

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF OCEAN ENERGY MANAGEMENT RESEARCH LEASE OF SUBMERGED LANDS FOR RENEWABLE ENERGY ACTIVITIES ON THE OUTER CONTINENTAL SHELF <i>Paperwork Reduction Act of 1995 statement: This form does not constitute an information collection as defined by 44 U.S.C. § 3501 et seq. and therefore does not require approval by the Office of Management and Budget.</i>	Office	Renewable Energy Lease Number
	Herndon, VA	OCS-A 0497
	Cash Bonus and/or Acquisition Fee N/A	Resource Type Wind
	Effective Date April 1, 2015	Block Number(s) See Addendum A

This lease, which includes any addenda hereto, is hereby entered into by and between the United States of America, ("Lessor"), acting through the Bureau of Ocean Energy Management ("BOEM"), its authorized officer, and the Commonwealth of Virginia, Department of Mines, Minerals and Energy ("Lessee").

Lessee	Interest Held
Commonwealth of Virginia, Department of Mines, Minerals and Energy	100%

This lease is effective on the date written above ("Effective Date") and will continue in effect until the lease terminates as set forth in Addendum "B." In consideration of the promises, terms, conditions, covenants, and stipulations contained herein and attached hereto, the Lessee and the Lessor agree as follows:

Section 1: Statutes and Regulations.

This lease is issued pursuant to subsection 8(p) of the Outer Continental Shelf Lands Act ("the Act"), 43 U.S.C. §§ 1331 *et seq.* This lease is subject to the Act and regulations promulgated pursuant to the Act, including but not limited to, offshore renewable energy and alternate use regulations at 30 CFR Part 585 as well as other applicable statutes and regulations in existence on the Effective Date of this lease. This lease is also subject to those statutes enacted (including amendments to the Act or other statutes) and regulations promulgated thereafter, except to the extent that they explicitly conflict with an express provision of this lease. It is expressly understood that amendments to existing statutes, including but not limited to the Act, and regulations may be made, and/or new statutes may be enacted or new regulations promulgated, which do not explicitly conflict with an express provision of this lease, and that the Lessee bears the risk that such amendments, regulations, and statutes may increase or decrease the Lessee's obligations under the lease.

Section 2: Rights of the Lessee.

- (a) The Lessor hereby grants and leases to the Lessee the exclusive right and privilege, subject to the terms and conditions of this lease and applicable regulations, to: (1) submit to the Lessor for approval a Site Assessment Plan (SAP) which meets the requirement of 30 CFR 585.606-612 for the deployment of metocean testing equipment and a Research Activities Plan (RAP) which meets the requirement of 30 CFR 585.626-628 for wind turbines and facilities installations as identified in Addendum "A" of this lease; and (2) allow a designated operator approved by the Lessor to conduct

activities in the area identified in Addendum "A" of this lease ("leased area") that are described in a SAP or RAP that has been approved by the Lessor. This lease does not, by itself, authorize any activity within the leased area. The Lessor and Lessee will comply with the processes outlined in 30 CFR 585.605-618 when submitting, processing and conducting activities related to the SAP and 30 CFR 585.620-638 when submitting, processing and conducting activities relating to the RAP, unless the Lessor has approved or prescribed a departure under 30 CFR 585.103. BOEM will review a RAP according to the regulations governing construction and operations plans outlined in 30 CFR 585.620-629. No inference regarding the commercial nature of the proposed activities should be made on the basis of the applicability of the regulations governing construction and operations plans.

- (b) The rights granted to the Lessee herein are limited to those activities described in any SAP or RAP approved by the Lessor. The rights granted to the Lessee are limited by the lease-specific terms, conditions, and stipulations required by the Lessor per Addendum "C."
- (c) This lease does not authorize the Lessee to conduct activities on the Outer Continental Shelf (OCS) relating to or associated with the exploration for, or development or production of, oil, gas, other seabed minerals, or renewable energy resources other than those renewable energy resources identified in Addendum "A."

Section 3: Reservations to the Lessor.

- (a) All rights in the leased area not expressly granted to the Lessee by the Act, applicable regulations, this lease, or any approved SAP or RAP, are hereby reserved to the Lessor.
- (b) The Lessor retains the right to disapprove a SAP or RAP based on the Lessor's determination that the proposed activities would have unacceptable environmental consequences, would conflict with one or more of the requirements set forth in subsection 8(p)(4) of the Act (43 U.S.C. § 1337(p)(4)), or for other reasons provided by the Lessor pursuant to 30 CFR Part 585. Disapproval of plans will not subject the Lessor to liability. The Lessor also retains the right to approve with modifications a SAP or RAP, as provided in applicable regulations.
- (c) The Lessor reserves the right to suspend the Lessee's operations in accordance with the national security and defense provisions of section 12 of the Act and applicable regulations.
- (d) The Lessor reserves the right to authorize other uses within the leased area that will not unreasonably interfere with activities described in Addendum "A."

Section 4: Payments.

The Lessor will not charge the Lessee any fees for the purpose of ensuring a fair return for the use of this lease area on the OCS.

Section 5: Plans.

The Lessee, by itself or through its designated operator, may conduct those activities described in Addendum "A" only in accordance with a SAP or RAP approved by the Lessor. The Lessee may not deviate from an approved SAP or RAP except as provided in applicable regulations in 30 CFR 585.

Section 6: Associated Project Easements.

Pursuant to 30 CFR 585.200(b), the Lessee has the right to one or more project easements, without further competition, for the purpose of installing gathering, transmission, and distribution cables, pipelines, and appurtenances on the OCS, as necessary for the full enjoyment of the lease, and under applicable regulations in 30 CFR Part 585. As part of submitting a RAP for approval, the Lessee may request that one or more easement(s) be granted by the Lessor. If the Lessee requests that one or more easement(s) be granted when submitting a RAP for approval, such project easements will be granted by the Lessor in accordance with the Act and applicable regulations in 30 CFR Part 585 upon approval of the RAP in which the Lessee has demonstrated a need for such easements. Such easements must be in a location acceptable to the Lessor, and will be subject to such conditions as the Lessor may require. The project easement(s) that would be issued in conjunction with an approved RAP under this lease will be described in Addendum "D" to this lease, which will be updated as necessary.

Section 7: Conduct of Activities.

The Lessee, by itself or through its designated operator, must conduct, and agrees to conduct, all activities in the leased area in accordance with an approved SAP or RAP, and with all applicable laws and regulations.

The Lessee further agrees that no activities authorized by this lease, including activities conducted by the Lessee or its designated operator, will be carried out in a manner that:

- (a) could unreasonably interfere with or endanger activities or operations carried out under any lease or grant issued or maintained pursuant to the Act, or under any other license or approval from any Federal agency;
- (b) could cause any undue harm or damage to the environment;
- (c) could create hazardous or unsafe conditions; or
- (d) could adversely affect sites, structures, or objects of historical, cultural, or archaeological significance, without notice to and direction from the Lessor on how to proceed.

Section 8: Violations, Suspensions, Cancellations, and Remedies.

If the Lessee fails to comply with (1) any of the applicable provisions of the Act or regulations, (2) the approved SAP or RAP or (3) the terms of this lease, including associated Addenda, the Lessor may exercise any of the remedies that are provided under the Act and applicable regulations, including, without limitation, issuance of cessation of operations orders, suspension or cancellation of the lease, and/or the imposition of penalties, in accordance with the Act and applicable regulations.

The Lessor may also cancel this lease for reasons set forth in subsection 5(a)(2) of the Act (43 U.S.C. § 1334(a)(2)), or for other reasons provided by the Lessor pursuant to 30 CFR 585.437.

Non-enforcement by the Lessor of a remedy for any particular violation of the applicable provisions of the Act or regulations, or the terms of this lease, will not prevent the Lessor from exercising any remedy, including cancellation of this lease, for any other violation or for the same violation occurring at any other time.

Section 9: Indemnification.

The Lessee hereby agrees to hold the Lessor harmless from any claim caused by or resulting from any of the Lessee's operations or activities on the leased area or project easements or arising out of any activities conducted by or on behalf of the Lessee or its employees, its designated operator, contractors, subcontractors, or their employees, under this lease, including claims for:

- a. loss or damage to natural resources,
- b. the release of any petroleum or any Hazardous Materials,
- c. other environmental injury of any kind,
- d. damage to property,
- e. injury to persons, and/or
- f. costs or expenses incurred by the Lessor.

