UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4
Atlanta, Georgia

Permit to Construct and Operate Under the Outer Continental Shelf Air Regulations
Permit No. OCS-EPA-R4008-M1

In accordance with the provisions of section 328 of the Clean Air Act (CAA), 42 U.S.C. § 7627 and the implementing Outer Continental Shelf (OCS) Air Regulations at title 40 Code of Federal Regulations (CFR) part 55, which incorporate by reference the Prevention of Significant Deterioration (PSD) of Air Quality Regulations at 40 CFR § 52.21, and the title V Operating Permit Program at 40 CFR part 71,

BHP Billiton Petroleum, Inc.
1360 Post Oak Blvd., Suite 150
Houston, Texas 77056

is hereby authorized to construct and operate air emissions units and to conduct other air pollutant emitting activities at an OCS source at multiple sites within the Gulf of Mexico, DeSoto Canyon lease blocks 499, 543-545, 586-592, 631-640, 676-685, 721-729, 768-773, and 815-817. The center of the contiguous lease blocks is located on OCS waters of the Gulf of Mexico east of longitude 87.5 º W at latitude 28.31º N and longitude 86.96 º W, approximately 120 miles from nearest Louisiana shoreline, 139 miles from the nearest Mississippi shoreline, and 125 miles from the nearest Alabama and Florida shorelines.

Upon initial start-up, this OCS source and support vessels shall be constructed and operated in accordance with the terms and conditions set forth in this permit.

This permit originally became effective on June 30, 2012. The permit was modified on March 13, 2013.

This permit shall expire two years from the date the OCS source commences activity on the identified DeSoto Canyon lease blocks, not to exceed June 30, 2017.

This permit shall not relieve the owner or operator of the responsibility to comply fully with all applicable provisions of federal and state law.

3/13/13
Date Signed

/signed by Carol Kemker for/
Beverly H. Banister
Director
Air, Pesticides, and Toxics
Management Division

1 AUTHORITY

The United States Environmental Protection Agency (EPA) issues this permit pursuant to section 328 of the CAA, 42 U.S.C. § 7627, and the implementing OCS Air Regulations at 40 CFR part 55, which incorporate by reference the PSD Regulations at 40 CFR § 52.21 and the title V Operating Permit Program at 40 CFR part 71. This permit is based upon application materials submitted to EPA by BHP Billiton Petroleum, Inc. (BHPB), dated October 14, 2010, February 9, 2011, September 30, 2011, October 14, 2011, December 21, 2011, January 18, 2012, supplemental submittals in the administrative record for this permit action, and upon the technical analysis performed by EPA.

2 APPLICANT

BHP Billiton Petroleum, Inc.
1360 Post Oak Blvd., Suite 150
Houston, Texas 77056

3 PROJECT LOCATION

BHPB's project is located in the OCS waters of the Gulf of Mexico, DeSoto Canyon area, within lease blocks 499, 543-545, 586-592, 631-640, 676-685, 721-729, 768-773, and 815-817. These contiguous lease blocks are found approximately within latitude 28.15° to 28.50° N and longitude 86.68° to 87.27° W, east of longitude 87.5° W. The center of the lease block area is located at 28.31° N and longitude 86.96° W, approximately 120 miles from the nearest Louisiana shoreline, 139 miles from the nearest Mississippi shoreline, and 125 miles from the nearest Alabama and Florida shorelines.

4 PROJECT DESCRIPTION

BHPB's project, known as the Sake Prospect Drilling Project (Sake Project), is an oil and natural gas exploration drilling campaign for a period of up to two years using a mobile offshore drilling unit (MODU) and associated support vessels described in this section. BHPB will use either the Transocean ultra-deepwater drillship *C.R. Luigs* MODU (Operating Scenario 1) or the Transocean semisubmersible *Development Driller 1* (*DD1*) MODU (Operating Scenario 2). Under either operating scenario, BHPB will conduct drilling activities in multiple locations within the DeSoto Canyon lease block locations listed in Section 3, Project Location, of this permit. This permit does not authorize the establishment of any permanent production facilities.

Air pollutant emissions generated from the Sake Project include carbon monoxide (CO), nitrogen dioxide (NO_2); particulate matter (PM) which includes PM with an aerodynamic diameter less than 10 microns (PM_{10}) and with an aerodynamic diameter less than 2.5 microns ($PM_{2.5}$); and sulfur dioxide (SO_2) (known as criteria pollutants), as well as other regulated air pollutants, including oxides of nitrogen (NO_X), volatile organic compounds (VOC), and greenhouse gases (GHGs). VOC and NO_X are the measured precursors for the criteria pollutant ozone, and NO_X and SO_2 are measured precursors for the criteria pollutant $PM_{2.5}$. Based on emissions estimates and applicable permitting thresholds, both operating scenarios are subject to the PSD and title V programs and have significant emissions of NO_X, CO, PM_{10}, $PM_{2.5}$, VOC, and GHGs. The project emissions of VOC and NO_X are measured precursors for the criteria pollutant ozone and NO_X is a measured precursor for $PM_{2.5}$. In addition, both the

C.R. Luigs and *DD1* MODUs are area sources of hazardous air pollutants pursuant to 40 CFR 63 subpart ZZZZ.

The *C.R. Luigs* emission units consist of eight main power plant diesel engines to provide power and propulsion, four crane diesel engines, one emergency diesel generator, and a black start compressor diesel engine. The cementing operations use two cementing unit diesel engines and a portable cementing nitrogen pump diesel engine. The wireline operations are intermittent and use up to four small portable diesel engines. The four life boats and the one fast rescue craft are powered by diesel engines. In addition, there is one mud degassing unit and two dust collectors for mud and cement. There are 29 tanks to store diesel fuel, one tank for hydraulic oil, one tank for base oil, and two tanks to store Jet A helifuel. A list of all emission units is in Table 1.

The *DD1* emission units consist of eight main power plant generator diesel engines to provide power and propulsion and one emergency diesel generator. The cementing operations use two cementing unit diesel engines, a batch mixer diesel engine, and a portable cementing nitrogen pump engine. The wireline operations are intermittent and use up to four small portable diesel engines. The four life boats and the one fast rescue craft are powered by diesel engines. In addition, there is one mud degassing unit and two dust collectors for mud and cement. There are 21 tanks to store diesel fuel, one base oil tank, and four tanks to store Jet A helifuel. Also present onboard are emission units associated with such emission-emitting activities as flaring, painting, welding and seismic operations. A list of all emission units is in Table 2.

Support vessels operating within 25 miles of either operating scenario will include offshore supply, work boats, and crew boats that run marine diesel engines.

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The information provided in Tables 1-3 is for description and identification purposes and does not establish operating limits.

