fast Response Vessels (FRVs)

- Designed to be a first vessel on scene
- Capable of maintaining the initial Command and Control function for on water recovery operations
- 24 hour oil spill detection capability
- Highly mobile and efficient skimming capability
- Use as far off-shore as safely possible

CGA FRUs

- To the area of the thickest oil
- Use as far off-shore as allowed
- VOOs 140' – 180' in length
- VOOs with minimum of 18' x 38' or 23' x 50' of optimum deck space
- VOOs in shallow water should have a draft of <10 feet when fully loaded

T&T Koseq Skimming Systems

- To the area of the thickest oil
- Use as far off-shore as allowed
- VOOs with a minimum of 2,000 bbls storage capacity
- VOOs at least 200' in length
- VOOs with deck space of 100' x 40' to provide space for arms, tanks, and crane
- VOOs for shallow water should be deck barges with a draft of <10 feet when fully loaded

Storage Vessels

- Establish availability of CGA contracted assets (See Appendix E)
- Early call out (to allow for tug boat acquisition and deployment speeds)
- Phase mobilization to allow storage vessels to arrive at the same time as skimming systems
- Position as closely as possible to skimming assets to minimize offloading time

Vessels of Opportunity (VOO)

- Use Fieldwood Energy LLC's contracted resources as applicable
- Industry vessels are ideal for deployment of Vessel of Opportunity Skimming Systems (VOSS)
- Acquire additional resources as needed
- Consider use of local assets, i.e. fishing and pleasure craft for ISB operations or boom tending
- Expect mission specific and safety training to be required
- Plan with the US Coast Guard for vessel inspections
- Place VOOs in Division or Groups as needed
- Use organic on-board storage if appropriate
- Maximize non-organic storage appropriate to vessel limitations
- Decant as appropriate after approval to do so has been granted
- Assign bulk storage barges to each Division/Group
- Position bulk storage barges as close to skimming units as possible
- Utilize large skimming vessel (e.g. barges) storage for smaller vessel offloading
- Maximize skimming area (swath) to the optimum width given sea conditions and available equipment
- Maximize use of oleophilic skimmers in all operations, but especially offshore
- Nearshore, use shallow water barges and shuttle to skimming units to minimize offloading time
- Plan and equip to use all offloading capabilities of the storage vessel to minimize offloading time

Adverse Weather Operations:

In adverse weather, when seas are $\geq$ 3 feet, the use of larger recovery and storage vessels, oleophilic skimmers, and large offshore boom will be maximized. KOSEQ Arm systems are built for rough conditions, and they should be used until their operational limit (9.8' seas) is met. Safety will be the overriding factor in all operations and will cease at the order of the Unified Command, vessel captain, or in an emergency, "stop work" may be directed by any crew member.

Surface Oil Recovery Considerations and Tactics
(Offshore and Near-shore Operations)

Maximization of skimmer-oil encounter rate

- Place barges in skimming task forces, groups, etc., to reduce recovered oil offloading time
- Place barges alongside skimming systems for immediate offloading of recovered oil when practicable
- Use two vessels, each with heavy sea boom, in an open-ended "V" configuration to funnel surface oil into a trailing skimming unit's organic, V-shaped boom and skimmer (see page 7, *CGA Equipment Guide Book and Tactic Manual* (CGATM)

- Use secondary vessels and heavy sea boom to widen boom swath beyond normal skimming system limits (see page 15, CGATM)
- Consider night-time operations, first considering safety issues
- Utilize all available advanced technology systems (IR, X-Band Radar, etc.) to determine the location of, and move to, recoverable oil
- Confirm the presence of recoverable oil prior to moving to a new location

Maximize skimmer system efficiency

- Place weir skimming systems in areas of calm seas and thick oil
- Maximize the use of oleophilic skimming systems in heavier seas
- Place less mobile, high EDRC skimming systems (e.g. HOSS Barge) in the largest pockets of the heaviest oil
- Maximize onboard recovered oil storage for vessels.
- Obtain authorization for decanting of recovered water as soon as possible
- Use smaller, more agile skimming systems to recover streamers of oil normally found farther from the source. Place recovered oil barges nearby

Recovered Oil Storage

- Smaller barges in larger quantities will increase flexibility for multi-location skimming operations
- Place barges in skimming task forces, groups, etc., to reduce recovered oil offloading time
- Procure and deploy the maximum number of portable tanks to support Vessel of Opportunity Skimming Systems if onboard storage is not available
- Maximize use of the organic recovered oil storage capacity of the skimming vessel

Command, Control, and Communications (C^3)

- Publish, implement, and fully test an appropriate communications plan
- Design an operational scheme, maintaining a manageable span of control
- Designate and mark C^3 vessels for easy aerial identification
- Designate and employ C^3 aircraft for task forces, groups, etc.
- Use reconnaissance air craft and Rapid Response Teams (RAT) to confirm the presence of recoverable oil

On Water Recovery Group
When the first skimming vessel arrives on scene, a complete site assessment will be conducted before recovery operations begin. Once it is confirmed that the air monitoring readings for O2, LEL, H2S, CO, VOC, and Benzene are all within the permissible limits, oil recovery operations may begin.

As skimming vessels arrive, they will be organized to work in areas that allow for the most efficient vessel operation and free vessel movement in the recovery of oil. Vessel groups will vary in structure as determined by the Operations Section of the Unified Command, but will generally consist, at a minimum, of the following dedicated assets:

- 3 to 5 – Offshore skimming vessels (recovery)
- 1 – Tank barge (temporary storage)
- 1 – Air asset (tactical direction)
- 2 – Support vessels (crew/utility for supply)
- 6 to 10 – Boom vessels (enhanced booming)

***Example** (**Note:** Actual organization of TFs will be dependent on several factors including, asset availability, weather, spilled oil migration, currents, etc.)*

The 95' FRV Breton Island out of Venice arrives on scene and conducts an initial site assessment. Air monitoring levels are acceptable and no other visual threats have been observed. The area is cleared for safe skimming operations. The Breton Island assumes command and control (CoC) of on-water recovery operations until a dedicated non-skimming vessel arrives to relieve it of those duties.

A second 95' FRV arrives and begins recovery operations alongside the Breton Island. Several more vessels begin to arrive, including a third 95' FRV out of Galveston, the HOSS Barge (High Volume Open Sea Skimming System) out of Harvey, a boom barge (CGA 300) with 25,000' of 42" auto boom out of Leeville, and 9 Fast Response Units (FRUs) from the load-out location at C-Port in Port Fourchon.

As these vessels set up and begin skimming, they are grouped into task forces (TFs) as directed by the Operations Section of the Unified Command located at the command post.

Initial set-up and potential actions:

- A 1,000 meter safety zone has been established around the incident location for vessels involved in Source Control
- The HOSS Barge is positioned facing the incident location just outside of this safety zone or at the point where the freshest oil is reaching the surface
- The HOSS Barge engages its Oil Spill Detection (OSD) system to locate the heaviest oil and maintains that ability for 24-hour operations

- The HOSS Barge deploys 1,320' of 67" Sea Sentry boom on each side, creating a swath width of 800'
- The Breton Island and H.I. Rich skim nearby, utilizing the same OSD systems as the HOSS Barge to locate and recover oil
- Two FRUs join this group and it becomes TF1
- The remaining 7 FRUs are split into a 2 and 3 vessel task force numbered TF2 and TF3
- A 95' FRV is placed in each TF
- The boom barge (CGA 300) is positioned nearby and begins deploying auto boom in sections between two utility vessels (1,000' to 3,000' of boom, depending on conditions) with chain-link gates in the middle to funnel oil to the skimmers
- The initial boom support vessels position in front of TF2 and TF3
- A 100,000+ barrel offshore tank barge is placed with each task force as necessary to facilitate the immediate offload of skimming vessels

The initial task forces (36 hours in) may be structured as follows:

TF 1

- 1 – 95' FRV
- 1 – HOSS Barge with 3 tugs
- 2 – FRUs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 8 – 500' sections of auto boom with gates
- 8 – Boom-towing vessels
- 2 – Support vessels (crew/utility)

TF 2

- 1 – 95' FRV
- 4 – FRUs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 10 – 500' sections of auto boom with gates
- 10 – Boom-towing vessels
- 2 – Support vessels (crew/utility)

TF 3

- 1 – 95' FRV
- 3 – FRUs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 8 – 500' sections of auto boom with gates
- 8 – Boom-towing vessels
- 2 – Support vessels (crew/utility)

Offshore skimming equipment continues to arrive in accordance with the ETA data listed in figure H.3a; this equipment includes 2 AquaGuard skimmers and 11 sets of Koseq Rigid Skimming Arms. These high volume heavy weather capable systems will be divided into functional groups and assigned to specific areas by the Operations Section of the Unified Command.

At this point of the response, the additional TFs may assume the following configurations:

TF 4

- 2 – Sets of Koseq Rigid Skimming Arms w/ associated 200'+ PIDVs
- 1 – AquaGuard Skimmer
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 2 – Support vessels (crew/utility)
- 6 – 500' sections of auto boom with gates
- 6 – Boom-towing vessels

TF 5

- 3 – Sets of Koseq Rigid Skimming Arms w/ associated 200'+ PIDVs
- 1 – AquaGuard Skimmer
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 2 – Support vessels (crew/utility)
- 8 – 500' sections of auto boom with gates
- 8 – Boom-towing vessels

TF 6

- 3 – Sets of Koseq Rigid Skimming Arms w/ associated 200'+ PIDVs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 2 – Support vessels (crew/utility)
- 6 – 500' sections of auto boom with gates
- 6 – Boom-towing vessels

TF 7

- 3 – Sets of Koseq Rigid Skimming Arms w/ associated 200'+ PIDVs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 2 – Support vessels (crew/utility)
- 6 – 500' sections of auto boom with gates
- 6 – Boom-towing vessels

CGA Minimum Acceptable Capabilities for Vessels of Opportunity (VOO)
Minimum acceptable capabilities of Petroleum Industry Designed Vessels (PIDV) for conducting Vessel of Opportunity (VOO) skimming operations are shown in the table below. PIDVs are "purpose-built" to provide normal support to offshore oil and gas operators. They include but are not limited to utility boats, offshore supply vessels, etc. They become VOOs when tasked with oil spill response duties.