Except as provided in any addenda to this lease, neither the Lessee nor its designated operator will be liable for any losses or damages proximately caused by the activities of the Lessor or the Lessor's employees, contractors, subcontractors, or their employees. The Lessee must require and ensure that its designated operator indemnifies the Lessor for, and holds the Lessor harmless from, any claim caused by or resulting from any of the Lessee's operations or activities on the leased area or project easements or arising out of any activities conducted by the operator on behalf of the Lessee or its employees, contractors, subcontractors, or their employees, under this lease, including claims for items a. through f. listed in the preceding paragraph. The Lessee must require and ensure that its designated operator pays the Lessor for any damage, cost, or expense due and pursuant to this section within 90 days after written demand by the Lessor.

Nothing in this lease will be construed to waive any liability or relieve the Lessee from any penalties, sanctions, or claims that would otherwise apply by statute, regulation, operation of law, or could be imposed by the Lessor or other government agency acting under such laws.

"Hazardous Material" means

1. Any substance or material defined as hazardous, a pollutant, or a contaminant under the Comprehensive Environmental Response, Compensation, and Liability Act at 42 U.S.C. §§ 9601(14) and (33);
2. Any regulated substance as defined by the Resource Conservation and Recovery Act ("RCRA") at 42 U.S.C. § 6991 (7), whether or not contained in or released from underground storage tanks, and any hazardous waste regulated under RCRA pursuant to 42 U.S.C. §§ 6921 *et seq.*;
3. Oil, as defined by the Clean Water Act at 33 U.S.C. § 1321(a)(1) and the Oil Pollution Act at 33 U.S.C. § 2701(23); or
4. Other substances that applicable Federal, state, tribal, or local laws define and regulate as "hazardous."

Section 10: Financial Assurance.

The Lessee, by itself or through its designated operator, will provide and maintain at all times a surety bond(s) or other form(s) of financial assurance approved by the Lessor in the amount specified in

Addendum "B." As required by the applicable regulations in 30 CFR Part 585, if, at any time during the term of this lease, the Lessor requires additional financial assurance, then the Lessee, by itself or through its designated operator, must furnish the additional financial assurance required by the Lessor in a form acceptable to the Lessor within 90 days after receipt of the Lessor's notice of such adjustment.

Section 11: Assignment or Transfer of Lease.

This lease may not be assigned or transferred in whole or in part without written approval of the Lessor. The Lessor reserves the right, in its sole discretion, to deny approval of the Lessee's application to transfer or assign all or part of this lease. Any assignment will be effective on the date the Lessor approves the Lessee's application. Any assignment made in contravention of this section is void.

Section 12: Relinquishment of Lease.

The Lessee may relinquish this entire lease or any officially designated subdivision thereof by filing with the appropriate office of the Lessor a written relinquishment application, in accordance with applicable regulations in 30 CFR Part 585. No relinquishment of this lease or any portion thereof will relieve the Lessee or its surety of the obligations accrued hereunder. This includes, but is not limited to, the Lessee's responsibility of ensuring, by itself or through its designated operator, the removal of property and the restoration of the leased area pursuant to section 13 of this lease and applicable regulations.

Section 13: Removal of Property and Restoration of the Leased Area on Termination of Lease.

Unless otherwise authorized by the Lessor, pursuant to the applicable regulations in 30 CFR Part 585, the Lessee, by itself or through its designated operator, must remove or decommission all facilities, projects, cables, pipelines, and obstructions and clear the seafloor of all obstructions created by activities on the leased area, including any project easements within two years following lease termination, whether by expiration, cancellation, contraction, or relinquishment, in accordance with any approved SAP, RAP, or approved Decommissioning Application, and applicable regulations in 30 CFR Part 585.

Section 14: Safety Requirements.

The Lessee, by itself or through its designated operator must:

- a. maintain all places of employment for activities authorized under this lease in compliance with occupational safety and health standards and, in addition, free from recognized hazards to employees of the Lessee or of any contractor or subcontractor operating under this lease;
- b. maintain all operations within the leased area in compliance with regulations in 30 CFR Part 585 and orders from the Lessor and other Federal agencies with jurisdiction, intended to protect persons, property and the environment on the OCS; and
- c. provide any requested documents and records, which are pertinent to occupational or public health, safety, or environmental protection, and allow prompt access, at the site of any operation or activity conducted under this lease, to any inspector authorized by the Lessor or other Federal agency with jurisdiction.

Section 15: Debarment Compliance.

The Lessee must comply with the Department of the Interior's non-procurement debarment and suspension regulations set forth in 2 CFR Parts 180 and 1400 and must communicate the requirement to comply with these regulations to persons with whom it does business related to this lease by including this requirement in all relevant contracts and transactions.

Section 16: Equal Opportunity Clause.

During the performance of this lease, the Lessee must fully comply with paragraphs (1) through (7) of section 202 of Executive Order 11246, as amended (reprinted in 41 CFR 60-1.4(a)), and the implementing regulations, which are for the purpose of preventing employment discrimination against persons on the basis of race, color, religion, sex, or national origin. Paragraphs (1) through (7) of section 202 of Executive Order 11246, as amended, are incorporated in this lease by reference.

Section 17: Certification of Nonsegregated Facilities.

By entering into this lease, the Lessee certifies, as specified in 41 CFR 60-1.8, that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. As used in this certification, the term "facilities" means, but is not limited to, any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees. Segregated facilities include those that are segregated by explicit directive or those that are in fact segregated on the basis of race, color, religion, sex, or national origin, because of habit, local custom, or otherwise; provided, that separate or single-user restrooms and necessary dressing or sleeping areas must be provided to assure privacy as appropriate. The Lessee further agrees that it will obtain identical certifications from proposed contractors and subcontractors prior to awarding contracts or subcontracts unless they are exempt under 41 CFR 60-1.5.

Section 18: Notices.

All notices or reports provided from one party to the other under the terms of this lease must be in writing, except as provided herein and in the applicable regulations in 30 CFR Part 585. Written notices must be delivered to the party's Lease Representative, as specifically listed in Addendum "A," either electronically, by hand, by facsimile, or by United States first class mail, adequate postage prepaid. Either party may notify the other of a change of address by doing so in writing. Until notice of any change of address is delivered as provided in this section, the last recorded address of either party will be deemed the address for all notices required under this lease. For all operational matters, notices must be provided to the party's Operations Representative, as specifically listed in Addendum "A," as well as the Lease Representative.

Section 19: Severability Clause.

If any provision of this lease is held unenforceable, all remaining provisions of this lease will remain in full force and effect.

Section 20: Modification.

Unless otherwise authorized by the applicable regulations in 30 CFR Part 585, this lease may be modified or amended only by mutual agreement of the Lessor and the Lessee. No such modification or amendment will be binding unless it is in writing and signed by the Lease Representatives of both the Lessor and the Lessee.

Section 21: Representations.

Each party to this lease represents and warrants to the other party to this lease that the party signing has lawful power and authority to enter into this lease and that each person signing the lease on behalf of a party is authorized to bind the party named above his or her signature.

Commonwealth of Virginia, Department of
Mines, Minerals and Energy

Lessee



(Signature of Authorized Officer)

CONRAD T. SPANGLER, III

(Name of Signatory)

DIRECTOR

(Title)

3/3/2015

(Date)

The United States of America

Lessor



(Signature of Authorized Officer)

James F. Bennett

(Name of Signatory)

Program Manager, Office of
Renewable Energy Programs

(Title)

3/23/2015

(Date)

COMMONWEALTH OF VIRGINIA

CITY/COUNTY OF

to-wit:

The foregoing instrument was acknowledged before me this 23 day of March, 2015,
by James F. Bennett, as Program Manager, Office of Renewable Energy Programs
on behalf of the United States of America.

My commission expires: 10/31/2017

My registration number: 361345

Kimbulu Hill
Notary Public

LESSEE

COMMONWEALTH OF VIRGINIA,
Department of Mines, Minerals and Energy

By: C. T. Spangler III
Conrad T. Spangler, III, Director
Department of Mines, Minerals and Energy
Telephone: 804.692.3206



COMMONWEALTH OF VIRGINIA

CITY OF RICHMOND, to-wit:

The foregoing instrument was acknowledged before me this 3 day of March,
2015, by Conrad T. Spangler, III, Director of the Department of Mines, Minerals and Energy, on behalf
of the Commonwealth of Virginia.