Table 1 – *C.R. Luigs* Emissions Units (Operating Scenario 1)

Emissions Unit ID	Engine Description	Manufacturer	Model	Rating[a] (hp)[*]	Mfg Year
EU-001L-008L	Main Power Plant Diesel Engines 1-8	MAN B&W	9L32/40-47	5,875	1998
EU-009L	Port Fwd Crane Diesel Engine	Caterpillar	3406	305	1998
EU-010L	Port Aft Crane Diesel Engine	Caterpillar	3406	305	1998
EU-011L	Stb Fwd Crane Diesel Engine	Caterpillar	3406	305	1998
EU-012L	Stb Aft Crane Diesel Engine	Caterpillar	3406	305	1998
EU-013L	Mud and Cement Mixing Dust Collectors	Metroplex Products	CF400R-129	NA	--
EU-014L	Mud Degassing Operations	--	--	NA	--
EU-015L	Emergency Generator Diesel Engine	Caterpillar	D3516A	2,064	1998
EU-016L-17L	Cement Units 1-2 Diesel Engines	Caterpillar	3412 CDITA	860	2001
EU-018L	Cementing Nitrogen Pump Diesel Engine[b]	Caterpillar or similar	3406 CDITA or similar	490	2000
EU-019L	POSU-CA Primary Wireline Unit Diesel Engine Hydraulic Generator Combination[b]	Caterpillar or similar	C-7 DITA or similar	300	2009
EU-020L	Wireline Unit Alt #2 Diesel Engine[b]	Caterpillar or similar	C-7 DITA or similar	300	2008
EU-022L	Wireline Unit Power Plant GSU-W Generator[b]	Various	Various	160	Various
EU-023L	Wireline Unit Hydraulic Diesel Generator DHPS[b]	Various	Various	160	Various
EU-024L	Fast Rescue Craft Diesel Engine	Steyr Motors	M0144M38	142	2008
EU-025L-028L	Lifeboat Diesel Engines 1-4	Bukh	DV36-39	39	1998
EU-029L-050L	Various Diesel Fuel Tanks	--	--	NA	--
EU-051L	Hydraulic Fluid Tank	--	--	NA	--
EU-052L	Base Oil Tank	--	--	NA	--
EU-053L-059L	Cement and Wireline Unit Diesel Fuel Tanks	--	--	NA	--
EU-060L	Workboat Diesel Engines[c] (See Table 3)	Various	Various	10,632	Various
EU-061L	Fast Crew Boat Diesel Engines[c] (See Table 3)	Various	Various	4,800	Various
EU-062L-089L	Support Vessel Tanks Diesel and Lube Oil	--	--	NA	--
EU-090L-091L	Helifuel Tanks 1-2 Jet A	--	--	NA	--
EU-092L	Black Start Air Compressor	Hatz	E673L5	6	1998

[a] Permit conditions may limit operation to less than rated capacity.

[b] These units are portable and brought on the MODU as needed by a third party supplier. The exact engine available for use during the project has not been identified at the time of application. The replacement engine will meet an equivalent or a higher EPA Tier standard.

[c] Ratings represent the total horsepower of all engines that could be operated on an individual support vessel.

[*] Horsepower

Table 2 – *DD1* Emissions Units (Operating Scenario 2)

Emissions Unit ID	Engine Description	Manufacturer	Model	Rating[a] (hp)[*]	Mfg Year
EU-001D-008D	Main Power Plant Diesel Engines 1-8	Caterpillar	3612 DITA	5,096	2002
EU-009D	Mud and Cement Mixing Dust Collectors	Hydralift Procon			
EU-010D	Mud Degassing Operations	NA	NA	NA	--
EU-011D	Emergency Generator Diesel Engine	Caterpillar	3516	2,229	2002
EU-012-013D	Cement Unit 1-2 Diesel Engine	Caterpillar	3412	860	2001
EU-014D	Cementing Nitrogen Pump Diesel Engine[b]	Caterpillar or similar	3406 or similar	490	2000
EU-015D	Cement Batch Mixer Diesel Engine	Caterpillar	3126	250	2004
EU-016D	POSU-CA Primary Wireline Unit Diesel Engine Hydraulic Generator Combination[b]	Caterpillar or similar	C-7 DITA or similar	300	2009
EU-017D	Wireline Unit Alt #2 Diesel Engine[b]	Caterpillar or similar	C-7 DITA or similar	300	2008
EU-019D	Wireline Unit Power Plant GSU-W Generator[b]	Various	Various	160	Various
EU-020D	Wireline Unit Hydraulic Diesel Generator DHPS[b]	Various	Various	160	Various
EU-021D	Fast Rescue Craft Diesel Engine	Steyr Motors	M0144M38	142	2008
EU-022D-025D	Lifeboat Diesel Engines 1-4	Steyr Motors	M0144M38	110	2002
EU-026D-032D	Various Diesel Fuel Tanks	--	--	NA	2002
EU-033D	Base Oil Tank	--	--	NA	2002
EU-034D-047D	Various Diesel Fuel Tanks	--	--	NA	--
EU-048D	Workboat Diesel Engines[c] (See Table 3)	Various	Various	10,632	Various
EU-049D	Fast Crew Boat Diesel Engines[c] (See Table 3)	Various	Various	4,800	Various
EU-050D-077D	Support Vessel Tanks Diesel and Lube Oil	--	--	NA	--
EU-078D-081D	Helifuel Tanks 1-4 Jet A	Sure Tank LTD	ST-1430	NA	2005
EU-082	Flaring Operations	--	--	NA	--
EU-083	Welding Operations	--	--	NA	--
EU-084	Painting Operations	--	--	NA	--
EU-085-087	Seismic Operations Engines	Various	QSX15G9-NR2 or similar	415	2006

[a] Permit conditions may limit operation to less than rated capacity.

[b] These units are portable and brought on the MODU as needed by a third party supplier. The exact engine available for use during the project has not been identified at the time of application. The replacement engine will be equivalent or a higher EPA Tier standard.

[c] Ratings represent the total horsepower of all engines that could be operated on an individual support vessel.

[*] Horsepower

Table 3 – Support Vessels

Vessel Description	Representative Vessel[a]	Operating Scenario
Crew Boats	*Allie* or similar	Operating Scenario 1 and 2
Offshore Supply/Work Boats	*Fast Skipper* or similar	Operating Scenario 1 and 2

[a] Specific crew, supply, and work boats available for use during the drilling project had not been identified at the time of application. The representative vessel is the worst case vessel in the potential vessel fleet and used to calculate potential emissions.

5 GENERAL CONDITIONS

5.1 Compliance

5.1.1 The permittee shall comply with all requirements of 40 CFR part 71, 40 CFR § 52.21, 40 CFR part 55 and this permit. Failure to do so shall be considered a violation of section 111(e) of the CAA. All enforcement provisions of the CAA, including, but not limited to, the provisions of sections 113, 114, 120, 303 and 304 of the CAA, shall apply to the OCS source and permittee**.**

[40 CFR § 55.8, 55.9(a) and (b)]

5.1.2 The permittee must comply with all conditions of this permit. All terms and conditions of this permit are enforceable by EPA and citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

[40 CFR § 55.8, 71.6(a)(6)(i)]

5.1.3 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

[40 CFR § 71.6(a)(6)(ii)]

5.2 Permit Shield

Compliance with the terms and conditions of this permit shall be deemed compliance with the applicable requirements that are included and are specifically identified in this permit. Nothing in this permit shall alter or affect the following:

- The provisions of CAA section 303 (emergency orders), including the authority of the Administrator under that section;
- The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or
- The ability of EPA to obtain information from a source pursuant to CAA section 114.

[40 CFR § 71.6(f)(1)]

5.3 Other Credible Evidence

For the purpose of submitting compliance certifications in accordance with Condition 5.21 of this permit, or establishing whether or not a person has violated or is in violation of any requirement of this permit, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[CAA §§ 113(a) and (e)(1), 40 CFR §§ 60.11(g) and 61.12]

5.4 Construction and Operation

5.4.1 As approved and conditioned by this permit, all construction and operation, including equipment operations and maintenance of the OCS source and support vessels shall be in accordance with the data, specifications, drawings, exhibits, and assumptions included with the application and supporting materials submitted by the permittee, which resulted in this permit (application materials). This permit is valid only for the specific processes and operations applied for and indicated in the application materials. Any unauthorized deviation from the application materials, or from any term or condition of this permit may constitute grounds for revocation or enforcement action by EPA.