Capability	FRU	KOSEQ	AquaGuard
Type of Vessel	Utility Boat	Offshore Supply Vessel	Utility Boat
Operating parameters			
Sea State	3-5 ft max	9.8 ft max	3-5 ft max
Skimming speed	≤1 kt	≤3 kts	≤1 kt
Vessel size			
Minimum Length	100 ft	200 ft	100 ft
Deck space for: • Tank(s) • Crane(s) • Boom Reels • Hydraulic Power Units • Equipment Boxes	18x32 ft	100x40 ft	18x32 ft
Communication Assets	Marine Band Radio	Marine Band Radio	Marine Band Radio

Tactical use of Vessels of Opportunity (VOO): Fieldwood Energy LLC will take all possible measures to maximize the oil-to-skimmer encounter rate of all skimming systems, to include VOOs, as discussed in this section. VOOs will normally be placed within an On-water recovery unit as shown in figures below.

Skimming Operations: PIDVs are the preferred VOO skimming platform. OSROs are more versed in operating on these platforms and the vessels are generally large enough with crews more likely versed in spill response operations. They also have a greater possibility of having on-board storage capacity and the most likely vessels to be under contract, and therefore more readily available to the operator. These vessels would normally be assigned to an on-water recovery group/division (see figure below) and outfitted with a VOSS suited for their size and capabilities. Specific tactics used for skimming operations would be dependent upon many parameters which include, but are not limited to, safety concerns, weather, type VOSS on board, product being recovered, and area of oil coverage. Planners would deploy these assets with the objective of safely maximizing oil- to-skimmer encounter rate by taking actions to minimize non-skimming time and maximizing boom swath. Specific tactical configurations are shown in figures below.

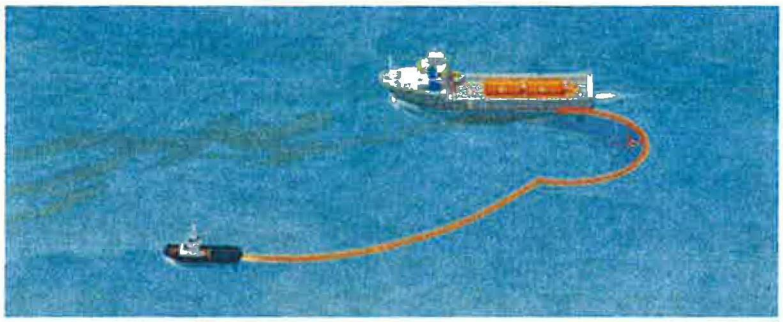
The Fast Response Unit (FRU): A self-contained, skid based, skimming system that is deployed from the right side of a vessel of opportunity (VOO). An outrigger holds a 75' long section of air inflatable boom in place that directs oil to an apex for recovery via a Foilex 250 weir skimmer. The outrigger creates roughly a 40' swath width dependent on the VOO beam. The lip of the collection bowl on the skimmer is placed as close to the oil and water interface as possible to maximize oil recovery and minimize water retention. The skimmer then pumps all fluids recovered to the storage tank where it is allowed to settle, and with the approval of the Coast Guard, the water is decanted from the bottom of the tank back into the water ahead of the containment boom to be recycled through the system. Once the tank is full of as much pure recovered oil as possible it is offloaded to a storage barge for disposal in accordance with an approved disposal plan. A second 100 barrel storage tank can be added if the appropriate amount of deck space is available to use as secondary storage.

Tactical Overview

Mechanical Recovery – The FRU is designed to provide fast response skimming capability in the offshore and nearshore environment in a stationary or advancing mode. It provides a rated daily recovery capacity of 4,100 barrels. An additional boom reel with 440' of offshore boom can be deployed along with the FRU, and a second support vessel for boom towing, to extend the swath width when attached to the end of the fixed boom. The range and sustainability offshore is dependent on the VOO that the unit is placed on, but generally these can stay offshore for extended periods. The FRU works well independently or assigned with other on-water recovery assets in a task force. In either case, it is most effective when a designated aircraft is assigned to provide tactical direction to ensure the best placement in recoverable oil.
Maximum Sea Conditions – Under most circumstances the FRU can maintain standard oil spill recovery operations in 2' to 4' seas. Ultimately, the Coast Guard licensed Captain in charge of the VOO (with input from the CGAS Supervisor assigned) will be responsible to determine when the sea conditions have surpassed the vessel's safe operating capabilities.

Possible Task Force Configuration (Multiple VOOs can be deployed in a task force)
1 – VOO (100' to 165' Utility or Supply Vessel)
1 – Boom reel w/support vessel for towing
1 – Tank barge (offshore) for temporary storage
1 – Utility/Crewboat (supply)
1 – Designated spotter aircraft

The VOSS (yellow) is being deployed and connected to an out-rigged arm. This is suitable for collection in both large pockets of oil and for recovery of streaming oil. The oil-to-skimmer encounter rate is limited by the length of the arm. Skimming pace is $\leq$ 1 knot.



Through the use of an additional VOO, and using extended sea boom, the swath of the VOSS is increased therefore maximizing the oil-to-skimmer encounter rate. Skimming pace is $\leq$ 1 knot.

The Koseq Rigid Sweeping Arm: A skimming system deployed on a vessel of opportunity. It requires a large Offshore or Platform Supply Vessel (OSV/PSV), greater than 200' with at least 100' x 50' of free deck space. On each side of the vessel, a 50' long rigid framed Arm is deployed that consists of pontoon chambers to provide buoyancy, a smooth nylon face, and a hydraulically adjustable mounted weir skimmer. The Arm floats independently of the vessel and is attached by a tow bridle and a lead line. The movement of the vessel forward draws the rubber end seal of the arm against the hull to create a collection point for free oil directed to the weir by the Arm face. The collection weir is adjusted to keep the lip as close to the oil water interface as possible to maximize oil recovery while attempting to minimize excess water collection. A transfer pump (combination of positive displacement, screw type and centrifuge suited for highly viscous oils) pump the recovered liquid to portable tanks and/or dedicated fixed storage tanks onboard the vessel. After being allowed to sit and separate, with approval from the Coast Guard, the water can be decanted (pumped off) in front of the collection arm to be reprocessed through the system. Once full with as much pure recovered oil as possible, the oil is transferred to a temporary storage barge where it can be disposed of in accordance with an approved disposal plan.

Tactical Overview

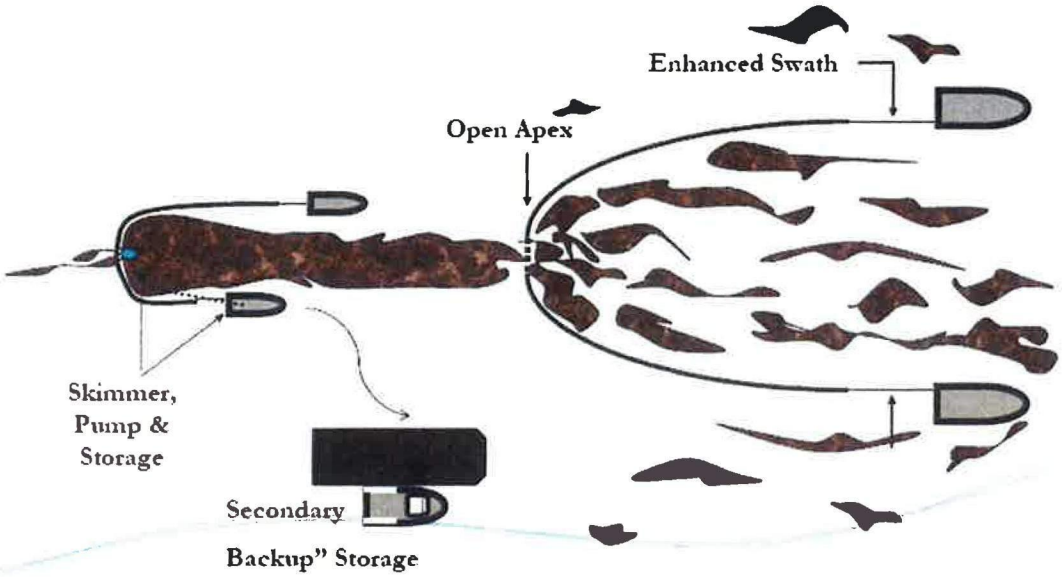
Mechanical Recovery – Deployed on large vessels of opportunity (VOO) the Koseq Rigid Sweeping Arms are high volume surge capacity deployed to increase recovery capacity at the source of a large oil spill in the offshore and outer nearshore environment of the Gulf of Mexico. They are highly mobile and sustainable in rougher sea conditions than normal skimming vessels (9.8' seas). The large Offshore Supply Vessels (OSV) required to deploy the Arms are able to remain on scene for extended periods, even when sea conditions pick up. Temporary storage on deck in portable tanks usually provides between 1,000 and 3,000 bbls. In most cases, the OSV will be able to pump 20% of its deadweight into the liquid mud tanks in accordance with the vessels Certificate of Inspection (COI). All storage can be offloaded utilizing the vessels liquid transfer system.

Maximum Sea Conditions - Under most circumstances the larger OSVs are capable of remaining on scene well past the Skimming Arms maximum sea state of 9.8'. Ultimately it will be the decision of the VOO Captain, with input from the T&T Supervisor onboard, to determine when the sea conditions have exceeded the safe operating conditions of the vessel.

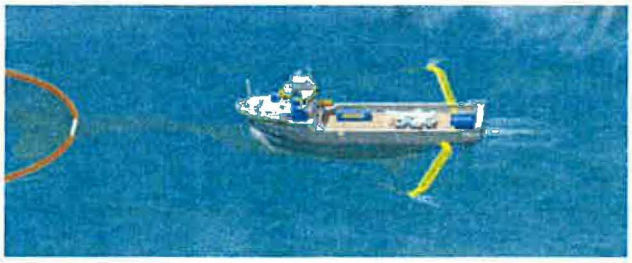
Command and Control – The large OSVs in many cases have state of the art communication and electronic systems, as well as the accommodations to support the function of directing all skimming operations offshore and reporting back to the command post.