My commission expires: 8-31-16

My registration number: 221175

Eva Christopher
Notary Public



OFFICE OF THE ATTORNEY GENERAL

Approved as to Form Only:

By:

Mark R. Henning
[OAG representative]

RECOMMEND APPROVAL:

DEPARTMENT OF GENERAL SERVICES

By:

Richard F. Sliwoski
Richard F. Sliwoski
Director

APPROVAL BY THE GOVERNOR:

Pursuant to Section 2.2-1149 of the Code of Virginia (1950), as amended, and as the official designee of the Governor of Virginia, as authorized and designated by Executive Order 88 (01), dated December 21, 2001, I hereby approve this lease in the stead of the Governor of Virginia.

Taney Rodriguez 3/13/2015
Secretary of Administration Date

**U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT**

Lease Number OCS-A 0497

CONTACT INFORMATION FOR REPORTING REQUIREMENTS

The following contact information must be used for the reporting and coordination requirements specified in Addendum C, Stipulation 3 for the Department of Defense (Stipulation 3.1), and the "appropriate command headquarters" (3.2 and 3.3):

**United States Fleet Forces (USFF) N46
1562 Mitscher Ave, Suite 250
Norfolk, VA 23551
(757) 836-6206**

The following contact information must be used for the reporting requirements in Addendum C, Stipulation 4.4:

Reporting Injured or Dead Protected Species

**NOAA Fisheries Northeast Region's Stranding Hotline
800-900-3622**

All other reporting requirements in Stipulation 4.4

**Bureau of Ocean Energy Management
Environment Branch for Renewable Energy
Phone: 703-787-1340
Email: renewable_reporting@boem.gov**

**National Marine Fisheries Service
Northeast Regional Office, Protected Resources Division
Section 7 Coordinator
Phone: 978-281-9328
Email: incidental.take@noaa.gov; kellie.foster-taylor@noaa.gov**

Vessel operators may send a blank email to ne.rw.sightings@noaa.gov for an automatic response listing all current DMAs.

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

ADDENDUM "A"

DESCRIPTION OF LEASED AREA AND LEASE ACTIVITIES

Lease Number OCS-A 0497

I. Lessor and Lessee Contact Information

Lessee Company Number: 15014

(a) Lessor's Contact Information

	Lease Representative	Operations Representative
Title	Program Manager	Same as Lease Representative
Address	U.S. Department of the Interior Bureau of Ocean Energy Management 381 Elden Street, HM 1328 Herndon, Virginia 20170	
Phone	(703) 787-1300	
Fax	(703) 787-1708	
Email	renewableenergy@boem.gov	

(b) Lessee's Contact Information

	Lease Representative	Operations Representative
Name	Conrad T. Spangler, III	Same as Lease Representative
Title	Director	
Address	Commonwealth of Virginia, Department of Mines, Minerals and Energy 1100 Bank Street, 8th Floor Richmond VA 23219	
Phone	(804) 692-3206	
Fax	(804) 692-3237	
Email	Conrad.Spangler@dmme.virginia.gov	

II. Description of Leased Area

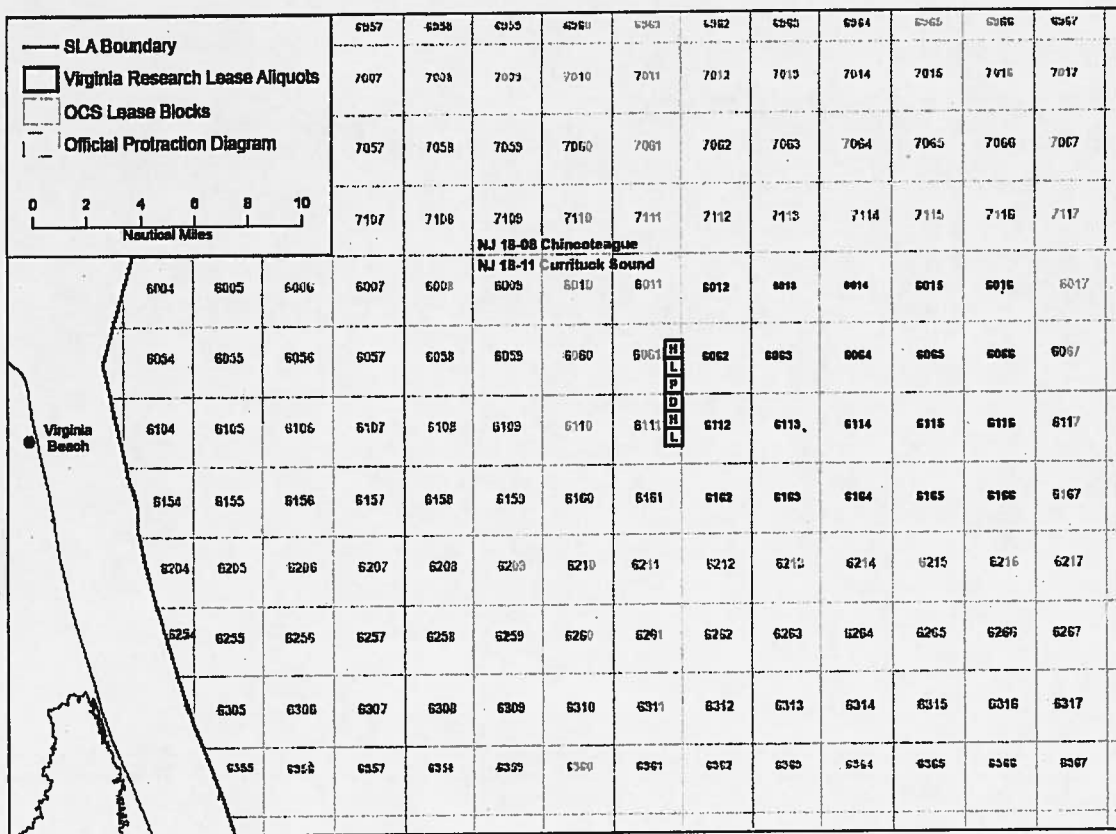
The total acreage of the lease area is approximately 2,135 acres.

This area is subject to later adjustment, in accordance with applicable regulations (e.g., contraction, relinquishment, etc.).

The following Blocks or portions of Blocks lying within Official Protraction Diagram Currituck Sound NJ18-11, are depicted on the map below and comprise 2,135 acres, more or less.

- 1) Block 6061, SE1/4 of NE1/4; E1/2 of SE1/4
- 2) Block 6111, E1/2 of NE1/4; NE1/4 of SE1/4

For the purposes of these calculations, a full Block is 2,304 hectares. The acreage of a hectare is 2.471043930.



III. Renewable Energy Resource

Wind

IV. Description of the Project

A research project to generate energy using wind turbine generators and conduct any associated resource assessment activities, as well as install associated offshore substation platforms, inter-array cables, and subsea export cables, located on the OCS in the leased area east of Virginia Beach, Virginia.

V. Description of Project Easement(s)

Once approved, the Lessor will incorporate the project easement(s) into this lease as Addendum "D."

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

ADDENDUM "B"

LEASE TERM AND FINANCIAL ASSURANCE

Lease Number OCS-A 0497

I. Research Lease Term

The duration of the lease term is described below. The term may be extended or otherwise modified in accordance with applicable regulations in 30 CFR Part 585.

Research Lease Term	30 years
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Renewal: The Lessee may request renewal of this lease, in accordance with applicable regulations in 30 CFR Part 585. The Lessor, at its discretion, may approve a renewal request to conduct substantially similar activities as were originally authorized under this lease or in an approved plan. The Lessor will not approve a renewal request that involves a type of renewable energy not originally authorized in the lease.

The Research Lease Term begins on the Effective Date of this lease. The Lessee may not conduct activities described in its plan (i.e., SAP or RAP) until BOEM approves or approves with modifications the plan pursuant to Section 5 of this lease.

II. Definitions

"Lease Issuance Date" refers to the date on which this lease has been signed by *both* the Lessee and the Lessor.

"Effective Date" has the same meaning as "effective date" in BOEM regulations provided in 30 CFR 585.237.

III. Financial Assurance

The Lessor will base the determination for the amounts of all SAP and RAP decommissioning financial assurance requirements on estimates of the cost to meet all accrued lease obligations. The Lessor determines the amount of supplemental and decommissioning financial assurance requirements on a case-by-case basis. The amount of financial assurance required to meet all lease obligations includes:

- (a) ***Initial Financial Assurance.*** Prior to Lease Issuance Date, the Lessee, by itself or through its designated operator, must provide an initial lease-specific bond, or other approved means of meeting the Lessor's initial financial assurance requirements, in an amount equal to \$300,000.