5.4.2 The permittee shall properly operate and maintain the OCS source and support vessels, including all systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the terms and conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to minimize or prevent emissions in achieving compliance with the terms and conditions of the permit.

[40 CFR § 52.21(r)(1)]

5.5 Compliance and Other Requirements

This permit does not relieve the permittee of the responsibility to comply fully with applicable provisions of any other requirements under federal law.

[40 CFR § 55.6(a)(4)(iii)]

5.6 Notification to Owners, Operators and Contractors

The permittee must notify all other owners or operators, contractors, and the subsequent owners or operators associated with emissions from the OCS source and support vessels of the terms and conditions of this permit.

[40 CFR § 55.6(a)(4)(iv)]

5.7 Expiration of Approval to Construct and Permit Renewal

5.7.1 This approval to construct shall become invalid if: construction is not commenced within 18 months after the effective date of this permit, construction is discontinued for a period of 18 months or more, or construction is not completed within a reasonable time. EPA may extend the 18-month period upon a satisfactory showing that an extension is justified.

[40 CFR § 52.21(r)(2)]

5.7.2 The permittee’s authority to construct and operate shall expire two years from the date the OCS Source commences activity on the DeSoto Canyon lease blocks specified in Section 3.0, Project Location. The EPA may extend the two years upon a satisfactory showing that the extension is justified, and under the condition that project emissions do not exceed those specified in this permit.

[40 CFR § 52.21(i)(3)]

5.7.3 If the permittee's authority to construct and operate has not expired pursuant to condition 5.7.2, then the permit expires on June 30, 2017. Expiration of this permit terminates the permittee's right to operate unless a timely and complete permit renewal application has been submitted at least 6 months, but not more than 18 months, prior to the date of expiration of this permit. If the permittee submits a timely and complete renewal application, and EPA does not take final action on the renewal application before the end of the term of this permit, the permittee's failure to have a permit is not a violation of 40 CFR part 71 until the permitting authority takes final action on the renewal application. Such protection will cease to apply if, subsequent to EPA's determination that the renewal application is complete, the permittee fails to submit by the deadline specified in writing by EPA any additional information identified as being needed to process the application. This condition does not supersede the limitation on the permittee's authority to construct and operate set forth in condition 5.7.2.

[40 CFR §§ 71.5(a)(1)(iii), 71.7(b) and 71.7(c)(1)(ii)]

5.7.4 If the permittee submits a timely and complete permit application for renewal, consistent with 40 CFR sections 71.5(a)(1)(iii) and 71.5(a)(2), but EPA does not take final action on the renewal application before the end of the term of this permit, then all the terms and conditions of this permit, including any permit shield granted pursuant to 40 CFR § 71.6(f), shall remain in effect until EPA takes final action on the renewal application.

[40 CFR §§ 71.7(c)(3) and 71.7(b)]

5.7.5 Renewal of this permit is subject to the same procedural requirements that apply to initial permit issuance, including those for public participation and affected State review.

[40 CFR part 71.7(c)(1)(i)]

5.7.6 The application to EPA for renewal shall include all information required pursuant to 40 CFR § 71.5(c), as well as the current permit number, a description of permit revisions and off-permit changes that occurred during the permit term and were not incorporated into the permit during the permit term, any applicable requirements that were promulgated and not incorporated into the permit during the permit term, and other information required by the application form.

[40 CFR §§ 71.5(a)(2) and 71.5(c)(5)]

5.8 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

[40 CFR §71.6(a)(6)(iv)]

5.9 Inspections

The permittee, by accepting this permit, specifically agrees to allow authorized EPA personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted or where any records are required to be kept under the terms and conditions of this permit to:

5.9.1 Have access to and copy any records that must be kept under conditions of the permit, including but not limited to, information relating to the OCS source, support vessels, monitoring data, or compliance or noncompliance with the permit;

5.9.2 Inspect the OCS source, support vessels, equipment, practices, or operation regulated or required under this permit; and

5.9.3 Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or EPA rules.

Reasonable time may depend on the nature of the concern being investigated.

[40 CFR §§ 71.6(c)(2) and 55.8]

5.10 Emergency Provisions

In addition to any emergency or upset provision contained in any applicable requirement, the permittee may seek to establish that noncompliance with a technology-based emission limitation under this permit was due to an emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emissions limitation. The permittee shall demonstrate the affirmative defense of emergency through properly signed, contemporaneous operating logs, or other relevant evidence that:

- An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- The permitted facility was at the time being properly operated;
- During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards, or other requirements in this permit; and
- The permittee submitted notice of the emergency to EPA within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the requirements of Condition 5.17.2 of this permit, concerning prompt notification of deviations.

[40 CFR §§ 71.6(g)(2), (3) and (5)]

5.11 Burden of Proof for Emergencies

In any enforcement proceeding, the permittee attempting to establish the occurrence of an emergency has the burden of proof.

[40 CFR § 71.6(g)(4)]

5.12 Emergency Defined

An “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.

[40 CFR § 71.6(g)(1)]

5.13 Certification Requirement

Any document required to be submitted under this permit shall be certified by a responsible official as to truth, accuracy and completeness. Such certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

[40 CFR §§ 71.5(d), 71.6(c)(1) and 71.9(h)(2)]

5.14 Permit Actions

This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[40 CFR § 71.6(a)(6)(iii)]

5.15 Reopening for Cause

The permit shall be reopened by EPA and the permit revised prior to expiration under any of the circumstances described in 40 CFR § 71.7(f).

[40 CFR § 71.7(f)]

5.16 Recordkeeping Requirements

In accepting this permit, the permittee understands and agrees that all information relating to this permitted source which is submitted to EPA may be used by EPA as evidence in any enforcement case involving the permitted source arising under federal statutes, EPA rules, or rules enforceable by EPA.

5.16.1 This permit or a copy thereof shall be kept at the work site of the permitted activity.

5.16.2 The permittee shall furnish all records required by this permit.

5.16.3 During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by EPA.

5.16.4 The permittee shall hold at the corporate offices of BHP Billiton Petroleum, Inc., located at 1360 Post Oak Blvd., Suite 150, Houston, Texas 77056, records of all monitoring information required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least five years from the date of the sample, measurement, report, or application unless otherwise specified.

[40 CFR §§ 71.6(a)(3)(ii)(B) and 55.8]

5.16.5 Records of monitoring information shall include:

- The date, emission unit or other place as defined in this permit, and time of sampling or measurements;
- The results of such analyses and operating conditions as existing at the time of sample or measurement;

- The date(s) the analyses were performed;
- The person who performed the sampling or measurements; and
- The analytical techniques or methods used.

[40 CFR § 71.6(a)(3)(ii)(A)]

5.16.6 When requested by EPA, the permittee shall furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to EPA, such facts or information shall be corrected promptly.