Possible Task Force Configuration (Multiple Koseq VOOs can be deployed in a task force)

1 – ≥ 200' Offshore Supply Vessels (OSV) with set of Koseq Arms
2 to 4 portable storage tanks (500 bbl)
1 – Modular Crane Pedestal System set (MCPS) or 30 cherry picker (crane) for deployment
1 – Tank barge (offshore) for temporary storage
1 – Utility/Crewboat (supply)
1 – Designated spotter aircraft
4 – Personnel (4 T&T OSRO)



Scattered oil is "caught" by two VOO and collected at the apex of the towed sea boom. The oil moves thought a "gate" at that apex, forming a larger stream of oil which moves into the boom of the skimming vessel. Operations are paced at >1. A recovered oil barge stationed nearby to minimize time taken to offload recovered oil.



This is a depiction of the same operation as above but using KOSEQ Arms. In this configuration, the collecting boom speed dictates the operational pace at $\geq$ 1 knot to minimize entrainment of the oil.

Clean Gulf Associates (CGA) Procedure for Accessing Member-Contracted and other Vessels of Opportunity (VOOs) for Spill Response

- CGA has procedures in place for CGA member companies to acquire vessels of opportunity (VOOs) from an existing CGA member's contracted fleet or other sources for the deployment of CGA portable skimming equipment including Koseq Arms, Fast Response Units (FRUs) and any other portable skimming system(s) deemed appropriate for the response for a potential or actual oil spill, WCD oil spill or a Spill of National Significance (SONS).

- CGA uses Port Vision, a web-based vessel and terminal interface that empowers CGA to track vessels through Automatic Identification System (AIS) and terminal activities using a Geographic Information System (GIS). It provides live AIS/GIS views of waterways showing current vessel positions, terminals, created vessel fleets, and points-of-interest. Through this system, CGA has the ability to get instant snapshots of the location and status of all vessels contracted to CGA members, day or night, from any web-enabled PC.

Near Shore Response Actions

Timing

- Put near shore assets on standby and deployment in accordance with planning based on the actual situation, actual trajectories and oil budgets
- VOO identification and training in advance of spill nearing shoreline if possible
- Outfitting of VOOs for specific missions
- Deployment of assets based on actual movement of oil

Considerations

- Water depth, vessel draft
- Shoreline gradient
- State of the oil
- Use of VOOs
- Distance of surf zone from shoreline

Surveillance

- Provide trained observer to direct skimming operations
- Continual surveillance of oil movement by remote sensing systems, aerial photography and visual confirmation
- Continual monitoring of vessel assets

Dispersant Use

- Generally will not be approved within 3 miles of shore or with less than 10 meters of water depth
- Approval would be at Regional Response Team level (Region 6)

Dedicated Near Shore skimming systems

- FRVs
- Egmopol and Marco SWS
- Operate with aerial spotter directing systems to observed oil slicks

VOO

- Use Fieldwood Energy LLC's contracted resources as applicable
- Industry vessel are usually best for deployment of Vessel of Opportunity Skimming Systems (VOSS)
- Acquire additional resources as needed
- Consider use of local assets, i.e. fishing and pleasure craft
- Expect mission specific and safety training to be required
- Plan with the US Coast Guard for vessel inspections
- Operate with aerial spotter directing systems to oil patches

Shoreline Protection Operations

Response Planning Considerations

- Review appropriate Area Contingency Plan(s)
- Locate and review appropriate Geographic Response and Site Specific Plans
- Refer to appropriate Environmentally Sensitive Area Maps
- Capability for continual analysis of trajectories run periodically during the response
- Environmental risk assessments (ERA) to determine priorities for area protection
- Time to acquire personnel and equipment and their availability
- Refer to the State of Louisiana Initial Oil Spill Response Plan, Deep Water Horizon, dated 2 May 2010, as a secondary reference
- Aerial surveillance of oil movement
- Pre-impact beach cleaning and debris removal
- Shoreline Cleanup Assessment Team (SCAT) operations and reporting procedures
- Boom type, size and length requirements and availability
- Possibility of need for In-situ burning in near shore areas
- Current wildlife situation, especially status of migratory birds and endangered species in the area
- Check for Archeological sites and arrange assistance for the appropriate state agency when planning operations the may impact these areas

Placement of boom

- Position boom in accordance with the information gained from references listed above and based on the actual situation
- Determine areas of natural collection and develop booming strategies to move oil into those areas
- Assess timing of boom placement based on the most current trajectory analysis and the availability of each type of boom needed. Determine an overall booming priority and conduct booming operations accordingly. Consider:
    - Trajectories
    - Weather forecast
    - Oil Impact forecast
    - Verified spill movement
    - Boom, manpower and vessel (shallow draft) availability
    - Near shore boom and support material, (stakes, anchors, line)

Beach Preparation - Considerations and Actions

- Use of a 10 mile go/no go line to determine timing of beach cleaning
- SCAT reports and recommendations
- Determination of archeological sites and gaining authority to enter
- Monitoring of tide tables and weather to determine extent of high tides
- Pre cleaning of beaches by moving waste above high tide lines to minimize waste

- Determination of logistical requirements and arranging of waste removal and disposal
- Staging of equipment and housing of response personnel as close to the job site as possible to maximize on-site work time
- Boom tending, repair, replacement and security (use of local assets may be advantageous)
- Constant awareness of weather and oil movement for resource re-deployment as necessary
- Earthen berms and shoreline protection boom may be considered to protect sensitive inland areas
- Requisitioning of earth moving equipment
- Plan for efficient and safe use pf personnel, ensuring:
    - A continual supply of the proper Personal Protective Equipment
    - Heating or cooling areas when needed
    - Medical coverage
    - Command and control systems (i.e. communications)
    - Personnel accountability measures
- Remediation requirements, i.e., replacement of sands, rip rap, etc.
- Availability of surface washing agents and associated protocol requirements for their use (see National Contingency Plan Product Schedule for list of possible agents)
- Discussions with all stakeholders, i.e., land owners, refuge/park managers, and others as appropriate, covering the following:
    - Access to areas
    - Possible response measures and impact of property and ongoing operations
    - Determination of any specific safety concerns
    - Any special requirements or prohibitions
    - Area security requirements
    - Handling of waste
    - Remediation expectations
    - Vehicle traffic control
    - Domestic animal safety concerns
    - Wildlife or exotic game concerns/issues

Inland and Coastal Marsh Protection and Response Considerations and Actions

- All considered response methods will be weighed against the possible damage they may do to the marsh. Methods will be approved by the Unified Command only after discussions with local Stakeholder, as identified above.
    - In-situ burn may be considered when marshes have been impacted
- Passive clean up of marshes should considered and appropriate stocks of sorbent boom and/or sweep obtained.
- Response personnel must be briefed on methods to traverse the marsh, i.e.,
    - use of appropriate vessel
    - use of temporary walkways or road ways
- Discuss and gain approval prior cutting or moving vessels through vegetation
- Discuss use of vessels that may disturb wildlife, i.e, airboats

- Safe movement of vessels through narrow cuts and blind curves
- Consider the possibility that no response in a marsh may be best
- In the deployment of any response asset, actions will be taken to ensure the safest, most efficient operations possible. This includes, but is not limited to:
    - Placement of recovered oil or waste storage as near to vessels or beach cleanup crews as possible.
    - Planning for stockage of high use items for expeditious replacement
    - Housing of personnel as close to the work site as possible to minimize travel time
    - Use of shallow water craft
    - Use of communication systems appropriate ensure command and control of assets
    - Use of appropriate boom in areas that I can offer effective protection
    - Planning of waste collection and removal to maximize cleanup efficiency
- Consideration or on-site remediation of contaminated soils to minimize replacement operations and impact on the area

Decanting Strategy

Recovered oil and water mixtures will typically separate into distinct phases when left in a quiescent state. When separation occurs, the relatively clean water phase can be siphoned or decanted back to the recovery point with minimal, if any, impact. Decanting therefore increases the effective on-site oil storage capacity and equipment operating time. FOSC/SOSC approval will be requested prior to decanting operations. This practice is routinely used for oil spill recovery.

CGA Equipment Limitations

The capability for any spill response equipment, whether a dedicated or portable system, to operate in differing weather conditions will be directly in relation to the capabilities of the vessel the system in placed on. Most importantly, however, the decision to operate will be based on the judgment of the Unified Command and/or the Captain of the vessel, who will ultimately have the final say in terminating operations. Skimming equipment listed below may have operational limits which exceed those safety thresholds. As was seen in the Deepwater Horizon (DWH) oil spill response, vessel skimming operations ceased when seas reached 5-6 feet and vessels were often recalled to port when those conditions were exceeded. Systems below are some of the most up-to-date systems available and were employed during the DWH spill.

Boom	3 foot seas, 20 knot winds
Dispersants	Winds more than 25 knots Visibility less than 3 nautical miles Ceiling less than 1,000 feet.
FRU	8 foot seas
HOSS Barge/OSRB	8 foot seas
Koseq Arms	8 foot seas
OSRV	4 foot seas

Environmental Conditions in the GOM

Louisiana is situated between the easterly and westerly wind belts, and therefore, experiences westerly winds during the winter and easterly winds in the summer. Average wind speed is generally 14-15 mph along the coast. Wave heights average 4 and 5 feet. However, during hurricane season, Louisiana has recorded wave heights ranging from 40 to 50 feet high and winds reaching speeds of 100 mph. Because much of southern Louisiana lies below sea level, flooding is prominent.

Surface water temperature ranges between 70 and 80 ° F during the summer months. During the winter, the average temperature will range from 50 and 60 ° F.