(b) ***Additional Financial Assurance.*** In addition to the initial financial assurance discussed above, the Lessee may be required to provide additional supplemental financial assurance and will be required to provide decommissioning financial assurance, as described below.

(1) Prior to the Lessor's approval of a SAP or RAP, the Lessor may require an additional supplemental bond or other form of financial assurance in an amount determined by the Lessor based on the complexity, number, and location of all facilities described in the SAP or RAP, and estimates of the costs to meet all accrued obligations, in accordance with applicable BOEM regulations (30 CFR 585.520-537). The supplemental financial assurance requirement is in addition to the initial lease-specific financial assurance. The Lessee, by itself or through its designated operator, may meet this obligation by providing a new bond or other acceptable form of financial assurance, or increasing the amount of its existing bond or other form of approved financial assurance.

(2) The Lessee, by itself or through its designated operator, must provide to the Lessor a decommissioning bond or other form of financial assurance based on the anticipated decommissioning costs as determined by the Lessor in accordance with applicable BOEM regulations (30 CFR 585.520-537). The decommissioning obligation must be guaranteed through an acceptable form of financial assurance and will be due according to the schedule beginning before commencement of the installation of facilities on a date or dates to be determined by the Lessor.

(c) ***Adjustments to Financial Assurance Amounts.*** The Lessor reserves the right to adjust the amount of any financial assurance requirement (initial, supplemental or decommissioning) associated with this lease and/or reassess the Lessee's cumulative lease obligations, including decommissioning obligations, at any time, pursuant to 30 CFR 585.517. If the Lessee's cumulative lease obligations and/or liabilities increase or decrease, the Lessor will notify the Lessee of any intended adjustment to the financial assurance requirements and provide the Lessee an opportunity to comment in accordance with applicable BOEM regulations.

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

ADDENDUM "C"

LEASE-SPECIFIC TERMS, CONDITIONS, AND STIPULATIONS

Lease Number OCS-A 0497

The Lessee's rights to conduct activities on the leased area are subject to the following terms, conditions, and stipulations. The Lessor reserves the right to impose additional terms, and conditions incident to the future approval or approval with modifications of plans, such as a Site Assessment Plan (SAP) or Research Activities Plan (RAP).

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1 DEFINITIONS

- 1.1 Definition of "Archaeological Resource": The term "archaeological resource" has the same meaning as "archaeological resource" in BOEM regulations provided in 30 CFR 585.112.
- 1.2 Definition of "Dynamic Management Area (DMA)": The term "DMA" refers to a temporary area designated by the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) and consisting of a circle around a confirmed North Atlantic right whale sighting. The radius of this circle expands incrementally with the number of whales sighted, and a buffer is included beyond the core area to allow for whale movement. Mandatory or voluntary speed restrictions may be applied by NOAA NMFS within DMAs. Information regarding the location and status of applicable DMAs is available from the NMFS Office of Protected Resources.
- 1.3 Definition of "Effective Date": The term "Effective Date" has the same meaning as "effective date" in BOEM regulations provided in 30 CFR 585.237.
- 1.4 Definition of "Geological and Geophysical Survey (G&G Survey)": The term "G&G Survey" serves as a collective term for surveys that collect data about the geology of the seafloor and landforms below the seafloor. High resolution geophysical surveys and geotechnical (sub-bottom) sampling are components of G&G surveys.
- 1.5 Definition of "Geotechnical Exploration": The term "Geotechnical Exploration" is used to refer to site-specific sediment and underlying geologic data acquired from the seafloor and the sub-bottom and includes geotechnical surveys utilizing borings, vibracores, and cone penetration tests.
- 1.6 Definition of "High Resolution Geophysical Survey (HRG Survey)": The term "HRG Survey" means a marine remote-sensing survey using electromechanical survey equipment. This equipment includes, but is not limited to, such equipment as side-scan sonar, magnetometer, shallow and medium (Seismic) penetration sub-bottom profiler systems, narrow beam or multibeam echo sounder, or other such equipment employed for the purposes of providing data on geological conditions, identifying shallow hazards, identifying archaeological resources, charting bathymetry, and gathering other site characterization information.
- 1.7 Definition of "Listed Species": The term "listed species," also referred to in adjective form as "listed," means any species of fish, wildlife, or plant that has been determined to be endangered or threatened under Section 4 of the Endangered Species Act. Listed species are provided in 50 CFR 17.11-17.12.
- 1.8 Definition of "Protected-Species Observer": The term "protected-species observer," or "observer," means an individual who is trained in the shipboard identification and behavior of protected species. Protected species include marine mammals (those protected under the Endangered Species Act and those protected under the Marine Mammal Protection Act) and sea turtles.

- 1.9 Definition of "Ramp-up": The term "ramp-up" means the process of incrementally increasing the acoustic source level of the survey equipment when conducting HRG surveys until it reaches the operational setting.
- 1.10 Definition of "Qualified Marine Archaeologist": The term "qualified marine archaeologist" means a person retained by the Lessee who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology (48 FR 44738- 44739), and has experience analyzing marine geophysical data.
- 1.11 Definition of "Take": The terms "Takes" and "Taken" and "Taking" have the same meaning as the term "take" as defined in 16 U.S.C. § 1532(19).

2 SCHEDULE

2.1 Site Characterization

2.1.1 Survey Plans.

- 2.1.1.1 SAP Survey Plan. Before conducting site assessment activities in the leased area, the Lessee must submit to the Lessor a complete SAP survey plan. This survey plan must include details and timelines of any surveys to be conducted on this lease necessary to support the submission of a SAP (i.e., necessary to satisfy the information requirements in the applicable regulations, including but not limited to 30 CFR 585.606, 610, 611).

The Lessee must submit the SAP survey plan to the Lessor at least 30 calendar days prior to the date of the required pre-survey meeting with the Lessor (See 2.1.2). The Lessor may require that the Lessee modify the SAP survey plan to address any comments the Lessor submits to the Lessee on the contents of the SAP survey plan in a manner deemed satisfactory to the Lessor prior to the commencement of any survey activities described in the SAP survey plan.

- 2.1.1.2 RAP Survey Plan. The Lessee must submit to the Lessor for review a complete RAP survey plan providing details and timelines of the surveys to be conducted on this lease that are necessary to support the submission of a RAP (i.e., necessary to satisfy the information requirements in the applicable regulations, including but not limited to 30 CFR 585.621, 626, 627). The RAP survey plan must be submitted to the Lessor no later than on the first anniversary of this lease's Effective Date and at least 30 calendar days prior to the date of the pre-survey meeting with the Lessor (see 2.1.2). The Lessee must modify the RAP survey plan to address any comments the Lessor submits to the Lessee on the contents of the RAP survey plan in a manner deemed satisfactory to the Lessor prior to the commencement of these survey activities.

- 2.1.2 Pre-Survey Meeting with the Lessor. At least 60 calendar days prior to the initiation of survey activities in support of the submission of a plan (i.e., SAP and RAP), the Lessee must hold a pre-survey meeting with the Lessor to discuss the applicable proposed survey plan and timelines. The Lessee must ensure the presence of a Qualified Marine Archaeologist at this meeting (See 4.2.2).

2.2 Progress Reporting

- 2.2.1 Semi-Annual Progress Report.** The Lessee must submit to the Lessor a semi-annual (i.e., every six months) progress report through the duration of the lease term that includes a brief narrative of the overall progress since the last progress report, or – in the case of the first report – since the Effective Date. The progress report must include an update regarding progress in executing the activities described in the survey plans, and include an enclosure accounting for any modifications in schedule.