[40 CFR §§ 71.5(b) and 55.8]

All notifications, reporting or other communications relating to this permit shall be submitted to:

Chief
Air & EPCRA Enforcement Branch
Air, Pesticides and Toxics Management Division
U.S. EPA Region 4
61 Forsyth Street, SW
Atlanta, GA 30303

In addition, electronic copies of the above-referenced notifications and communications shall be submitted to the following individuals at their corresponding email address:

Name	Email	Phone
David Lloyd	lloyd.david@epa.gov	404-562-9216
Jason Dressler	dressler.jason@epa.gov	404-562-9208
Kelly Fortin	fortin.kelly@epa.gov	404-562-9117

5.16.7 The permittee shall furnish to EPA, within a reasonable time, any information that EPA may request in writing to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee shall also furnish to EPA copies of records that are required to be kept pursuant to the terms of the permit, including information claimed to be confidential. Information claimed to be confidential must be accompanied by a claim of confidentiality according to the provisions of 40 CFR part 2, subpart B.

[40 CFR §§ 71.6(a)(6)(v),71.5(a)(3) and 55.8]

5.17 General Reporting Requirements

5.17.1 The permittee shall submit to EPA reports of any required monitoring for each six month reporting period from July 1 to December 31 and from January 1 to June 30, except that the first reporting period shall begin on the effective date of this permit and end on either June 30 or December 31, whichever occurs first. All reports shall be submitted to EPA and shall be postmarked by the 30th day following the end of the reporting period. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with Condition 5.13.

[40 CFR §§ 71.6(a)(3)(iii)(A) and 55.8]

5.17.2 The permittee shall promptly report to EPA, by telephone or facsimile, deviations from permit conditions, including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. The report shall be made using the following numbers:

Telephone: (404) 562-9194
Facsimile: (404) 562-9019
Attn: Air Permits Part 71 Deviation Report

[40 CFR § 71.6(a)(3)(iii)(B)]

5.17.3 For the purposes of Condition 5.17.2 of the permit, prompt is defined as follows:

5.17.3.1 Any definition of prompt or a specific time frame for reporting deviations provided in an underlying applicable requirement as identified in this permit.

5.17.3.2 Where the underlying applicable requirement fails to address the time frame for reporting deviations, reports of deviations will be submitted based on the following schedule:

- For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in the applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence;
- For emissions of any regulated pollutant excluding those referenced in the preceding bullet, that continue for more than 2 hours in excess of permit requirements, the report must be made within 48 hours of the occurrence; or
- For all other deviations from permit requirements, the report shall be submitted with the semi-annual monitoring report required in Condition 5.17.1.

[40 CFR § 71.6(a)(3)(iii)(B)]

5.17.4 Within 10 working days of the occurrence of a deviation that requires 24-hr or 48-hr notification as provided in Condition 5.17.3.2 above, the permittee shall also submit a written notice, which shall include a narrative description of the deviation and updated information as listed below to EPA, certified consistent with Condition 5.13 of this permit. When reporting excess emissions or permit deviations, including those that are required to be submitted for the first time with the semi-annual monitoring report, the permittee must report in writing the following information:

- OCS Source (Facility) Name;
- OCS Air Permit Number;
- Company Name;
- Date/Time when the deviation was discovered;
- Date/Time when the event began (24-hour clock);
- Date/Time when the event ended (24-hour clock);
- Duration of the event: (hours: minutes) or days (total number of hours, minutes or days, if intermittent then include only the duration of the deviation);
- If the deviation was intermittent or continuous;
- Brief description of what happened and the cause, including information regarding the operating conditions during the deviation;
- Identification of the emission unit(s) or source(s) involved in the event using the same identification number(s) and name(s) as in the permit;
- Identification of each emission limit potentially exceeded during the event and the level of exceedance, if applicable;
- Whether the deviation was unavoidable;
- Describe corrective action taken and action taken to prevent future recurrence;
- If not corrected, the anticipated time the deviation is expected to continue and steps being taken to reduce, eliminate, and prevent recurrence of the deviation; and
- Certification: Based on information and belief formed after reasonable inquiry, certify that the statements and information reported are true, accurate, and complete.

[40 CFR §§ 71.6(a)(3)(i)(B) and (iii)(B)]

5.17.5 For the purposes of Conditions 5.17.1 through 5.17.5, deviation means any situation in which the permittee fails to meet a permit term or condition. A deviation is not always a violation. A deviation can be determined by observation or through review of data obtained from any testing, monitoring, or recordkeeping required by this permit. For a situation lasting more than 24 hours, each 24-hour period is considered a separate deviation. Included in the meaning of deviation are any of the following:

- A situation where emissions exceed an emission limitation or standard;
- A situation where process or emissions control device parameter values indicate that an emission limitation or standard has not been met;
- A situation in which observations or data collected demonstrate noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit (including indicators of compliance revealed through parameter monitoring); and

- A situation in which any testing, monitoring, recordkeeping or reporting required by this permit is not performed or not performed as required.

[40 CFR § 71.6(a)(3)(iii)(C)]

5.17.6 If requested by EPA, the permittee shall provide a more detailed written report as requested to follow up on an excess emissions/deviation report.

[40 CFR § 71.6(a)(3)(iii)(B)]

5.18 Off Permit Changes

The permittee is allowed to make certain changes without a permit revision, provided that the following requirements are met:

- Each change is not addressed or prohibited by this permit;
- Each change shall meet all applicable requirements and shall not violate any existing permit term or condition;
- Changes under this provision may not include changes subject to any requirement under any provision of title I of the Clean Air Act;
- The permittee shall provide contemporaneous written notice to EPA of each change, except for changes that qualify as insignificant activities under 40 CFR § 71.5(c)(11). The written notice shall describe each change, the date of the change, any change in emissions, pollutants emitted and any applicable requirements that would apply as a result of the change;
- The permit shield in Condition 5.2 does not apply to changes made under this provision; and
- The permittee shall keep a record describing all changes that result in emissions of any regulated air pollutant subject to any applicable requirement not otherwise regulated under this permit, and the emissions resulting from those changes.

[40 CFR §71.6(a)(12)]

5.19 Operational Flexibility

The permittee is allowed to make a limited class of changes under section 502(b)(10) of the CAA within this permitted facility without applying for a permit revision, provided the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions) and are not title I modifications. This class of changes does not include changes that would violate applicable requirements or changes that would contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

[40 CFR § 71.2 and 71.6(a)(13)(i)]

5.19.1 The permittee is required to send a notice to EPA at least 7 days in advance of any change made under this provision. The notice must describe the change, when it will occur and any change in emissions, and identify any permit terms or conditions made inapplicable as a result of the change. The permittee shall attach each notice to its copy this permit.

[40 CFR § 71.6(a)(13)(i)(A)]

5.19.2 Any permit shield provided under 40 CFR § 71.6(f) and Condition 5.2 of this permit does not apply to changes made under this provision.

[40 CFR § 71.6(a)(13)(i)(B)]

5.20 Combined Operating Scenarios

In the event that more than one MODU is constructed or operated during any compliance period, such as a 12-month rolling average, any applicable condition of this permit, including but not limited to emission limits, fuel consumption limits, operating limits, and fee calculations, shall be prorated based on the duration of the operation of each MODU during the compliance period. In no case does this condition allow for the simultaneous operation of more than one MODU under the terms of this permit.