The Atlantic and Gulf of Mexico hurricane season is officially from 1 June to 30 November. 97% of all tropical activity occurs within this window. The Atlantic basin shows a very peaked season from August through October, with 78% of the tropical storm days, 87% of the minor (Saffir-Simpson Scale categories 1 and 2) hurricane days, and 96% of the major (Saffir-Simpson categories 3, 4 and 5) hurricane days occurring then. Maximum activity is in early to mid September. Once in a few years there may be a hurricane occurring "out of season" - primarily in May or December. Globally, September is the most active month and May is the least active month.

FIGURE 1
TRAJECTORY BY LAND SEGMENT

Trajectory of a spill and the probability of it impacting a land segment have been projected utilizing Fieldwood Energy LLC's WCD and information in the BOEM Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on the BOEM website using 3 day impact. The results are tabulated below.

Area/Block	OCS-G	Launch Area	Land Segment and/or Resource	Conditional Probability (%) within 3 days
SS 204, Platform A *77 miles from shore*	G01520	C38	**Terrebonne, LA**	**1**

WCD Scenario– BASED ON WELL BLOWOUT DURING DRILLING OPERATIONS (77 miles from shore)
3,993 bbls of condensate (Volume considering natural weathering)
API Gravity 50°

FIGURE 2 – Equipment Response Time to SS 204, Platform A

Dispersants/Surveillance

Dispersant/Surveillance	Dispersant Capacity (gal)	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to site	Total Hrs
ASI							
Basler 67T	2000	2	Houma	2	2	0.4	2.4
DC 3	1200	2	Houma	2	2	0.5	2.5
DC 3	1200	2	Houma	2	2	0.5	2.5
Aero Commander	NA	2	Houma	2	2	0.4	2.4

Offshore Response

Offshore Equipment Pre-Determined Staging	EDRC	Storage Capacity	VOO	Persons Required	From	Hrs to Procure	Hrs to Loadout	Hrs to GOM	Travel to Spill Site	Hrs to Deploy	Total Hrs
CGA											
HOSS Barge	76285	4000	3 Tugs	8	Harvey	7	0	5	5	1	18
95' FRV	22885	249	NA	6	Leeville	2	0	2	3.5	0	7.5
Boom Barge (CGA-300) 42" Auto Boom (25000')	NA	NA	1 Tug 50 Crew	4 (Barge) 2 (Per Crew)	Leeville	4	0	6	10	2	22
Enterprise Marine Services LLC (Available through contract with CGA)											
CTCo 2604	NA	20000	1 Tug	6	Amelia	36	12	4	7	1	60
CTCo 2605	NA	20000	1 Tug	6	Amelia	36	12	4	7	1	60
CTCo 2606	NA	20000	1 Tug	6	Amelia	36	12	4	7	1	60
CTCo 5001	NA	47000	1 Tug	6	Amelia	36	12	4	7	1	60

Staging Area: Fourchon

Offshore Equipment With Staging	EDRC	Storage Capacity	VOO	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Site	Hrs to Deploy	Total Hrs
CGA											
FRU (2) + 100 bbl Tank (4)	8502	400	2 Utility	12	Leeville	2	2	0.5	6	1	11.5

Nearshore Response

Nearshore Equipment Pre-determined Staging	EDRC	Storage Capacity	VOO	Persons Required	From	Hrs to Procure	Hrs to Loadout	Hrs to GOM	Travel to Spill Site	Hrs to Deploy	Total Hrs
CGA											
46' FRV	15257	65	NA	4	Morgan City	2	0	2	2.5	0	6.5
46' FRV	15257	65	NA	4	Venice	2	0	2	2.5	0	6.5
Enterprise Marine Services LLC (Available through contract with CGA)											
CTCo 2607	NA	23000	1 Tug	6	Amelia	36	12	4	7	1	60
CTCo 2608	NA	23000	1 Tug	6	Amelia	36	12	4	7	1	60

Staging Area: Fourchon

Nearshore Equipment With Staging	EDRC	Storage Capacity	VOO	Persons Req.	From	Hrs to Procure	Hrs to Load Out	Travel to Staging	Travel to Deployment	Hrs to Deploy	Total Hrs
CGA											
SWS Egmopol	1810	100	NA	3	Morgan City	2	2	3	2	0	9
SWS Marco	3588	34	NA	3	Leeville	2	2	0.5	2	0	6.5
SWS Marco	3588	34	NA	3	Venice	2	2	5	2	0	11
Rope Mop	77	2	0	3	Harvey	2	2	3	2	0	9
Foilex Skim Package (TDS 150)	1131	50	NA	3	Harvey	2	2	3	2	0	9
4 Drum Skimmer (Magnum	680	100	1 Crew	3	Harvey	2	2	3	2	0	9
2 Drum Skimmer (TDS 118)	240	100	1 Crew	3	Harvey	2	2	3	2	0	9

Shoreline Protection

Staging Area: Fourchon

Shoreline Protection Boom	VOO	Persons Req.	Storage/Warehouse Location	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Deployment Site	Hrs to Deploy	Total Hrs
AMPOL (available through Letter of Intent)									
34,050' 18" Boom	13 Crew	26	New Iberia, LA	2	2	4.1	2	12	22.1
12,000' 18" Boom	7 Crew	14	Chalmette, LA	2	2	3	2	6	15
900' 18" Boom	1 Crew	2	Morgan City, LA	2	2	3	2	2	11
30,000' 18" Boom	13 Crew	26	Harvey, LA	2	2	3	2	12	21
1,700' 18" Boom	2 Crew	4	Venice, LA	2	2	5	2	2	13
16,000' 18" Boom	7 Crew	14	Port Arthur, TX	2	2	9	2	6	21
OMI Environmental (available through Letter of Intent)									
12,500' 18" Boom	6 Crew	12	New Iberia, LA	1	1	4	2	3	11
6,400' 18" Boom	3 Crew	6	Houston, TX	1	1	11	2	3	18
3,500' 18" Boom	2 Crew	4	Port Arthur, TX	1	1	9	2	3	16
4,000' 18" Boom	2 Crew	4	Longview, TX	1	1	13	2	3	20
4,850' 18" Boom	2 Crew	4	Belle Chasse, LA	1	1	3	2	3	10
8,000' 18" Boom	3 Crew	6	Port Allen, LA	1	1	5	2	3	12
2,000' 18" Boom	1 Crew	2	Houma, LA	1	1	2	2	3	9
2,500' 18" Boom	1 Crew	2	Morgan City, LA	1	1	3	2	3	10
1,600' 18" Boom	1 Crew	2	Gonzalez, LA	1	1	4	2	3	11
1,900' 18" Boom	1 Crew	2	St. James, LA	1	1	3	2	3	10
2,000' 18" Boom	1 Crew	2	Galliano, LA	1	1	1	2	3	8
1,000' 18" Boom	1 Crew	2	St. Rose, LA	1	1	3	2	3	10
1,000' 18" Boom	1 Crew	2	Hackberry, LA	1	1	8	2	3	15
5,800' 18" Boom	3 Crew	6	Venice, LA	1	1	5	2	3	12
13,300' 18" Boom	6 Crew	12	Harvey, LA	1	1	3	2	3	10

Wildlife Response	EDRC	Storage Capacity	VOO	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Deployment	Hrs to Deploy	Total Hrs
					CGA						
Wildlife Support Trailer	NA	NA	NA	2	Harvey	2	2	3	1	2	10
Bird Scare Guns (24)	NA	NA	NA	2	Harvey	2	2	3	1	2	10
Bird Scare Guns (12)	NA	NA	NA	2	Galveston	2	2	12	1	2	19
Bird Scare Guns (12)	NA	NA	NA	2	Aransas Pass	2	2	16.5	1	2	23.5
Bird Scare Guns (48)	NA	NA	NA	2	Lake Charles	2	2	7	1	2	14
Bird Scare Guns (24)	NA	NA	NA	2	Leeville	2	2	0.5	1	2	7.5

Response Asset	Total
Offshore EDRC	107,672
Offshore Recovered Oil Capacity	111,649
Nearshore / Shallow Water EDRC	41,628
Nearshore / Shallow Water Recovered Oil Capacity	46,550

SECTION J
ENVIRONMENTAL MONITORING INFORMATION
(30 CFR 550.221 AND 550.252)

A. MONITORING SYSTEMS
There are no environmental monitoring systems currently in place or planned for the proposed activities.

B. INCIDENTAL TAKES
There is no reason to believe that any of the endangered species or marine mammals as listed in the ESA will be incidentally taken as a result of the operations proposed under this plan.

To date, it has been documented that the use of explosives and/or seismic devices can affect marine life. Operations proposed in this plan will not be utilizing either of these devices.

C. FLOWER GARDEN BANKS NATIONAL MARINE SANCTUARY
Ship Shoal Block 205 is not located in the Flower Garden Banks National Marine Sanctuary; therefore, the requested information is not required in this DOCD.

SECTION K
LEASE STIPULATIONS INFORMATION
(30 CFR 550.222 and 550.253)

Oil and gas development activities on the OCS are subject to stipulations developed before the lease sale and would be attached to the lease instrument, as necessary, in the form of mitigating measures. The BOEM is responsible for ensuring full compliance with stipulations.

Development activities are subject to the following stipulations attached to Lease OCS-G 35948, Ship Shoal.

Stipulation 3 Military Warning Area (MWA)
Ship Shoal 205 is located within designated MWA-59. The Naval Air Station will be contacted in order to coordinate and control the electromagnetic emissions during the proposed operations.

Stipulation 8 Marine Protected Species
Lease Stipulation No. 8 is meant to reduce the potential taking of marine protected species. Fieldwood will operate in accordance with NTL 2012-JOINT-G02, to minimize the risk of vessel strikes to protected species and report observations of injured or dead protected species, and the prevention of intentional and/or accidental introduction of debris into the marine environment.

SECTION L
ENVIRONMENTAL MITIGATION MEASURES INFORMATION
(30 CFR 550.224 and 550.257)

A. MEASURES TAKEN TO AVOID, MINIMIZE, AND MITIGATE IMPACTS

Activities in this DOCD do not impact the State of Florida.