3 NATIONAL SECURITY AND MILITARY OPERATIONS

3.1 Hold and Save Harmless, Assumption of Risk and Indemnification

- 3.1.1** Whether compensation for such damage or injury might be due under a theory of strict or absolute liability or otherwise, the Lessee must require its designated operator to assume all risks of damage or injury to persons or property, which occur in, on, or above the OCS, to any persons or to any property of any person or persons in connection with any activities being performed by the operator on behalf of the Lessee in, on, or above the OCS, if such injury or damage to such person or property occurs by reason of the activities of any agency of the United States Government, its contractors, or subcontractors, or any of its officers, agents or employees, being conducted as a part of, or in connection with, the programs or activities of the Department of Defense. The contact information for the Department of Defense is provided as an Enclosure to this lease. Notwithstanding any limitation of the Lessee's and the designated operator's liability in Section 9 of the lease, the Lessee must require the designated operator to assume this risk whether such injury or damage is caused in whole or in part by any act or omission, regardless of negligence or fault, of the United States, its contractors or subcontractors, or any of its officers, agents, or employees.
- 3.1.2** The Lessee further agrees to save harmless the United States against all claims for loss, damage, or injury in connection with the programs or activities of the Department of Defense, whether the same be caused in whole or in part by the negligence or fault of the United States, its contractors, or subcontractors, or any of its officers, agents, or employees and whether such claims might be sustained under a theory of strict or absolute liability or otherwise.
- 3.1.3** The Lessee further agrees to require its designated operator to indemnify and save harmless the United States against all claims for loss, damage, or injury in connection with the programs or activities of the Department of Defense, whether the same be caused in whole or in part by the negligence or fault of the United States, its contractors, or subcontractors, or any of its officers, agents, or employees and whether such claims might be sustained under a theory of strict or absolute liability or otherwise.

- 3.1.4 The Lessee must require and ensure that its designated operator accepts and complies with the requirements in this section of this lease until all of the Lessee's and/or its designated operator's obligations under this lease and/or applicable law have been fulfilled. Accrued obligations under this section will survive the termination or expiration of this lease and/or any agreement between Lessee and its designated operator.
- 3.1.5 If the Lessee designates a new operator to perform activities pursuant to this lease, the Lessee must require and ensure that the newly designated operator accepts and complies with all terms and conditions of this lease including, but not limited to, those requirements and/or obligations applicable to the operator under this section of the lease.

3.2 Evacuation or Suspension of Activities

- 3.2.1 General. The Lessee hereby recognizes and agrees that the United States reserves and has the right to temporarily suspend operations and/or require evacuation on this lease in the interest of national security pursuant to Section 3(c) of this lease.
- 3.2.2 Notification. Every effort will be made by the appropriate military agency to provide as much advance notice as possible of the need to suspend operations and/or evacuate. Advance notice will normally be given before requiring a suspension or evacuation. Temporary suspension of operations may include but is not limited to the evacuation of personnel and appropriate sheltering of personnel not evacuated.

"Appropriate sheltering" means the protection of all Lessee's and its designated operator's personnel for the entire duration of any Department of Defense activity from flying or falling objects or substances and will be implemented by an order (oral and/or written) from the BOEM Office of Renewable Energy Programs (OREP) Program Manager, after consultation with the appropriate command headquarters or other appropriate military agency or higher Federal authority. The appropriate command headquarters, military agency or higher authority will provide information to allow the Lessee to assess the degree of risk to, and provide sufficient protection for, the Lessee's personnel and property.

- 3.2.3 Duration. Suspensions or evacuations for national security reasons will not generally exceed 72 hours; however, any such suspension may be extended by order of the OREP Program Manager. During such periods, equipment may remain in place, but all operations, if any, must cease for the duration of the temporary suspension if so directed by the OREP Program Manager. Upon cessation of any temporary suspension, the OREP Program Manager will immediately notify the Lessee such suspension has terminated and operations on the leased area can resume.
- 3.2.4 Lessee Point-of-Contact for Evacuation/Suspension Notifications. The Lessee must inform the Lessor of the persons/offices to be notified to implement the terms of 3.2.2 and 3.2.3.

- 3.2.5 Coordination with Command Headquarters. The Lessee must establish and maintain early contact and coordination with the appropriate command headquarters, to avoid or minimize the potential to conflict with and minimize the potential effects of conflicts with military operations.
- 3.2.6 Reimbursement. The Lessee is not entitled to reimbursement for any costs or expenses associated with the suspension of operations or activities or the evacuation of property or personnel in fulfillment of the military mission in accordance with 3.2.1 through 3.2.5 above.

3.3 Electromagnetic Emissions

The Lessee, prior to entry into any designated defense operating area, warning area, or water test area for the purpose of commencing survey activities undertaken to support SAP or RAP submittal, must enter into an agreement with the commander of the appropriate command headquarters to coordinate the electromagnetic emissions associated with such survey activities. The Lessee, by itself or through its designated operator, must ensure that all electromagnetic emissions associated with such survey activities are controlled as directed by the commander of the appropriate command headquarters.

4 STANDARD OPERATING CONDITIONS

4.1 General

- 4.1.1 Vessel Strike Avoidance Measures. The Lessee, by itself or through its designated operator, must ensure that all vessels conducting activities in support of plan (i.e., SAP and RAP) submittal comply with the vessel-strike avoidance measures specified in stipulations 4.1.1.1 through 4.1.1.7, except under extraordinary circumstances when complying with these requirements would put the safety of the vessel or crew at risk.
- 4.1.1.1 The Lessee, by itself or through its designated operator, must ensure that vessel operators and crews maintain a vigilant watch for cetaceans, pinnipeds, and sea turtles and slow down or stop their vessel to avoid striking these protected species.
- 4.1.1.2 The Lessee, by itself or through its designated operator, must ensure that all vessel operators comply with 10 knot (18.5 km/hr) speed restrictions in any Dynamic Management Area (DMA). In addition, the Lessee must ensure that all vessels operating in the mid-Atlantic Seasonal Management Areas from November 1 through April 30 operate at speeds of 10 knots (18.5 km/hr) or less.
- 4.1.1.3 North Atlantic right whales.
- 4.1.1.3.1 The Lessee, by itself or through its designated operator, must ensure all vessels maintain a separation distance of 500 meters (1,640 ft) or greater from any sighted North Atlantic right whale.

4.1.1.3.2 The Lessee, by itself or through its designated operator, must ensure that the following avoidance measures are taken if a vessel comes within 500 meters (1,640 ft) of any North Atlantic right whale:

4.1.1.3.2.1 If underway, any vessel must steer a course away from the North Atlantic right whale at 10 knots (18.5 km/hr) or less until the 500 meters (1,640 ft) minimum separation distance has been established (except as provided in 4.1.1.3.2.2).

4.1.1.3.2.2 If a North Atlantic right whale is sighted within 100 meters (328 ft) of an underway vessel, the vessel operator must immediately reduce speed and promptly shift the engine to neutral. The vessel operator must not engage the engines until the North Atlantic right whale has moved beyond 100 meters (328 ft), at which point the lessee must comply with 4.1.1.3.2.1.

4.1.1.3.2.3 If a vessel is stationary, the vessel must not engage engines until the North Atlantic right whale has moved beyond 100 meters (328 ft), at which point the Lessee must comply with 4.1.1.3.2.1.

4.1.1.4 Non-delphinoid cetaceans other than the North Atlantic right whale.

4.1.1.4.1 The Lessee, by itself or through its designated operator, must ensure all vessels maintain a separation distance of 100 meters (328 ft) or greater from any sighted non-delphinoid cetacean.

4.1.1.4.2 The Lessee, by itself or through its designated operator, must ensure that the following avoidance measures are taken if a vessel comes within 100 meters (328 ft) of any non-delphinoid cetacean:

4.1.1.4.2.1 If any non-delphinoid cetacean is sighted, the vessel underway must reduce speed and shift the engine to neutral, and must not engage the engines until the non-delphinoid cetacean has moved beyond 100 meters (328 ft).

4.1.1.4.2.2 If a vessel is stationary, the vessel must not engage engines until the non-delphinoid cetacean has moved beyond 100 meters (328 ft).

4.1.1.5 Delphinoid cetaceans.

4.1.1.5.1 The Lessee, by itself or through its designated operator, must ensure that all vessels maintain a separation distance of 50 meters (164 ft) or greater from any sighted delphinoid cetacean.

4.1.1.5.2 The Lessee, by itself or through its designated operator, must ensure that the following avoidance measures are taken if the vessel comes within 50 meters (164 ft) of any delphinoid cetacean:

4.1.1.5.2.1 The Lessee, by itself or through its designated operator, must ensure that any vessel underway remain parallel to a sighted delphinoid cetacean's course whenever possible, and avoid excessive speed or abrupt changes in direction. The Lessee may not adjust course and speed until the delphinoid cetacean has moved beyond 50 meters (164 ft) or the delphinoid cetacean has moved abeam of the underway vessel.