[40 CFR § 55.6]

5.21 Annual Compliance Certification

The permittee shall submit to EPA a certification of compliance with permit terms and conditions, including emission limitations, standards, or work practices, postmarked by February 28 of each year and covering the previous calendar year except that the first certification shall cover the period from the effective date of this permit through December 31. The compliance certification shall be certified as to truth, accuracy and completeness by a responsible official consistent with Condition 5.13 of this permit. The certification shall include the following:

- The identification of each permit term or condition that is the basis of the certification;
- The identification of the method(s) or other means used by the permittee for determining the compliance status with each term and condition during the certification period. Such methods and other means shall include, at a minimum, the methods and means required in this permit. If necessary, the permittee also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the CAA, which prohibits knowingly making a false certification or omitting material information;
- The status of compliance with each term and condition of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated above. The certification shall identify each deviation and take it into account in the compliance certification; and
- A summary of NO_X, CO, PM/PM_{10}/$PM_{2.5}$, SO_2, VOC, GHG and HAP emissions in tons per year emitted by each emissions unit regulated under this permit during the duration of the reporting period based on recorded data, such as actual fuel usage and actual hours of operation.

[40 CFR §71.6(c)(5), 55.6(a)(4) and 55.8]

5.22 Compliance Schedule

For applicable requirements with which the source is in compliance, the permittee will continue to comply with such requirements. For applicable requirements that will become effective during the permit term, the permittee shall meet such requirements on a timely basis.

[40 CFR §§ 71.6(c)(3) and 71.5(c)(8)(iii)(A) and (B)]

5.23 Safe Shutdown

As provided in 40 CFR § 55.9(c), if this OCS source is ordered to cease operation of any piece of equipment due to enforcement action taken by EPA, the shutdown will be coordinated by EPA with the DOI Bureau of Safety and Environmental Enforcement, the United States Coast Guard, the permittee, and the operator to assure that the shutdown will proceed in a safe manner. No shutdown action will occur until after EPA's consultation with these agencies, but in no case will initiation of the shutdown be delayed by more than 24 hours after EPA consults with these agencies. The initiation of the shutdown process will not preclude well procedures necessary to ensure safety.

[40 CFR § 55.9(c)]

5.24 Transfer of Ownership

In the event of any changes in control or ownership of the OCS source, this permit shall be binding on all subsequent owners and operators. Permittee shall notify the succeeding owner and operator of the existence of this permit and its conditions by letter, a copy of which shall be forwarded to EPA Region 4.

[40 CFR § 55.6(a)(4)(iv)]

5.25 Severability

The provisions of this permit are severable, and, in the event of any challenge to any portion of this permit or if any provision of the permit is held invalid, the remainder of this permit shall remain valid and in force.

[40 CFR §71.6(a)(5)]

5.26 General Testing Requirements

5.26.1 In addition to the specific testing requirements contained in the emission unit sections of this permit, the permittee shall comply with the generally applicable testing requirements in Conditions 5.26.2 through 5.26.10 whenever conducting a performance test required by this permit unless specifically stated otherwise in this permit.

5.26.2 The permittee shall provide EPA at least 30 days prior notice of any performance test, except as otherwise specified in this permit, to afford EPA the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay in conducting the scheduled performance test, the permittee shall notify EPA as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with EPA by mutual agreement.

5.26.3 The permittee shall submit to EPA a source test plan 30 days prior to any required testing. The source test plan shall include and address the following elements:

- Purpose and scope of testing;
- Source description, including a description of the operating scenarios and mode of operation during testing and including fuel sampling and analysis procedures;
- Schedule/dates of testing;

- Process data to be collected during the test and reported with the results, including source-specific data identified in the emission unit sections of this permit;
- Sampling and analysis procedures, specifically requesting approval for any proposed alternatives to the reference test methods, and addressing minimum test length (*e.g.*, one hour, 8 hours, 24 hours, etc.) and minimum sample volume;
- Sampling location description and compliance with the reference test methods;
- Analysis procedures and laboratory identification;
- Quality assurance plan;
- Calibration procedures and frequency;
- Sample recovery and field documentation;
- Chain of custody procedures;
- Quality assurance/quality control project flow chart;
- Data processing and reporting;
- Description of data handling and quality control procedures; and
- Report content and timing.

5.26.4 Only regular operating staff may adjust the processes or emission control devices during or within two (2) hours prior to the start of a source test. Any operating adjustments made during a source test that do not result in representative testing conditions may render the source test invalid.

5.26.5 For the duration of each test run (unless otherwise specified), the permittee shall record the following information:

- All data which is required to be monitored during the test in the emission unit sections of this permit; and
- All continuous monitoring system data that is required to be routinely monitored in the emission unit sections of this permit for the emission unit being tested.

5.26.6 Each source test shall follow the reference test methods specified by this permit and consist of at least 3 valid test runs conducted under normal operating conditions.

5.26.7 If the reference test method yields measured pollutant concentration values at an oxygen concentration other than specified in the emission standard, the permittee shall correct the measured pollutant concentration to the oxygen concentration specified in the emission standard by using the following equation:

$$PC_X = PC_m \times \frac{(21-X)}{(21-Y)}$$

Where:

PC_X = Pollutant concentration at X percent;
PC_m = Pollutant concentration as measured;
X = the oxygen concentration specified in the standard; and
Y = the measured average volumetric oxygen concentration.

5.26.8 Facilities for performing and observing the emission testing shall be provided that meet the requirements of 40 CFR § 60.8(e) and Reference Method 1 (40 CFR § 60, Appendix A).

5.26.9 Emission test reports shall be submitted to EPA within 45 days of completing any emission test required by this permit along with items required to be recorded in Condition 5.26.5 above.

5.26.10 Source test emission data shall be reported as the arithmetic average of all valid test runs and in the terms of any applicable emission limit, unless otherwise specified in the emission unit sections of this permit.

[40 CFR §§ 71.6(a)(3) and 71.6(c)(1)]

5.27 Fee Payment

5.27.1 No later than April 1 of the subsequent year, the permittee shall submit the following to EPA:

- Full payment of the annual permit fee, as specified in Conditions 5.27.2 through 5.27.11;
- An updated fee calculation worksheet form and a photocopy of each fee payment check (or other confirmation of actual fee paid), as specified in Conditions 5.27.4 through 5.27.8; and
- An annual emissions report of actual emissions, as specified in Condition 5.27.6, for the preceding calendar year.

[40 CFR §§ 71.9(a) and (h)]

5.27.2 The fee payment shall be in United States currency and shall be paid by money order, bank draft, certified check, corporate check, or electronic funds transfer payable to the order of the U.S. Environmental Protection Agency.

[40 CFR § 71.9(k)(1)]

5.27.3 The permittee shall send fee payment and a completed fee filing form to either of the addresses listed below.

If sent by Regular Mail through U.S. Postal Service (USPS), send to:

U.S. Environmental Protection Agency
FOIA and Miscellaneous Payments
Cincinnati Finance Center
PO Box 979078
St. Louis, MO 63197-9000

If sent by Express Delivery (or when a physical address is required), send to:

U.S. Bank
Government Lockbox 979078
US EPA FOIA & Misc. Payments
1005 Convention Plaza
Mail Station SL-MO-C2GL
St. Louis, MO 63101
Contact: Natalie Pearson
(314-418-4087)

[40 CFR § 71.9(k)(2)]

5.27.4 The permittee shall send an updated fee calculation worksheet form and a photocopy of each fee payment check (or other confirmation of actual fee paid), submitted annually by the date specified in Condition 5.27.1, to:

Chief
Air Permits Section
Air, Pesticides and Toxics Management Division
U.S. EPA Region 4
61 Forsyth Street, SW
Atlanta, GA 30303

[40 CFR § 71.9(h)(1)]

5.27.5 The annual emissions fee shall be calculated by multiplying the total tons of actual emissions of all "regulated pollutants (for fee calculation)," emitted from the source by the presumptive emission fee (in dollars/ton) in effect at the time of calculation. The presumptive emission fee is revised each calendar year and is available from EPA prior to the start of each calendar year.