B. INCIDENTAL TAKES

Fieldwood will adhere to the requirements as set forth in the following documents, as applicable, to avoid or minimize impacts to any of the species listed in the ESA as a result of the operations conducted herein:

- NTL 2015-G03 "Marine Trash and Debris Awareness and Elimination"
- NTL 2016-G01 "Vessel Strike Avoidance and Injured/Dead Protected Species Reporting"
- NTL 2016-G02 "Implementation of Seismic Survey Mitigation Measure & Protected Species Observer Program"

SECTION M
RELATED FACILITIES AND OPERATIONS INFORMATION
(30 CFR 550.256)

(A) RELATED OCS FACILITIES AND OPERATIONS
The subject wells will be protected by the SS204 A structure. An existing 6-inch oil/ gas right-of-way pipeline approximately seven (7) miles in length will used to transport produced hydrocarbons from Ship Shoal Block 204 Platform A to Ship Shoal Block 207 Platform A. The maximum flow rate is 350 BOPD. The pipelines will have a shut-in time of 60 seconds.

Fieldwood anticipates installing minimal processing equipment on this structure. All hydrocarbon handling equipment installed for testing and production operations will be designed, installed and operated to prevent pollution.

(B) TRANSPORTATION SYSTEM
Once departing Well location A or B in Ship Shoal Block 205, production will flow to the A platform in Ship Shoal Block 204 for ultimate recovery onshore.

(C) PRODUCED LIQUID HYDROCARBONS TRANSPORTATION VESSELS
Fieldwood will not transfer liquid hydrocarbons using any method other than via pipeline.

SECTION N
SUPPORT VESSELS AND AIRCRAFT INFORMATION
(30 CFR 250.224 and 250.257)

A. GENERAL

Fieldwood will travel the most practical, direct route from the shorebase to Ship Shoal Block 204 as permitted by weather and traffic conditions.

Type	Maximum Fuel Tank Capacity	Maximum Number in Area at Any Time	Trip Frequency or Duration
Tug Boats	3000 bbls	2	As needed
Anchor Handling Boat	1500 bbls	1	3 trips/week
Crew Boat	400 bbls	1	3 trips/week
Supply Boat	2380 bbls	1	3 trips/week
Helicopter	760 gallons	1	As Needed

B. DIESEL OIL SUPPLY VESSELS

Size of Fuel Supply Vessel	Capacity of Fuel Supply Vessel	Frequency of Fuel Transfers	Route Fuel Supply Vessel Will Take
240 Foot	2500 Barrels	2 per month	Shorebase to Ship Shoal 204

C. DRILLING FLUID TRANSPORTATION

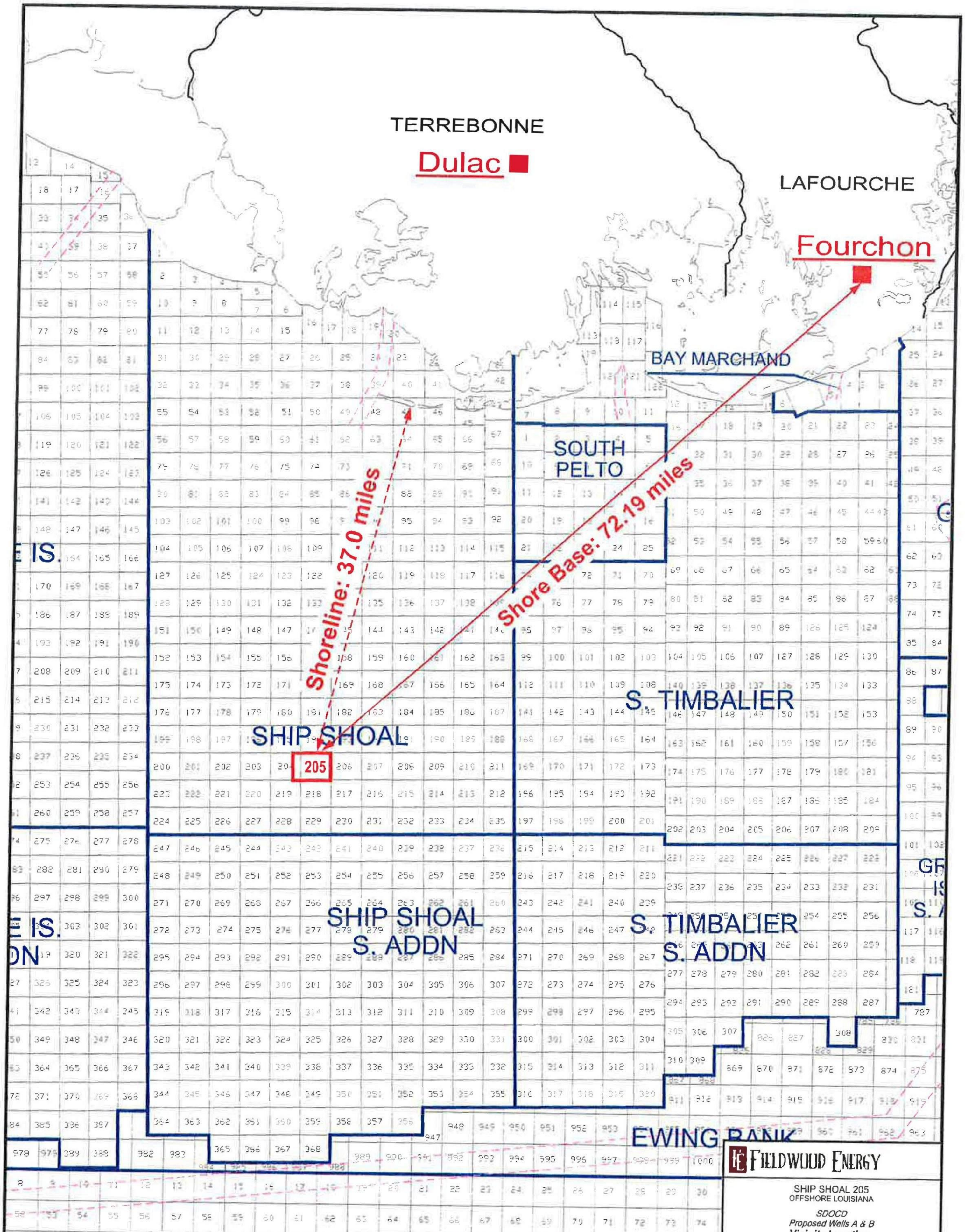
Not applicable, per NTL 2008-G04.

D. SOLID AND LIQUID WASTE TRANSPORTATION

Name/Location of Facility	Type of waste	Amount	Disposal Method
R360; Fourchon, LA	Completion Fluid	200 bbls	Environmental Drum/tote tank to shorebase; trucked to recycling facility
R360; Fourchon, LA	Trash and Debris	3000 cuft.	Storage bins to shorebase; trucked to recycling facility

E. VICINITY MAP

A vicinity map showing the location of the proposed activities relative to the shoreline, the distance of the proposed activities from the shoreline and the support base, and the primary route of the support vessels and aircraft that will be used when traveling between the onshore support facilities is included as **Attachment N-1**.



Attachment 11-A

SECTION O
ONSHORE SUPPORT FACILITIES INFORMATION
(30 CFR 550.225 and 550.258)

A. GENERAL
Provided in the table below is a list of the onshore facilities that will be used to provide supply and service support for the proposed activities:

Name	Location	Existing/New/Modified
Martin Terminal	Fourchon, LA	Existing

B. SUPPORT BASE CONSTRUCTION OR EXPANSION
Fieldwood does not propose any land acquisitions for the construction of an onshore support base, nor will we expand the existing shorebase as a result of the operations proposed in this DOCD.

C. SUPPORT BASE CONSTRUCTION OR EXPANSION TIMETABLE
There will be no new construction of an onshore support base, nor will we expand the existing shorebase as a result of the operations proposed in this DOCD.

D. WASTE DISPOSAL

Name/Location of Facility	Type of waste	Amount	Disposal Method
R360; Fourchon, LA	Completion Fluid	200 bbls	Environmental Drum/tote tank to shorebase; trucked to recycling facility
R360; Fourchon, LA	Trash and Debris	3000 cuft.	Storage bins to shorebase; trucked to recycling facility

SECTION P
COASTAL ZONE MANAGEMENT (CZMA) INFORMATION
(30 CFR 550.226 and 550.260)

Under the direction of the Coastal Zone Management Act (CZMA), 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 P-1**.

PUBLIC COPY

COASTAL ZONE MANAGEMENT CONSISTENCY CERTIFICATION

JOINT DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

SHIP SHOAL BLOCKS 204 (SL) & 205 (BHL)

LEASES OCS-G 01520 and OCS-G 35948

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

Fieldwood Energy Offshore LLC
Lessee or Operator

Melissa Duhon
Certifying Official

02/19/18
Date

SECTION Q
ENVIRONMENTAL IMPACT ANALYSIS (EIA)
(30 CFR 550.227 and 550.261)

The Environmental Impact Analysis is enclosed as **Attachment Q-1.**

Fieldwood Energy LLC

Initial Development Operations Coordination Document
Ship Shoal Block 205
OCS-G 035948

(A) IMPACT PRODUCING FACTORS

ENVIRONMENTAL IMPACT ANALYSIS WORKSHEET

Environment Resources	Impact Producing Factors (IPFs) Categories and Examples Refer to recent GOM OCS Lease Sale EIS for a more complete list of IPFs					
	Emissions (air, noise, light, etc.)	**Effluents (muds, cutting, other discharges to the water column or seafloor)**	**Physical disturbances to the seafloor (rig or anchor emplacements, etc.)**	**Wastes sent to shore for treatment or disposal**	**Accidents (e.g., oil spills, chemical spills, H_2S releases)**	**Discarded Trash & Debris**
Site-specific at Offshore Location						
Designated topographic features		(1)	(1)		(1)	
Pinnacle Trend area live bottoms		(2)	(2)		(2)	
Eastern Gulf live bottoms		(3)	(3)		(3)	
Benthic communities			(4)			
Water quality		X	X		X	
Fisheries		X	X		X	
Marine Mammals	X(8)	X			X(8)	X
Sea Turtles	X(8)	X			X(8)	X
Air quality	X(9)					
Shipwreck sites (known or potential)			(7)			
Prehistoric archaeological sites			X(7)			
Vicinity of Offshore Location						
Essential fish habitat		X	X		X(6)	
Marine and pelagic birds	X				X	X
Public health and safety					(5)	
Coastal and Onshore						
Beaches					X(6)	X
Wetlands					X(6)	
Shore birds and coastal nesting birds					X(6)	X
Coastal wildlife refuges					X	
Wilderness areas					X	