4.1.1.5.2.2 The Lessee, by itself or through its designated operator, must ensure that any vessel underway reduce vessel speed to 10 knots (18.5 km/hr) or less when pods (including mother/calf pairs) or large assemblages of delphinoid cetaceans are observed. The Lessee may not adjust course and speed until the delphinoid cetaceans have moved beyond 50 meters (164 ft) or abeam of the underway vessel.

4.1.1.6 Sea Turtles and Pinnipeds.

4.1.1.6.1 The Lessee, by itself or through its designated operator, must ensure all vessels maintain a separation distance of 50 meters (164 ft) or greater from any sighted sea turtle or pinniped.

4.1.1.7 Vessel Operator Briefing. The Lessee, by itself or through its designated operator, must ensure that all vessel operators are briefed to ensure they are familiar with the requirements specified in 4.1.1.

4.1.2 Marine Trash and Debris Prevention. The Lessee, by itself or through its designated operator, must ensure that vessel operators, employees, and contractors actively engaged in activity in support of plan (i.e., SAP and RAP) submittal are briefed on marine trash and debris awareness and elimination, as described in the BSEE NTL No. 2012-G01 ("Marine Trash and Debris Awareness and Elimination") or any NTL that supercedes this NTL, except that the Lessor will not require the Lessee, vessel operators, employees, and contractors to undergo formal training or post placards. The Lessee, by itself or through its designated operator, must ensure that these vessel operator employees and contractors are made aware of the environmental and socioeconomic impacts associated with marine trash and debris and their responsibilities for ensuring that trash and debris are not intentionally or accidentally discharged into the marine environment. The above-referenced NTL provides information the Lessee may use for this awareness training.

4.2 Archaeological Survey Requirements

4.2.1 Archaeological Survey Required. The Lessee must provide the results of an archaeological survey with its SAP and RAP.

4.2.2 Qualified Marine Archaeologist. The Lessee must ensure that the analysis of archaeological survey data collected in support of plan (i.e., SAP and RAP) submittal and the preparation of archaeological reports in support of plan (i.e., SAP and RAP) submittal are conducted by a Qualified Marine Archaeologist.

- 4.2.3 Tribal Pre-Survey Meeting. Subsequent to any pre-survey meeting with the Lessor (see 2.1.2) and at least 45 calendar days prior to commencing survey activities performed in support of plan (i.e., SAP and RAP) submittal, the Lessee must invite by certified mail the Narragansett Indian Tribe, the Shinnecock Indian Nation, and the Lenape Tribe of Delaware to a tribal pre-survey meeting. The purpose of this meeting will be for the Lessee and the Qualified Marine Archaeologist to discuss the Lessee's Survey Plan and consider requests to monitor portions of the archaeological survey and the geotechnical sampling activities, including the visual logging and analysis of geotechnical samples (e.g., cores). The meeting must be scheduled for a date at least 30 calendar days prior to commencing survey and at a location and time that affords the participants a reasonable opportunity to participate. The anticipated date for the meeting must be identified in the timeline of activities described in the survey plan (see 2.1.1).
- 4.2.4 Geotechnical Exploration. The Lessee may, by itself or through its designated operator, conduct geotechnical exploration activities in support of applicable plan (i.e., SAP and RAP) submittal, including geotechnical sampling or other direct sampling or investigation techniques, only in locations where an analysis of the results of geophysical surveys has been completed. This analysis must include a determination by a Qualified Marine Archaeologist as to whether any potential archaeological resources are present in the area. Except as allowed by the Lessor under 4.2.6, the geotechnical exploration activities must avoid potential archaeological resources by a minimum of 50 meters (164 ft.), and the avoidance distance must be calculated from the maximum discernible extent of the archaeological resource. A Qualified Marine Archaeologist must certify, in the Lessee's archaeological reports, that geotechnical exploration activities did not impact potential historic properties identified as a result of the HRG surveys performed in support of plan submittal, except as follows: in the event that the geotechnical exploration activities did impact potential historic properties identified in the archaeological surveys without the Lessor's prior approval, the Lessee and the Qualified Marine Archaeologist who prepared the report must instead provide a statement documenting the extent of these impacts.
- 4.2.5 Monitoring and Avoidance. The Lessee, by itself or through its designated operator, must inform the Qualified Marine Archaeologist that he or she may be present during HRG surveys and bottom-disturbing activities performed in support of plan (i.e., SAP and RAP) submittal to ensure avoidance of potential archaeological resources, as determined by the Qualified Marine Archaeologist (including bathymetric, seismic, and magnetic anomalies; side scan sonar contacts; and other seafloor or sub-surface features that exhibit potential to represent or contain potential archaeological sites or other historic properties). In the event that this Qualified Marine Archaeologist indicates that he or she wishes to be present, the Lessee, by itself or through its designated operator, must facilitate the Qualified Marine Archaeologist's presence, as requested by the Qualified Marine Archaeologist, and provide the Qualified Marine Archaeologist the opportunity to inspect data quality.
- 4.2.6 No Impact without Approval. In no case may the Lessee knowingly impact a potential archaeological resource without the Lessor's prior approval.

4.2.7 Post-Review Discovery Clauses. If the Lessee or its designated operator, while conducting site characterization activities in support of plan (i.e., SAP and RAP) submittal, discovers a potential archaeological resource, such as the presence of a shipwreck (e.g., a sonar image or visual confirmation of an iron, steel, or wooden hull, wooden timbers, anchors, concentrations of historic objects, piles of ballast rock), prehistoric artifacts, or relict landforms, etc. within the project area, the Lessee, by itself or through its designated operator, must:

4.2.7.1 Immediately halt seafloor/bottom-disturbing activities within the area of discovery;

4.2.7.2 Notify the Lessor within 24 hours of discovery;

4.2.7.3 Notify the Lessor in writing via report to the Lessor within 72 hours of its discovery;

4.2.7.4 Keep the location of the discovery confidential and take no action that may adversely affect the archaeological resource until the Lessor has made an evaluation and instructs the applicant on how to proceed; and

4.2.7.5 Conduct any additional investigations as directed by the Lessor to determine if the resource is eligible for listing in the National Register of Historic Places (30 CFR 585.802(b)). The Lessor will do this if: (1) the site has been impacted by the Lessee's project activities; or (2) impacts to the site or to the area of potential effect cannot be avoided. If investigations indicate that the resource is potentially eligible for listing in the National Register of Historic Places, the Lessor will tell the Lessee how to protect the resource or how to mitigate adverse effects to the site. If the Lessor incurs costs in protecting the resource, under Section 110(g) of the National Historic Preservation Act, the Lessor may charge the Lessee reasonable costs for carrying out preservation responsibilities under the OCS Lands Act (30 CFR 585.802(c-d)).

4.3 Geological and Geophysical (G&G) Survey Requirements

4.3.1 General. The Lessee, by itself or through its designated operator, must ensure that all vessels conducting activity in support of a plan (i.e., SAP and RAP) submittal comply with the geological and geophysical survey requirements specified in 4.3 except under extraordinary circumstances when complying with these requirements would put the safety of the vessel or crew at risk.

4.3.2 Visibility. Neither the Lessee nor its designated operator may conduct G&G surveys in support of plan (i.e., SAP and RAP) submittal at any time when lighting or weather conditions (e.g., darkness, rain, fog, sea state) prevents visual monitoring of the HRG survey exclusion zone (see 4.3.6) or the geotechnical sampling exclusion zone (see 4.3.7), except as allowed under 4.3.3.