[40 CFR § 71.9(c)(1)]

5.27.5.1 "Actual emissions" means the actual rate of emissions in tons per year (TPY) of any "regulated pollutant (for fee calculation)," as defined in 40 CFR § 71.2, emitted from a part 71 source over the preceding calendar year. Actual emissions shall be calculated using each emissions unit's actual operating hours, production rates, in-place control equipment, and types of materials processed, stored, or combusted during the preceding calendar year.

[40 CFR § 71.9(c)(6)]

5.27.5.2 Actual emissions shall be computed using methods required by the permit for determining compliance, such as monitoring or source testing data.

[40 CFR § 71.9(h)(3)]

5.27.5.3 If actual emissions cannot be determined using the compliance methods in the permit, the permittee shall use other federally recognized procedures.

[40 CFR § 71.9(e)(2)]

5.27.5.4 The permittee shall exclude the following emissions from the calculation of fees:

- The amount of actual emissions of each regulated pollutant (for fee calculation) that the source emits in excess of 4,000 tons per year;
- Actual emissions of any regulated pollutant (for fee calculation) already included in the fee calculation; and
- The insignificant quantities of actual emissions not required to be listed or calculated in a permit application pursuant to 40 CFR § 71.5(c)(11).

[40 CFR §§ 71.9(c)(5)(i) through (iii)]

5.27.6 The permittee shall submit an annual emissions report of its actual emissions for the preceding calendar year. The annual emissions report shall be certified by a responsible official and shall be submitted each year to EPA by the date specified in Condition 5.27.1. The annual emissions report shall be submitted to EPA at the address listed in Condition 5.27.3 of this permit.

[40 CFR §§ 71.9(h)(1) and (2)]

5.27.7 Fee calculation worksheets shall be certified as to truth, accuracy, and completeness by a responsible official in accordance with Condition 5.13 of this permit.

[40 CFR § 71.9(h)(2)]

5.27.8 The permittee shall retain in accordance with the provisions of Conditions 5.16.4 and 5.16.5 of this permit, all worksheets and other materials used to determine fee payments. Records shall be retained for five years following the year in which the emissions data is submitted.

[40 CFR § 71.9(i)]

5.27.9 Failure of the permittee to pay fees in a timely manner shall subject the permittee to assessment of penalties and interest.

[40 CFR § 71.9(l)]

5.27.10 The permittee, when notified by EPA of additional amounts due, shall remit full payment within 30 days of receipt of an invoice from EPA.

[40 CFR § 71.9(j)(2)]

5.27.11 If the permittee thinks an EPA assessed fee is in error and wishes to challenge such fee, the permittee shall provide a written explanation of the alleged error to EPA along with full payment of the EPA assessed fee.

[40 CFR § 71.9(j)(3)]

6 SPECIFIC CONDITIONS

6.1 Drill Site Notification

At least 10 days prior to entering the drill site, the permittee shall notify EPA in writing in accordance with Condition 5.16.7 of this permit, of the following information:

6.1.1 The location of the proposed drill site, using coordinates in the following formats:

- Latitude and longitude; and
- Universal Transverse Mercator grid system.

6.1.2 The proposed date that the MODU will enter the lease block and commence construction or operation and the probable duration of operation at that location; and

6.1.3 Not less than 24 hours prior to commencing construction or operation, of any changes to the information provided by the permittee in Conditions 6.1.1 and 6.1.2.

[40 CFR §§ 71.6(a)(6)(v), 52.21 and 55.8]

6.2 Drilling Limitations

6.2.1 The permittee shall not operate the *C.R. Luigs* drillship and the *DD1* drilling unit concurrently within the lease blocks specified in section 3 of this permit.

6.2.2 The total combined hours of operation of the *C.R. Luigs* and the *DD1* MODUs shall not exceed 6,570 hours per year on a rolling 12-month basis.

6.2.3 Compliance with this operating limit will be assured by maintaining a record of operating hours and summing such hours on a rolling 12- month basis.

[40 CFR § 55.6(a)]

6.3 Support Vessel Identification

The permittee shall maintain records, in accordance with Condition 5.16, of the engine specifications and number of hours operated within 25 miles of a MODU for any support vessel used in place of the *Allie* (work boat) or the *Fast Skipper* (crew boat). These records, as well as engine emission factors and calculated mass emissions in tons per year of regulated pollutant, shall be submitted as part of the Annual Compliance Certification in accordance with Condition 5.21.

[40 CFR § 55.8]

6.4 Source-wide SO_2 Emission Limit

The permittee shall not combust any diesel fuel with a sulfur content greater than 15 parts per million (ppm) by weight, as determined by Condition 6.4.1, in any diesel fueled emission unit on *C.R. Luigs*, *DD1*, or any support vessel.

6.4.1 The permittee shall obtain a certification of sulfur content for each shipment of fuel from the fuel supplier (the certification must indicate the sulfur content was determined by an approved EPA method), or the permittee shall obtain representative fuel samples using one of the methods in 40 CFR 80.330 and shall determine the sulfur content of the fuel using one of the methods in 40 CFR 80.580.

6.4.2 Monitoring, Recordkeeping and Reporting

6.4.2.1 Prior to mobilizing the selected MODU for activities covered by this permit, the permittee shall determine and record the sulfur content of the diesel fuel on the MODU and the support vessels using the procedures in Condition 6.4.1.

6.4.2.2 Thereafter, the permittee shall determine and record the sulfur content of the diesel fuel on the MODU and the support vessels using the procedures in Condition 6.4.1 upon receiving each fuel shipment.

6.4.3 The permittee shall provide the results of all fuel sample analyses required by Conditions 6.4.1 and 6.4.2 with the Compliance Certification Report required by Condition 5.21.

[40 CFR §§ 52.21, 71.6(a)(3) and (c)(1), and 55.8]

6.5 *C.R. Luigs* Emission and Operating Limits

6.5.1 Source Identification: EU-001L through -008L, main power plant engines equipped with positive crankcase ventilation, turbocharger and aftercooler, and high-pressure fuel injection with aftercooler.

6.5.1.1 The permittee shall not discharge or cause the discharge of emissions into the atmosphere from <u>each</u> engine in excess of:

6.5.1.1.1 NO_X BACT Limit: 18.1 g/kW-hr (12.1 g/kW-hr, corrected to 95% NO) on a rolling 24-hour average basis.

6.5.1.1.2 CO BACT Limit: 2.42 g/kW-hr on a rolling 24-hour average basis.

6.5.1.1.3 VOC BACT Limit: 6.42×10^{-4} lb/hp-hr (0.39 g/kW-hr) on a rolling 24-hour average basis.

6.5.1.1.4 PM BACT Limit: 7.00×10^{-4} lb/hp-hr (0.43 g/kW-hr) on a rolling 24-hour average basis.

6.5.1.1.5 PM_{10} BACT Limit: 4.01×10^{-4} lb/hp-hr (0.24 g/kW-hr) on a rolling 24-hour average basis.

6.5.1.1.6 $PM_{2.5}$ BACT Limit: 3.89×10^{-4} lb/hp-hr (0.24 g/kW-hr) on a rolling 24-hour average basis.