Attachment 1-1

Footnotes for Environmental Impact Analysis Matrix

1) Activities that may affect a marine sanctuary or topographic feature. Specifically, if the well or platform site or any anchors will be on the seafloor within the:
   - 4-mile zone of the Flower Garden Banks, or the 3-mile zone of Stetson Bank;
   - 1000-m, 1-mile or 3-mile zone of any topographic feature (submarine bank) protected by the Topographic Features Stipulation attached to an OCS lease;
   - Essential Fish Habitat (EFH) criteria of 500 ft. from any no-activity zone; or
   - Proximity of any submarine bank (500 ft. buffer zone) with relief greater than 2 meters that is not protected by the Topographic Features Stipulation attached to an OCS lease.
2) Activities with any bottom disturbance within an OCS lease block protected through the Live Bottom (Pinnacle Trend) Stipulation attached to an OCS lease.
3) Activities within any Eastern Gulf OCS block where seafloor habitats are protected by the Live Bottom (Low-Relief) Stipulation attached to an OCS lease.
4) Activities on blocks designated by the BOEM as being in water depths 300 meters or greater.
5) Exploration or production activities where H2S concentrations greater than 500 ppm might be encountered.
6) All activities that could result in an accidental spill of produced liquid hydrocarbons or diesel fuel that you determine would impact these environmental resources. If the proposed action is located a sufficient distance from a resource that no impact would occur, the EIA can note that in a sentence or two.
7) All activities that involve seafloor disturbances, including anchor emplacements, in any OCS block designated by the BOEM as having high-probability for the occurrence of shipwrecks or prehistoric sites, including such blocks that will be affected that are adjacent to the lease block in which your planned activity will occur. If the proposed activities are located a sufficient distance from a shipwreck or a prehistoric site that no impact would occur, the EIA can note that in a sentence or two.
8) All activities that you determine might have an adverse effect on endangered or threatened marine mammals or sea turtles or their critical habitats.
9) Production activities that involve transportation of produced fluids to shore using shuttle tankers or barges.

(B) ANALYSIS

Site-Specific at Ship Shoal Block 205

Proposed operations consist of the drilling and completion of two well locations from the existing Ship Shoal 204 A platform.

Operations will be conducted with a jackup.

1. Designated Topographic Features

Potential IPFs on topographic features include physical disturbances to the seafloor, effluents, and accidents.

Physical disturbances to the seafloor: Ship Shoal Block 205 is 29 miles from the closest designated Topographic Features Stipulation Block (Ewing Bank); therefore, no adverse impacts are expected.

Effluents: Ship Shoal Block 205 is 29 miles from the closest designated Topographic Features Stipulation Block (Ewing Bank); therefore, no adverse impacts are expected.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed activities (refer to statistics in **Item 5**, Water Quality). Oil spills cause damage to benthic organisms only if the oil contacts the organisms. Oil from a surface spill can be driven into the water column; measurable amounts have been documented down to a 10 m depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on corals. Because the crests of topographic features in the Northern Gulf of Mexico are found below 10 m, no oil from a surface spill could reach their sessile biota. Oil from a subsurface spill is not applicable due to the distance of these blocks from a topographic area. The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional OSRP (refer to information submitted in **Appendix I**).

There are no other IPFs (including emissions and wastes sent to shore for disposal) from the proposed activities, which could impact topographic features.

2. Pinnacle Trend Area Live Bottoms

Potential IPFs on pinnacle trend area live bottoms include physical disturbances to the seafloor, effluents, and accidents.

Physical disturbances to the seafloor: Ship Shoal Block 205 is 164 miles from the closest live bottom (pinnacle trend) area; therefore, no adverse impacts are expected.

Effluents: Ship Shoal Block 205 is 164 miles from the closest live bottom (pinnacle trend) area; therefore, no adverse impacts are expected.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed activities (refer to statistics in **Item 5**, Water Quality). Oil spills have the potential to foul benthic communities and cause lethal and sublethal effects on live bottom organisms. Oil from a surface spill can be driven into the water column; measurable amounts have been documented down to a 10 m depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on marine organisms. Oil from a subsurface spill is not applicable due to the distance of these blocks from a live bottom (pinnacle trend) area. The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional OSRP (refer to information submitted in **Appendix I**).

There are no other IPFs (including emissions and wastes sent to shore for disposal) from the proposed activities which could impact a live bottom (pinnacle trend) area.

3. Eastern Gulf Live Bottoms

Potential IPFs on Eastern Gulf live bottoms include physical disturbances to the seafloor, effluents, and accidents.

Physical disturbances to the seafloor: Ship Shoal Block 205 is not located in an area characterized by the existence of live bottoms, and this lease does not contain a Live-Bottom Stipulation requiring a photo documentation survey and survey report.

Effluents: Ship Shoal Block 205 is not located in an area characterized by the existence of live bottoms; therefore, no adverse impacts are expected.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed activities (refer to statistics in **Item 5**, Water Quality). Oil spills cause damage to live bottom organisms only if the oil contacts the organisms. Oil from a surface spill can be driven into the water column; measurable amounts have been documented down to a 10 m depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on marine invertebrates. Oil from a subsurface spill is not applicable due to the distance of these blocks from a live bottom area. The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional OSRP (refer to information submitted in **Appendix I**).

There are no other IPFs (including emissions and wastes sent to shore for disposal) from the proposed activities which could impact an Eastern Gulf live bottom area.

4. Benthic Communities

There are no IPFs (including emissions, physical disturbances to the seafloor, wastes sent to shore for disposal, or accidents) from the proposed activities that could cause impacts to benthic communities.

Operations proposed in this plan are in water depths of 107 feet. High-density benthic communities are found only in water depths greater than 984 feet (300 meters); therefore, Fieldwood Energy LLC's proposed operations in Ship Shoal Block 205 would not cause impacts to benthic communities.

5. Water Quality

IPFs that could result in water quality degradation from the proposed operations in Ship Shoal Block 205 include disturbances to the seafloor, effluents and accidents.

Physical disturbances to the seafloor: Bottom area disturbances resulting from the emplacement of drill rigs, the drilling of wells and the installation of platforms and pipelines would increase water-column turbidity and re-suspension of any accumulated pollutants, such as trace metals and excess nutrients. This would cause short-lived impacts on water quality conditions in the immediate vicinity of the emplacement operations.

Effluents: Levels of contaminants in drilling muds and cuttings and produced water discharges, discharge-rate restrictions and monitoring and toxicity testing are regulated by the EPA NPDES permit, thereby eliminating many significant biological or ecological effects. Operational discharges are not expected to cause significant adverse impacts to water quality.

Accidents: Oil spills have the potential to alter offshore water quality; however, it is unlikely that an accidental surface or subsurface spill would occur from the proposed activities. Between 1980 and 2000, OCS operations produced 4.7 billion barrels of oil and spilled only 0.001 percent of this oil, or 1 bbl for every 81,000 bbl produced. The spill risk related to a diesel spill from drilling operations is even less. Between 1976 and 1985, (years for which data were collected), there were 80 reported diesel spills greater than one barrel associated with drilling activities. Considering that there were 11,944 wells drilled, this is a 0.7 percent probability of an occurrence. If a spill were to occur, the water quality of marine waters would be temporarily affected by the dissolved components and small oil droplets. Dispersion by currents and microbial degradation would remove the oil from the water column and dilute the constituents to background levels. Historically, changes in offshore water quality from oil spills have only been detected during the life of the spill and up to several months afterwards. Most of the components of oil are insoluble in water and therefore float. The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional Oil Spill Response Plan (refer to information submitted in **Appendix I**).

There are no other IPFs (including emissions, physical disturbances to the seafloor, and wastes sent to shore for disposal) from the proposed activities which could cause impacts to water quality.

6. Fisheries

IPFs that could cause impacts to fisheries as a result of the proposed operations in Ship Shoal Block 205 include physical disturbances to the seafloor, effluents and accidents.

Physical disturbances to the seafloor: The emplacement of a structure or drilling rig results in minimal loss of bottom trawling area to commercial fishermen. Pipelines cause gear conflicts which result in losses of trawls and shrimp catch, business downtime and vessel damage. Most financial losses from gear conflicts are covered by the Fishermen's Contingency Fund (FCF). The emplacement and removal of facilities are not expected to cause significant adverse impacts to fisheries.

Effluents: Effluents such as drilling fluids and cuttings discharges contain components and properties which are detrimental to fishery resources. Moderate petroleum and metal contamination of sediments and the water column can occur out to several hundred meters down-current from the discharge point. Offshore discharges are expected to disperse and dilute to very near background levels in the water column or on the seafloor within 3,000 m of the discharge point, and are expected to have negligible effect on fisheries.

Accidents: An accidental oil spill has the potential to cause some detrimental effects on fisheries; however, it is unlikely that such an event would occur from the proposed activities (refer to **Item 5**, Water Quality). The effects of oil on mobile adult finfish or shellfish would likely be sublethal and the extent of damage would be reduced to the capacity of adult fish and shellfish to avoid the spill, to metabolize hydrocarbons, and to excrete both metabolites and parent compounds. The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional OSRP (refer to information submitted in **Appendix I**).

There are no IPFs from emissions, or wastes sent to shore for disposal from the proposed activities which could cause impacts to fisheries.