- 4.3.3 Modification of Visibility Requirement. If the Lessee, by itself or through its designated operator, intends to conduct G&G survey operations in support of plan submittal at night or when visual observation is otherwise impaired, the Lessee must submit to the Lessor an alternative monitoring plan detailing the alternative monitoring methodology (e.g., active or passive acoustic monitoring technologies). The Lessor may decide to allow the Lessee or its designated operator to conduct G&G surveys in support of plan submittal at night or when visual observation is otherwise impaired using the proposed alternative monitoring methodology.
- 4.3.4 Protected-Species Observer. The Lessee, by itself or through its designated operator, must ensure that the exclusion zone for all G&G surveys performed in support of plan (i.e., SAP and RAP) submittal is monitored by one or more NMFS-approved protected-species observers around the sound source. The Lessee must provide to the Lessor a list of observers and their résumés no later than 45 calendar days prior to the scheduled start of surveys performed in support of plan (i.e., SAP and RAP) submittal. The résumés of any additional observers must be provided at least 15 calendar days prior to each observer's start date. The Lessor will send the observer information to NMFS for approval.
- 4.3.5 Optical Device Availability. The Lessee, by itself or through its designated operator, must ensure that reticle binoculars and other suitable equipment are available to each observer to adequately perceive and monitor protected marine species within the exclusion zone during surveys conducted in support of plan (i.e., SAP and RAP) submittal.
- 4.3.6 High-Resolution Geophysical (HRG) Surveys. Stipulations specific to HRG surveys conducted in support of plan (i.e., SAP and RAP) submittal where one or more acoustic sound sources is operating at frequencies below 200 kHz are provided in 4.3.6.1 through 4.3.6.9:
- 4.3.6.1 Establishment of Default Exclusion Zone. The Lessee, by itself or through its designated operator, must ensure a 200-meter radius exclusion zone for cetaceans, pinnipeds, and sea turtles. Neither the Lessee nor its designated operator may use HRG survey devices that emit sound levels that exceed the 180 dB Level A harassment radius (200 meter) boundary without approval by the Lessor. If the Lessor determines that the exclusion zone does not encompass the 180 dB Level A harassment radius, the Lessor may impose additional, relevant requirements on the Lessee, including but not limited to, required expansion of this exclusion zone.
- 4.3.6.2 HRG Survey Chesapeake Bay Seasonal Management Area (SMA) Right Whale Monitoring. The Lessee, by itself or through its designated operator, must ensure that between November 1 and April 30 vessel operators monitor National Marine Fisheries Service (NMFS) North Atlantic Right Whale reporting systems (e.g., the Early Warning System, Sighting Advisory System, and Mandatory Ship Reporting System) for the presence of North Atlantic right whales during HRG survey operations within or adjacent to this SMA.

- 4.3.6.3 Dynamic Management Area Shutdown Requirement. The Lessee, by itself or through its designated operator, must ensure that vessels cease HRG survey activities within 24 hours of NMFS establishing a DMA in the Lessee's HRG survey area. HRG surveys may resume in the affected area after the DMA has expired.
- 4.3.6.4 Clearance of Exclusion Zone. The Lessee, by itself or through its designated operator, must ensure that active acoustic sound sources will not be activated until the protected species observer has reported the exclusion zone clear of all cetaceans, pinnipeds, and sea turtles for 60 minutes.
- 4.3.6.5 Electromechanical Survey Equipment Ramp-Up. The Lessee, by itself or through its designated operator, must ensure that, when technically feasible, a "ramp-up" of the electromechanical survey equipment occurs at the start or re-start of HRG survey activities. A ramp-up would begin with the power of the smallest acoustic equipment for the HRG survey at its lowest power output. The power output would be gradually turned up and other acoustic sources added in a way such that the source level would increase in steps not exceeding 6 dB per 5-minute period.
- 4.3.6.6 Shutdown for Non-Delphinoid Cetaceans and Sea Turtles. If a non-delphinoid cetacean or sea turtle is sighted at or within the exclusion zone, an immediate shutdown of the electromechanical survey equipment is required. The vessel operator must comply immediately with such a call by the observer. Any disagreement or discussion must occur only after shutdown. Subsequent restart of the electromechanical survey equipment may only occur following clearance of the exclusion zone (see 4.3.6.4) and implementation of ramp-up procedures (see 4.3.6.5).
- 4.3.6.7 Power Down for Delphinoid Cetaceans and Pinnipeds. If a delphinoid cetacean or pinniped is sighted at or within the exclusion zone, the electromechanical survey equipment must be powered down to the lowest power output that is technically feasible. The vessel operator must comply immediately with such a call by the observer. Any disagreement or discussion must occur only after power-down. Subsequent power up of the electromechanical survey equipment must use the ramp-up provisions described in 4.3.6.5 and may occur after (1) the exclusion zone is clear of delphinoid cetaceans and pinnipeds or (2) a determination by the observer after a minimum of 10 minutes of observation that the delphinoid cetacean or pinniped is approaching the vessel or towed equipment at a speed and vector that indicates voluntary approach to bow-ride or chase towed equipment. An incursion into the exclusion zone by a non-delphinoid cetacean or sea turtle during a power-down requires implementation of the shutdown procedures described in 4.3.6.6.

- 4.3.6.8 Pauses in Electromechanical Survey Sound Source. The Lessee, by itself or through its designated operator, must ensure that, if the electromechanical sound source shuts down for reasons other than encroachment into the exclusion zone by a non-delphinoid cetacean or sea turtle, including reasons such as, but not limited to, mechanical or electronic failure, resulting in the cessation of the sound source for a period greater than 20 minutes, restart of the electromechanical survey equipment commences only after clearance of the exclusion zone (see 4.3.6.4) and implementation of ramp-up procedures (see 4.3.6.5). If the pause is less than 20 minutes the equipment may be restarted as soon as practicable at its operational level as long as visual surveys were continued diligently throughout the silent period and the exclusion zone remained clear of cetaceans, pinnipeds, and sea turtles. If visual surveys were not continued diligently during the pause of 20-minutes or less, the Lessee, by itself or through its designated operator, must restart the electromechanical survey equipment following clearance of the exclusion zone (see 4.3.6.4) and implementation of ramp-up procedures (see 4.3.6.5).
- 4.3.6.9 Compliance with Equipment Noise Standards. All HRG survey equipment used by the Lessee or its designated operator must comply with applicable equipment noise standards of the U.S. Environmental Protection Agency (EPA), unless directed otherwise by the Lessor. All HRG survey equipment, even if modified from the original, must have noise-control devices no less effective than those provided on the original equipment.
- 4.3.7 Geotechnical Exploration. Stipulations specific to geotechnical exploration limited to borings and vibracores and conducted in support of plan (i.e., SAP and RAP) submittal are provided in 4.3.7.1 through 4.3.7.4.
- 4.3.7.1 Establishment of Default Exclusion Zone. The Lessee, by itself or through its designated operator, must ensure a 200-meter default exclusion zone for cetaceans, pinnipeds, and sea turtles. Neither the Lessee nor its designated operator may use geotechnical survey equipment that emits sound levels that exceed the 120 dB Level B harassment radius (200 meter) boundary without approval by the Lessor. If the Lessor determines that the exclusion zone does not encompass the 120 dB Level B harassment radius, the Lessor may impose additional, relevant requirements on the Lessee, including but not limited to, required expansion of this exclusion zone.
- 4.3.7.2 Clearance of Exclusion Zone. The Lessee, by itself or through its designated operator, must ensure that the geotechnical sound source is not activated until the observer has reported the exclusion zone clear of all cetaceans, pinnipeds, and sea turtles for 60 minutes.
- 4.3.7.3 Shutdown for Non-Delphinoid Cetaceans and Sea Turtles. If any non-delphinoid cetaceans or sea turtles are sighted at or within the exclusion zone, an immediate shutdown of the geotechnical survey equipment is required. The vessel operator must comply immediately with such a call by the observer. Any disagreement or discussion must occur only after shutdown. Subsequent restart of the geotechnical survey equipment may only occur following clearance of the exclusion zone (see 4.3.7.2).

- 4.3.7.4 Pauses in Geotechnical Survey Sound Source. The Lessee, by itself or through its designated operator, must ensure that, if the geotechnical sound source shuts down for reasons other than encroachment into the exclusion zone by a non-delphinoid cetacean or sea turtle, including reasons such as, but not limited to, mechanical or electronic failure, resulting in the cessation of the sound source for a period greater than 20 minutes, restart of the geotechnical survey equipment commences only following clearance of the exclusion zone (see 4.3.7.2). If the pause is less than 20 minutes, the equipment may be restarted as soon as practicable as long as visual surveys were continued diligently throughout the silent period and the exclusion zone remained clear of cetaceans, pinnipeds, and sea turtles. If visual surveys were not continued diligently during the pause of 20 minutes or less, the Lessee or its designated operator may restart the geotechnical survey equipment only after clearance of the exclusion zone (see 4.3.7.2).