6.5.1.1.7 GHG BACT Limits: 1.16 lb/hp-hr (705 g/kW-hr) of CO_2e on a rolling 24-hour average basis and 78,005 tons per year of CO_2e on a rolling 12-month basis.

6.5.1.2 BACT Work Practice Standards:

6.5.1.2.1 Use of ultra low sulfur diesel;

6.5.1.2.2 Good combustion practices based on the current manufacturer's specifications for these engines; and

6.5.1.2.3 Additional enhanced work practice standards as detailed in the application received (by EPA) on October 20, 2010; and application addendums received on February 11, 2011; October 27, 2011; and December 22, 2011, respectively. The application is provided in the administrative record and defines a detailed engine performance management system and the Diesel Engines with Turbochargers (DEWT) monitoring system designed by Transocean. A parametric monitoring system equivalent to DEWT may be used with prior EPA approval.

6.5.1.3 Compliance Demonstration Method for units EU-01L through -08L: The permittee shall monitor emissions by the use of an EPA-approved continuous emissions monitoring system, an EPA-approved stack testing emissions monitoring system, or, with prior written approval by EPA, an alternative parametric monitoring method pursuant to Condition 6.9.

6.5.1.4 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.9 and 6.18.

6.5.2 Source Identification: EU-009L through -012L, crane engines equipped with positive crankcase ventilation, turbocharger and aftercooler, and high-pressure fuel injection with aftercooler.

6.5.2.1 The permittee shall not discharge or cause the discharge of emissions into the atmosphere from the engines <u>combined</u> in excess of:

6.5.2.1.1 NO_X BACT Emission Limit: 82.83 tons per year on a 12-month rolling total basis.

6.5.2.1.2 CO BACT Emission Limit: 17.85 tons per year on a 12-month rolling total basis.

6.5.2.1.3 VOC BACT Emission Limit: 6.72 tons per year on a 12-month rolling total basis.

6.5.2.1.4 $PM/PM_{10}/PM_{2.5}$ BACT Emission Limit: 5.88 tons per year on a 12-month rolling total basis.

6.5.2.1.5 GHG BACT Emission Limit: 3,083 tons per year of CO_2e on a 12-month rolling total basis.

6.5.2.2 BACT Work Practice Standards:

6.5.2.2.1 Use of ultra low sulfur diesel fuel, and

6.5.2.2.2 Good combustion practices based on the current manufacturer's specifications for these engines.

6.5.2.3 Operating Limit: These units shall be operated no more than 17,520 hours per year combined on a 12-month rolling total basis.

6.5.2.4 Compliance with this operating limit will be assured by maintaining a record of hours of operation and summing such hours on a rolling 12-month basis.

6.5.2.5 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.10 and 6.18.

6.5.3 Source Identification: EU-013L, mud and cement mixing, equipped with dust collectors.

6.5.3.1 $PM/PM_{10}/PM_{2.5}$ BACT Emission Limit: 1.08 tons per year on a 12-month rolling total basis.

6.5.3.2 BACT Work Practice Standard: Proper maintenance and operation of the dust collectors in accordance with manufacturer specifications to ensure a control efficiency of 99.95%.

6.5.3.3 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.13 and 6.18.

6.5.4 Source Identification: EU-014L, mud degassing operations.

6.5.4.1 VOC BACT Emission Limit: 19.39 tons per year on a 12-month rolling total basis.

6.5.4.2 GHG BACT Emission Limit: 982.7 tons per year of CO_2e on a 12-month rolling total basis.

6.5.4.3 The permittee shall determine the water-based mud/oil-based mud ratio to ensure it does not exceed 2:5 based on a 12-month rolling average.

6.5.4.4 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.14 and 6.18.

6.5.5 Source Identification: EU-015L, emergency generator engine, equipped with positive crankcase ventilation, turbocharger and aftercooler, and high-pressure fuel injection with aftercooler.

6.5.5.1 NO_X BACT Emission Limit: 1.49 tons per year on a 12-month rolling total basis.

6.5.5.2 CO BACT Emission Limit: 0.34 tons per year on a 12-month rolling total basis.

6.5.5.3 VOC BACT Emission Limit: 0.04 tons per year on a 12-month rolling total basis.

6.5.5.4 PM BACT Emission Limit: 0.04 tons per year on a 12-month rolling total basis.

6.5.5.5 $PM_{10}/PM_{2.5}$ BACT Emission Limit: 0.02 tons per year on a 12-month rolling total basis.

6.5.5.6 GHG BACT Emission Limit: 72.06 tons per year of CO_2e on a 12-month rolling total basis.

6.5.5.7 BACT Work Practice Standards:

6.5.5.7.1 Use of ultra low sulfur diesel fuel, and

6.5.5.7.2 Good combustion practices based on the current manufacturer's specifications for this engine.

6.5.5.8 Operating Limit: This unit shall be operated no more than 60 hours per year on a 12-month rolling total basis.

6.5.5.9 Compliance with this operating limit will be assured by maintaining a record of hours of operation and summing such hours on a rolling 12-month basis.

6.5.5.10 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.10 and 6.18.

6.5.6 Source Identification: EU-092L, black start air compressor.

6.5.6.1 BACT Work Practice Standards:

6.5.6.1.1 Use of ultra low sulfur diesel fuel, and

6.5.6.1.2 Good combustion practices based on the current manufacturer's specifications for this engine.

6.5.6.2 Operating Limit: This unit shall be operated no more than 25 hours per year on a 12-month rolling total basis.

6.5.6.3 Compliance with this operating limit will be assured by maintaining a record of hours of operation and summing such hours on a rolling 12-month basis.

6.5.6.4 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.10 and 6.18.

6.5.7 Source Identification: EU-016L through -018L, cementing engines and cementing nitrogen pump engine, equipped with closed crankcase ventilation, turbocharger (without aftercooler), and high-pressure fuel injection with aftercooler.

6.5.7.1 The permittee shall not discharge or cause the discharge of emissions into the atmosphere from the engines combined in excess of:

6.5.7.1.1 NO_X BACT Emission Limit: 8.69 tons per year on a 12-month rolling total basis.

6.5.7.1.2 CO BACT Emission Limit: 3.30 tons per year on a 12-month rolling total basis.

6.5.7.1.3 VOC BACT Emission Limit: 0.38 tons per year on a 12-month rolling total basis.

6.5.7.1.4 PM BACT Emission Limit: 0.38 tons per year on a 12-month rolling total basis.

6.5.7.1.5 PM_{10} BACT Emission Limit: 0.23 tons per year on a 12-month rolling total basis.

6.5.7.1.6 $PM_{2.5}$ BACT Emission Limit: 0.22 tons per year on a 12-month rolling total basis.

6.5.7.1.7 GHG BACT Emission Limit: 628.9 tons per year of CO_2e on a 12-month rolling total basis.

6.5.7.2 BACT Work Practice Standards:

6.5.7.2.1 Use of certified EPA Tier 1 (or better) Marine engines for EU-016L and -017L and Tier 1 (or better) Nonroad engine for EU-018L;

6.5.7.2.2 Use of ultra low sulfur diesel fuel; and

6.5.7.2.3 Good combustion practices based on the current manufacturer's specifications for these engines.

6.5.7.3 Operating Limit: Units EU-016L and -017L shall be operated no more than 1200 hours per year combined on a 12-month rolling total basis.