7. Marine Mammals

GulfCet II studies revealed that cetaceans of the continental shelf and shelf-edge were almost exclusively bottlenose dolphin and Atlantic spotted dolphin. Squid eaters, including dwarf and pygmy killer whale, Risso's dolphin, rough-toothed dolphin, and Cuvier's beaked whale, occurred most frequently along the upper slope in areas outside of anticyclones. IPFs that could cause impacts to marine mammals as a result of the proposed operations in Ship Shoal Block 205 include emissions, effluents, discarded trash and debris, and accidents.

Emissions: Noises from drilling activities, support vessels and helicopters may elicit a startle reaction from marine mammals. This reaction may lead to disruption of marine mammals' normal activities. Stress may make them more vulnerable to parasites, disease, environmental contaminants, and/or predation (Majors and Myrick, 1990). There is little conclusive evidence for long-term displacements and population trends for marine mammals relative to noise.

Effluents: Drilling fluids and cuttings discharges contain components which may be detrimental to marine mammals. Most operational discharges are diluted and dispersed upon release. Any potential impact from drilling fluids would be indirect, either as a result of impacts on prey items or possibly through ingestion in the food chain (API, 1989).

Discarded trash and debris: Both entanglement in, and ingestion of debris have caused the death or serious injury of marine mammals (Laist, 1997; MMC, 1999). The limited amount of marine debris, if any, resulting from the proposed activities is not expected to substantially harm marine mammals. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

Fieldwood Energy LLC will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "Think About It" (*previously "All Washed Up: The Beach Litter Problem"*). Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Fieldwood Energy LLC management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

Accidents: Collisions between support vessels and cetaceans would be unusual events, however should one occur, death or injury to marine mammals is possible. Contract vessel operators can avoid marine mammals and reduce potential deaths by maintaining a vigilant watch for marine mammals and maintaining a safe distance when they are sighted. Vessel personnel should use a Gulf of Mexico reference guide to help identify the twenty-one species of whales and dolphins, and the single species of manatee that may be encountered in the Gulf of Mexico OCS. Vessel personnel must report sightings of any injured or dead protected marine mammal species

immediately, regardless of whether the injury or death is caused by their vessel, to the NMFS Southeast Marine Mammal Stranding Hotline at 1-877-433-8299 (http://www.nmfs.noaa.gov/pr/health/report.htm#southeast). Any injured or dead protected species should also be reported to takereport.nmfsser@noaa.gov. In addition, if the injury or death was caused by a collision with a contract vessel, the BOEM must be notified within 24 hours of the strike by email to protectedspecies@bsee.gov. If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

Oil spills have the potential to cause sublethal oil-related injuries and spill-related deaths to marine mammals. However, it is unlikely that an accidental oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Oil spill response activities may increase vessel traffic in the area, which could add to changes in cetacean behavior and/or distribution, thereby causing additional stress to the animals. The effect of oil dispersants on cetaceans is not known. The acute toxicity of oil dispersant chemicals included in Fieldwood Energy LLC's OSRP is considered to be low when compared with the constituents and fractions of crude oils and diesel products. The activities proposed in this plan will be covered by Fieldwood Energy LLC's OSRP (refer to information submitted in accordance with **Appendix I**).

There are no other IPFs (including physical disturbances to the seafloor) from the proposed activities which could impact marine mammals.

8. Sea Turtles

IPFs that could cause impacts to sea turtles as a result of the proposed operations include emissions, effluents, discarded trash and debris, and accidents. GulfCet II studies sighted most loggerhead, Kemp's ridley and leatherback sea turtles over shelf waters. Historically these species have been sighted up to the shelf's edge. They appear to be more abundant east of the Mississippi River than they are west of the river (Fritts et al., 1983b; Lohoefener et al., 1990). Deep waters may be used by all species as a transitory habitat.

Emissions: Noise from drilling activities, support vessels, and helicopters may elicit a startle reaction from sea turtles, but this is a temporary disturbance.

Effluents: Drilling fluids and cuttings discharges are not known to be lethal to sea turtles. Most operational discharges are diluted and dispersed upon release. Any potential impact from drilling fluids would be indirect, either as a result of impacts on prey items or possibly through ingestion in the food chain (API, 1989).

Discarded trash and debris: Both entanglement in, and ingestion of, debris have caused the death or serious injury of sea turtles (Balazs, 1985). The limited amount of marine debris, if any, resulting from the proposed activities is not expected to substantially harm sea turtles. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the

Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Fieldwood Energy LLC will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "Think About It" (*previously "All Washed Up: The Beach Litter Problem"*). Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Fieldwood Energy LLC management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

Accidents: Collisions between support vessels and sea turtles would be unusual events, however should one occur, death or injury to sea turtles is possible. Contract vessel operators can avoid sea turtles and reduce potential deaths by maintaining a vigilant watch for sea turtles and maintaining a safe distance when they are sighted. Vessel crews should use a reference guide to help identify the five species of sea turtles that may be encountered in the Gulf of Mexico OCS. Vessel crews must report sightings of any injured or dead protected sea turtle species immediately, regardless of whether the injury or death is caused by their vessel, to the State Coordinators for the Sea Turtle Stranding and Salvage Network (STSSN) at http://www.sefsc.noaa.gov/species/turtles/stranding_coordinators.htm (phone numbers vary by state). Any injured or dead protected species should also be reported to takereport.nmfsser@noaa.gov. In addition, if the injury or death was caused by a collision with a contract vessel, the BOEM must be notified within 24 hours of the strike by email to protectedspecies@bsee.gov. If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

All sea turtle species and their life stages are vulnerable to the harmful effects of oil through direct contact or by fouling of their food. Exposure to oil can be fatal, particularly to juveniles and hatchlings. However, it is unlikely that an accidental oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Oil spill response activities may increase vessel traffic in the area, which could add to the possibility of collisions with sea turtles. The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional Oil Spill Response Plan (refer to information submitted in accordance with **Appendix I**).

There are no other IPFs (including physical disturbances to the seafloor) from the proposed activities which could impact sea turtles.

9. Air Quality

The projected air emissions identified in **Appendix H** are not expected to affect the OCS air quality primarily due to distance to the shore or to any Prevention of Significant Deterioration Class I air quality area such as the Breton Wilderness Area. Ship Shoal Block 205 is beyond the 200 kilometer (124 mile) buffer for the Breton Wilderness Area and is 37 miles from the coastline. Therefore, no special mitigation, monitoring, or reporting requirements apply with respect to air emissions.

Accidents and blowouts can release hydrocarbons or chemicals, which could cause the emission of air pollutants. However, these releases would not impact onshore air quality because of the prevailing atmospheric conditions, emission height, emission rates, and the distance of Ship Shoal Block 205 from the coastline. There are no other IPFs (including effluents, physical disturbances to the seafloor, wastes sent to shore for treatment or disposal) from the proposed activities which could impact air quality.

10. Shipwreck Sites (known or potential)

IPFs that could impact known or unknown shipwreck sites as a result of the proposed operations in Ship Shoal Block 205 include disturbances to the seafloor and accidents (oil spill). Ship Shoal Block 205 is not located in or adjacent to an OCS block designated by BOEM as having a high probability for occurrence of shipwrecks. Fieldwood Energy LLC will report to BOEM the discovery of any evidence of a shipwreck and make every reasonable effort to preserve and protect that cultural resource. There are no other IPFs (including emissions, effluents, wastes sent to shore for treatment or disposal, or accidents) from the proposed activities which could impact shipwreck sites.

Accidents: An accidental oil spill has the potential to cause some detrimental effects to shipwreck sites if the release were to occur subsea. However, it is unlikely that an accidental oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional Oil Spill Response Plan (refer to information submitted in accordance with **Appendix I**).

There are no other IPFs (including emissions, effluents, or wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to shipwreck sites.

11. Prehistoric Archaeological Sites

IPFs that could cause impacts to prehistoric archaeological sites as a result of the proposed operations in Ship Shoal Block 205 are physical disturbances to the seafloor and accidents (oil spills).

Physical Disturbances to the seafloor: Ship Shoal Block 205 is located inside the Archaeological Prehistoric high probability lines. Fieldwood Energy LLC will report to BOEM

the discovery of any object of prehistoric archaeological significance and make every reasonable effort to preserve and protect that cultural resource.

Accidents: An accidental oil spill has the potential to cause some detrimental effects to prehistoric archaeological sites if the release were to occur subsea. However, it is unlikely that an accidental oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional Oil Spill Response Plan (refer to information submitted in accordance with **Appendix I**).

There are no other IPFs (including emissions, effluents, wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to prehistoric archaeological sites.

Vicinity of Offshore Location

1. Essential Fish Habitat (EFH)

IPFs that could cause impacts to EFH as a result of the proposed operations in Ship Shoal Block 205 include physical disturbances to the seafloor, effluents and accidents. EFH includes all estuarine and marine waters and substrates in the Gulf of Mexico.

Physical disturbances to the seafloor: The Live Bottom Low Relief Stipulation, the Live Bottom (Pinnacle Trend) Stipulation, and the Eastern Gulf Pinnacle Trend Stipulation would prevent most of the potential impacts on live-bottom communities and EFH from bottom disturbing activities (e.g., anchoring, structure emplacement and removal).

Effluents: The Live Bottom Low Relief Stipulation, the Live Bottom (Pinnacle Trend) Stipulation, and the Eastern Gulf Pinnacle Trend Stipulation would prevent most of the potential impacts on live-bottom communities and EFH from operational waste discharges. Levels of contaminants in drilling muds and cuttings and produced-water discharges, discharge-rate restrictions, and monitoring and toxicity testing are regulated by the EPA NPDES permit, thereby eliminating many significant biological or ecological effects. Operational discharges are not expected to cause significant adverse impacts to EFH.

Accidents: An accidental oil spill has the potential to cause some detrimental effects on EFH. Oil spills that contact coastal bays and estuaries, as well as OCS waters when pelagic eggs and larvae are present, have the greatest potential to affect fisheries. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional OSRP (refer to information submitted in **Appendix I**).

There are no other IPFs (including emissions, or wastes sent to shore for treatment or disposal) from the proposed activities which could impact essential fish habitat.