4.4 Protected-Species Reporting Requirements

The Lessee, by itself or through its designated operator, must ensure compliance with the following reporting requirements for site characterization activities performed in support of plan (i.e., SAP and RAP) submittal and must use the contact information provided as an enclosure to this lease, or updated contact information as provided by the Lessor, to fulfill these requirements:

- 4.4.1 Reporting Injured or Dead Protected Species. The Lessee, by itself or through its designated operator, must ensure that sightings of any injured or dead protected species (e.g., marine mammals, sea turtles or sturgeon) are reported to the Lessor, NMFS, and the NMFS Northeast Regional Stranding Hotline within 24 hours of sighting, regardless of whether the injury or death is caused by a vessel. In addition, if the injury or death was caused by a collision with a project-related vessel, the Lessee, by itself or through its designated operator, must ensure that the Lessor is notified of the incident within 24 hours. The Lessee or its designated operator must use the form provided in Appendix A to ADDENDUM "C" to report the sighting or incident. If the Lessee's or its designated operator's activity is responsible for the injury or death, the Lessee's or its designated operator's vessel must assist in any salvage effort as requested by NMFS.
- 4.4.2 Protected Species Observer Reports. The Lessee, by itself or through its designated operator, must ensure that the protected-species observer record all observations of protected species using standard marine mammal observer data collection protocols. The list of required data elements for these reports is provided in Appendix B to ADDENDUM "C".
- 4.4.3 Final Report of G&G Survey Activities and Observations. The Lessee must provide the Lessor with a report within 90 calendar days following the commencement of HRG or geotechnical sampling activities that includes a summary of survey activities, all protected-species observer reports, a summary of the survey activities and an estimate of the number of listed marine mammals and sea turtles observed and/or Taken during these survey activities.

- 4.4.4 Marine Mammal Protection Act Authorization(s). If the Lessee is required to obtain an authorization pursuant to section 101(a)(5) of the Marine Mammal Protection Act prior to conducting survey activities, in support of plan (i.e., SAP and RAP) submittal then the Lessee, by itself or through its designated operator, must provide to the Lessor a copy of the authorization prior to commencing these activities.

5 COORDINATION

- 5.1 Notification. The Lessor will endeavor to notify the Lessee of any activity that the Lessor authorizes or funds that the Lessor has determined may affect the activities of the Lessee within the lease area.

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

APPENDIX A TO ADDENDUM "C"

INCIDENT REPORT: PROTECTED SPECIES INJURY OR MORTALITY

Lease Number OCS-A 0497

Photographs/Video should be taken of all injured or dead animals.

Observer's full name: _____

Reporter's full name: _____

Species Identification: _____

Name and type of platform: _____

Date animal observed: _____ Time animal observed: _____

Date animal collected: _____ Time animal collected: _____

Environmental conditions at time of observation (i.e. tidal stage, Beaufort Sea State, weather):

Water temperature (°C) and depth (m/ft) at site: _____

Describe location of animal and events 24 hours leading up to, including and after, the incident (include vessel speeds, vessel activity and status of all sound source use):

Photograph/Video taken: YES / NO If Yes, was the data provided to NMFS? YES / NO
(Please label *species*, *date*, *geographic site* and *vessel name* when transmitting photo and/or video)

Date and Time reported to NMFS Stranding Hotline: _____

Smalltooth Sawfish (*Pristis pectinata*) Information:

Fork length (or total length): _____

Condition of specimen/description of animal: _____

Fish Decomposed: NO SLIGHTLY MODERATELY SEVERELY

Fish tagged: YES / NO If Yes, please record all tag numbers.

Tag #(s): _____

Genetic samples collected: YES / NO

Genetics samples transmitted to: _____ on ____ / ____ / 201 ____

Sea Turtle Species Information: (please designate cm/m or inches)

Species: _____ Weight (kg or lbs): _____

Sex: Male Female Unknown

How was sex determined?: _____

Straight carapace length: _____ Straight carapace width: _____

Curved carapace length: _____ Curved carapace width: _____

Plastron length: _____ Plastron width: _____

Tail length: _____ Head width: _____

Condition of specimen/description of animal: _____

Existing Flipper Tag Information

Left: _____ Right: _____

PIT Tag#: _____

Miscellaneous:

Genetic biopsy collected: YES NO Photographs taken: YES NO

Turtle Release Information:

Date: _____ Time: _____

Latitude: _____ Longitude: _____

State: _____ County: _____

Remarks: (Note if turtle was involved with tar or oil, gear or debris entanglement, wounds, or mutilations, propeller damage, papillomas, old tag locations, etc.) _____

Marine Mammal information: *(please designate cm/m or ft/inches)*

Length of marine mammal (note direct or estimated): _____

Sex of marine mammal (if possible): _____

How was sex determined?: _____

Confidence of Species Identification: SURE UNSURE BEST GUESS

Description of Identification characteristics of marine mammal: _____

Genetic samples collected: YES / NO

Genetic samples transmitted to: _____ on ____ / ____ / 201 ____

Fate of marine mammal: _____

Description of Injuries Observed: _____

Other Remarks/Drawings: _____

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT

APPENDIX B TO ADDENDUM "C"

REQUIRED DATA ELEMENTS FOR PROTECTED SPECIES OBSERVER REPORTS

Lease Number OCS-A 0497

Per ADDENDUM "C", 4.4.2 of Protected Species Observer Reports, the Lessee, by itself or through its designated operator, must ensure that the protected-species observer record all observations of protected species using standard marine mammal observer data collection protocols. The list of required data elements for these reports is provided below:

1. Vessel name;
2. Observers' names and affiliations;
3. Date;
4. Time and latitude/longitude when daily visual survey began;
5. Time and latitude/longitude when daily visual survey ended; and
6. Average environmental conditions during visual surveys including:
 - a. Wind speed and direction;
 - b. Sea state (glassy, slight, choppy, rough, or Beaufort scale);
 - c. Swell (low, medium, high, or swell height in meters); and
 - d. Overall visibility (poor, moderate, good).
7. Species (or identification to lowest possible taxonomic level);
8. Certainty of identification (sure, most likely, best guess);
9. Total number of animals;
10. Number of juveniles;
11. Description (as many distinguishing features as possible of each individual seen, including length, shape, color and pattern, scars or marks, shape and size of dorsal fin, shape of head, and blow characteristics);
12. Direction of animal's travel – related to the vessel (drawing preferable);
13. Behavior (as explicit and detailed as possible; note any observed changes in behavior);
14. Activity of vessel when sighting occurred.

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ADDENDUM "D"

PROJECT EASEMENT

Lease Number OCS-A 0497

**This section includes a description of the Project Easement(s), if any, associated with this lease.
This section will be updated as necessary.**



United States Department of the Interior

BUREAU OF OCEAN ENERGY MANAGEMENT

WASHINGTON, DC 20240-0001

Mr. Conrad T. Spangler, III
Director
Commonwealth of Virginia
Department of Mines, Minerals and Energy
1100 Bank Street, 8th Floor
Richmond Virginia 23219

MAY - 6 2014

VIA EMAIL TO: [Conrad.Spangler@dmme.virginia.gov]

Dear Mr. Spangler:

The Bureau of Ocean Energy Management (BOEM) is pleased to offer lease OCS-A 0497, along with the associated Addenda, (electronic copy enclosed), to the Commonwealth of Virginia, Department of Mines, Minerals and Energy. Within thirty (30) days of receipt of this letter, please indicate your acceptance, rejection, or request for modification of the terms and conditions of the lease in a reply to this email. If you want to request a modification, please identify the specific modification(s) to the terms and conditions that you wish to submit for BOEM's consideration. Also, we are, of course, willing to meet with you to discuss the terms and conditions of the lease and answer any questions you might have.

Once we receive notification of your acceptance of the terms and conditions of the lease, we will transmit three paper copies of the lease instrument for your signature. Within ten (10) business days of receipt of the paper copies, you will be required to:

- 1) Execute and return the three copies of the lease. Please include lease and operations contact information in Addendum A of the lease instrument.
- 2) Provide a surety bond or other form of BOEM-approved financial assurance in the amount of \$300,000 to guarantee compliance with all terms and conditions of the lease.

After confirming compliance with the above requirements, BOEM will execute the lease on behalf of the United States and send you one fully executed copy. Your lease will become effective on the first day of the month following the date the lease is signed by both parties, unless you request, and we approve, making the lease effective on the first day of the month in which it is signed by BOEM.

Please do not hesitate to contact Mr. Casey Reeves at (703) 787-1320 if you have any questions regarding the issuance of your lease.

Sincerely,

A handwritten signature in dark ink, appearing to read "Maureen A. Bornholdt". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Maureen A. Bornholdt
Program Manager
Office of Renewable Energy Programs

Enclosure