2. Marine and Pelagic Birds

IPFs that could impact marine birds as a result of the proposed activities include air emissions, accidental oil spills, and discarded trash and debris from vessels and the facilities.

Emissions: Emissions of pollutants into the atmosphere from these activities are far below concentrations which could harm coastal and marine birds.

Accidents: An oil spill would cause localized, low-level petroleum hydrocarbon contamination. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Marine and pelagic birds feeding at the spill location may experience chronic, nonfatal, physiological stress. It is expected that few, if any, coastal and marine birds would actually be affected to that extent. The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional OSRP (refer to information submitted in **Appendix I**).

Discarded trash and debris: Marine and pelagic birds could become entangled and snared in discarded trash and debris, or ingest small plastic debris, which can cause permanent injuries and death. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Fieldwood Energy LLC will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass. Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "Think About It" (*previously "All Washed Up: The Beach Litter Problem"*). Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Fieldwood Energy LLC management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE. Debris, if any, from these proposed activities will seldom interact with marine and pelagic birds; therefore, the effects will be negligible.

There are no other IPFs (including effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities which could impact marine and pelagic birds.

3. Public Health and Safety Due to Accidents.

There are no IPFs (emissions, effluents, physical disturbances to the seafloor, wastes sent to shore for treatment or disposal or accidents, including an accidental H2S releases) from the proposed activities which could cause impacts to public health and safety. In accordance with NTL No.'s 2008-G04, 2009-G27, and 2009-G31, sufficient information is included in **Appendix D** to justify our request that our proposed activities be classified by BSEE as H_2S absent.

Coastal and Onshore

1. Beaches

IPFs from the proposed activities that could cause impacts to beaches include accidents (oil spills) and discarded trash and debris.

Accidents: Oil spills contacting beaches would have impacts on the use of recreational beaches and associated resources. Due to the distance from shore (37 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional OSRP (refer to information submitted in **Appendix I**).

Discarded trash and debris: Trash on the beach is recognized as a major threat to the enjoyment and use of beaches. There will only be a limited amount of marine debris, if any, resulting from the proposed activities. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Fieldwood Energy LLC will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "Think About It" (*previously "All Washed Up: The Beach Litter Problem"*). Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Fieldwood Energy LLC management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities which could impact beaches.

2. Wetlands

IPFs from the proposed activities that could cause impacts to wetlands include accidents (oil spills) and discarded trash and debris.

Accidents: It is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Due to the distance from shore (37 miles) and the response capabilities that would be implemented, no impacts are expected. The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional OSRP (refer to information submitted in **Appendix I**).

Discarded trash and debris: There will only be a limited amount of marine debris, if any, resulting from the proposed activities. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Fieldwood Energy LLC will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "Think About It" (*previously "All Washed Up: The Beach Litter Problem"*). Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Fieldwood Energy LLC management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities which could impact wetlands.

3. Shore Birds and Coastal Nesting Birds

Accidents: Oil spills could cause impacts to shore birds and coastal nesting birds. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water

Quality). Given the distance from shore (37 miles) and the response capabilities that would be implemented, no impacts are expected. The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional OSRP (refer to information submitted in **Appendix I**).

Discarded trash and debris: Coastal and marine birds are highly susceptible to entanglement in floating, submerged, and beached marine debris: specifically plastics. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Fieldwood Energy LLC will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on vessels and every facility that has sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "Think About It" (*previously "All Washed Up: The Beach Litter Problem"*). Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Fieldwood Energy LLC management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to shore birds and coastal nesting birds.

4. Coastal Wildlife Refuges

Accidents: An accidental oil spill from the proposed activities could cause impacts to coastal wildlife refuges. However, it is unlikely that an oil spill would occur from the proposed activities (refer to Item 5, Water Quality). Due to the distance from shore (37 miles) and the response capabilities that would be implemented, no impacts are expected. The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional OSRP (refer to information submitted in **Appendix I**).

Discarded trash and debris: Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Fieldwood Energy LLC will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special

precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on vessels and every facility that has sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "Think About It" (*previously "All Washed Up: The Beach Litter Problem"*). Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Fieldwood Energy LLC management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to coastal wildlife refuges.

5. Wilderness Areas

Accidents: An accidental oil spill from the proposed activities could cause impacts to wilderness areas. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Due to the distance from the nearest designated Wilderness Area (129 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. The activities proposed in this plan will be covered by Fieldwood Energy LLC's Regional OSRP (refer to information submitted in **Appendix I).**

Discarded trash and debris: Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Fieldwood Energy LLC will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on vessels and every facility that has sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "Think About It" (*previously "All Washed Up: The Beach Litter Problem"*). Thereafter, all personnel will view the marine trash and debris training video annually. Offshore

personnel will also receive an explanation from Fieldwood Energy LLC management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to wilderness areas.

6. Other Environmental Resources Identified

There are no other environmental resources identified for this impact assessment.

(C) IMPACTS ON PROPOSED ACTIVITIES

The site–specific environmental conditions have been taken into account for the proposed activities. No impacts are expected on the proposed activities from site-specific environmental conditions.

(D) ENVIRONMENTAL HAZARDS

During the hurricane season, June through November, the Gulf of Mexico is impacted by an average of ten tropical storms (39-73 mph winds), of which six become hurricanes (> 74 mph winds). Due to its location in the gulf, Ship Shoal Block 205 may experience hurricane and tropical storm force winds, and related sea currents. These factors can adversely impact the integrity of the operations covered by this plan. A significant storm may present physical hazards to operators and vessels, damage exploration or production equipment, or result in the release of hazardous materials (including hydrocarbons). Additionally, the displacement of equipment may disrupt the local benthic habitat and pose a threat to local species.

The following preventative measures included in this plan may be implemented to mitigate these impacts:

1. Drilling & completion
    a. Secure well
    b. Secure rig / platform
    c. Evacuate personnel

Drilling activities will be conducted in accordance with NTL No.'s 2008-G09, 2009-G10, and 2010-N10.

2. Platform / Structure Installation
   Operator will not conduct platform / structure installation operations during Tropical Storm or Hurricane threat.

3. Pipeline Installation

Operator will not conduct pipeline installation operations during Tropical Storm or Hurricane threat.

(E) ALTERNATIVES

No alternatives to the proposed activities were considered to reduce environmental impacts.

(F) MITIGATION MEASURES

No mitigation measures other than those required by regulation will be employed to avoid, diminish, or eliminate potential impacts on environmental resources.

(G) CONSULTATION

No agencies or persons were consulted regarding potential impacts associated with the proposed activities. Therefore, a list of such entities has not been provided.

(H) PREPARER(S)

Jami Christley
J. Connor Consulting, Inc.
19219 Katy Freeway, Suite 200
Houston, Texas 77094
(281) 578-3388
jami.christley@jccteam.com

(I) REFERENCES

Authors:

American Petroleum Institute (API). 1989. Effects of offshore petroleum operations on cold water marine mammals: a literature review. Washington, DC: American Petroleum Institute. 385 pp.

Balazs, G.H. 1985. Impact of ocean debris on marine turtles: entanglement and ingestion. In: Shomura, R.S. and H.O. Yoshida, eds. Proceedings, Workshop on the Fate and Impact of Marine Debris, 26-29 November 1984, Honolulu, HI. U.S. Dept. of Commerce. NOAA Tech. Memo. NOAA-TM-NMFS-SWFC-54. Pp 387-429.

Burke, C.J. and J.A. Veil. 1995. Potential benefits from regulatory consideration of synthetic drilling muds. Environmental Assessment Division, Argonne National Laboratory, ANL/EAD/TM-43.

Daly, J.M. 1997. Controlling the discharge of synthetic-based drilling fluid contaminated cuttings in waters of the United States. U.S. Environmental Protection Agency, Office of Water. Work Plan, June 24, 1997.

Hansen, D.J. 1981. The relative sensitivity of seabird populations in Alaska to oil pollution. U.S. Dept. of the Interior, Bureau of Land Management, Alaska OCS Region, Anchorage. BLM-YK-ES-81-006-1792.

Laist, D.W. 1997. Impacts of marine debris: entanglement of marine life in marine debris including a comprehensive list of species with entanglement and ingestion records. In: Coe, J.M. and D.B. Rogers, eds. Marine debris: sources, impacts, and solutions. New York, NY: Springer-Verlag. Pp. 99-139.

Majors, A.P. and A.C. Myrick, Jr. 1990. Effects of noise on animals: implications for dolphins exposed to seal bombs in the eastern tropical Pacific purse-seine fishery–an annotated bibliography. NOAA Administrative Report LJ-90-06.

Marine Mammal Commission. 1999. Annual report to Congress – 1998.

Piatt, J.F., C.J. Lensink, W. Butler, M. Kendziorek, and D.R. Nysewander. 1990. Immediate impact of the Exxon Valdez oil spill on marine birds. The Auk. 107 (2): 387-397.

Vauk , G., E. Hartwig, B. Reineking, and E. Vauk-Hentzelt. 1989. Losses of seabirds by oil pollution at the German North Sea coast. Topics in Marine Biology. Ros, J.D, ed. Scient. Mar. 53 (2-3): 749-754.

Vermeer, K. and R. Vermeer, 1975 Oil threat to birds on the Canadian west coast. The Canadian Field-Naturalist. 89:278-298.

Although not cited, the following were utilized in preparing this EIA:

- Hazard Surveys
- BOEM EIS's:
  - GOM Deepwater Operations and Activities. Environmental Assessment. MMS 2000-001
  - GOM Central and Western Planning Areas Sales 166 and 168 Final Environmental Impact Statement. MMS 96-0058.

SECTION R
ADMINISTRATIVE INFORMATION
(30 CFR Parts 550.228 and 550.262)

A. EXEMPTED INFORMATION DESCRIPTION

Included in the proprietary copy and removed from the public copy of this DOCD are the proposed bottom-hole locations of the planned well, discussions of the target objectives, geologic and/or geophysical data, and any interpreted geology.

B. BIBLIOGRAPHY

Not applicable.