6.5.7.4 Operating Limit: Unit EU-018L shall be operated no more than 100 hours per year on a 12-month rolling total basis.

6.5.7.5 Compliance with these operating limits will be assured by maintaining a record of hours of operation and summing such hours on a rolling 12-month basis.

6.5.7.6 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.10 and 6.18.

6.5.8 Source Identification: EU-019L, -020L, -022L, and -023L; wireline unit engines (including primary, alternative #2, and power plant generator, and hydraulic generator), equipped with turbocharger and aftercooler (EU-019L and -020L only), and high-pressure fuel injection with aftercooler.

6.5.8.1 The permittee shall not discharge or cause the discharge of emissions into the atmosphere from the engines <u>combined</u> in excess of:

6.5.8.1.1 NO_X BACT Emission Limit: 8.92 tons per year on a 12-month rolling total basis.

6.5.8.1.2 CO BACT Emission Limit: 2.90 tons per year on a 12-month rolling total basis.

6.5.8.1.3 VOC BACT Emission Limit: 1.17 tons per year on a 12-month rolling total basis.

6.5.8.1.4 $PM/PM_{10}/PM_{2.5}$ BACT Emission Limit: 0.60 tons per year on a 12-month rolling total basis.

6.5.8.1.5 GHG BACT Emission Limit: 536.6 tons per year of CO_2e on a 12-month rolling total basis.

6.5.8.2 BACT Work Practice Standards:

6.5.8.2.1 Use of certified EPA Tier 2 Nonroad (or better) engines for EU-022L and -023L and Tier 3 Nonroad (or better) engines for EU-019L and -020L;

6.5.8.2.2 Use of ultra low sulfur diesel fuel; and

6.5.8.2.3 Good combustion practices based on the current manufacturer's specifications for these engines.

6.5.8.3 Operating Limit: Units EU-019L and -020L shall be operated no more than 1,500 hours per year combined on a 12-month rolling total basis.

6.5.8.4 Operating Limit: Unit EU-022L shall be operated no more than 1,700 hours per year on a 12-month rolling total basis.

6.5.8.5 Operating Limit: Unit EU-023L shall be operated no more than 1,300 hours per year on a 12-month rolling total basis.

6.5.8.6 Compliance with these operating limits will be assured by maintaining a record of hours of operation and summing such hours on a rolling 12-month basis.

6.5.8.7 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.10 and 6.15.

6.5.9 Source Identification: EU-024L, fast rescue craft engine, equipped with turbocharger (without aftercooler).

6.5.9.1 Work Practice Standards:

6.5.9.1.1 Use of ultra low sulfur diesel fuel, and

6.5.9.1.2 Good combustion practices based on the current manufacturer's specifications for this engine.

6.5.9.2 Operating Limit: This unit shall be operated no more than 25 hours per year on a 12-month rolling total basis.

6.5.9.3 Compliance with this operating limit will be assured by maintaining a record of hours of operation and summing such hours on a rolling 12-month basis.

6.5.9.4 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.10 and 6.18.

6.5.10 Source Identification: EU-025L through -028L, life boat engines.

6.5.10.1 Work Practice Standards:

6.5.10.1.1 Use of ultra low sulfur diesel fuel, and

6.5.10.1.2 Good combustion practices based on the current manufacturer's specifications for these engines.

6.5.10.2 Operating Limit: These units shall be operated no more than 25 hours per year each on a 12-month rolling total basis.

6.5.10.3 Compliance with this operating limit will be assured by maintaining a record of hours of operation and summing such hours on a rolling 12-month basis.

6.5.10.4 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.10 and 6.18.

6.5.11 Source Identification: EU-029L through -059L and EU-090L through -091L, storage tanks.

6.5.11.1 The permittee shall not discharge or cause the discharge of emissions into the atmosphere from the storage tanks combined in excess of:

6.5.11.1.1 VOC BACT Emission Limit: 0.57 tons per year on a 12-month rolling total basis.

6.5.11.2 BACT Work Practice Standard: Use of good maintenance practices.

6.5.11.3 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.11 and 6.18.

[40 CFR §§ 52.21, 71.6(a)(1), (a)(3) and (c)(1) and 55.8]

6.6 *DD1* Emission and Operating Limits

6.6.1 Source Identification: EU-001D through -008D, main power plant engines equipped with positive crankcase ventilation, turbocharger and aftercooler, and high-pressure fuel injection with aftercooler.

6.6.1.1 The permittee shall not discharge or cause the discharge of emissions into the atmosphere from each engine in excess of:

6.6.1.1.1 NO_X BACT Limit: 12.1 g/kW-hr (8.10 g/kW-hr, corrected to 95% NO) on a rolling 24-hour average basis.

6.6.1.1.2 CO BACT Limit: 1.98 g/kW-hr on a rolling 24-hour average basis.

6.6.1.1.3 VOC BACT Limit: 6.42×10^{-4} lb/hp-hr (0.39 g/kW-hr) on a rolling 24-hour average basis.

6.6.1.1.4 PM BACT Limit: 7.00×10^{-4} lb/hp-hr (0.43 g/kW-hr) on a rolling 24-hour average basis.

6.6.1.1.5 PM_{10} BACT Limit: 4.01×10^{-4} lb/hp-hr (0.24 g/kW-hr) on a rolling 24-hour average basis.

6.6.1.1.6 $PM_{2.5}$ BACT Limit: 3.89×10^{-4} lb/hp-hr (0.24 g/kW-hr) on a rolling 24-hour average basis.

6.6.1.1.7 GHG BACT Limit: 1.16 lb/hp-hr (705 g/kW-hr) of CO_2e on a rolling 24-hour average basis and 79,921 tons per year of CO_2e on a rolling 12-month basis.

6.6.1.2 BACT Work Practice Standards:

6.6.1.2.1 Use of ultra low sulfur diesel, and

6.6.1.2.2 Good combustion practices based on the current manufacturer's specifications for these engines, and additional enhanced work practice standards as detailed in the application received (by EPA) on October 20, 2010; and application addendums received on February 11, 2011; October 27, 2011; and December 22, 2011, respectively. The application is provided in the administrative record and defines a detailed engine performance management system and the Diesel Engines with Turbochargers (DEWT) monitoring system designed by Transocean. A parametric monitoring system equivalent to DEWT may be used with prior EPA approval.

6.6.1.3 Compliance Demonstration Method for units EU-01D through -08D: Pursuant to Condition 6.9, the permittee shall monitor emissions by the use of an EPA-approved continuous emissions monitoring system, an EPA-approved stack testing emissions monitoring system, or, with prior written approval by EPA, an alternative parametric monitoring method.

6.6.1.4 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.9 and 6.18.

6.6.2 Source Identification: EU-009D, mud and cement mixing, equipped with dust collectors.

6.6.2.1 $PM/PM_{10}/PM_{2.5}$ BACT Emission Limit: 1.08 tons per year on a 12-month rolling total basis.

6.6.2.2 BACT Work Practice Standard: Proper maintenance and operation of the dust collectors to ensure a control efficiency of 99.95%.

6.6.2.3 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.13 and 6.18.

6.6.3 Source Identification: EU-010D, mud degassing operations.

6.6.3.1 VOC BACT Emission Limit: 19.39 tons per year on a 12-month rolling total basis.

6.6.3.2 GHG BACT Emission Limit: 982.7 tons per year of CO_2e on a 12-month rolling total basis.

6.6.3.3 The permittee shall determine the water-based mud/oil-based mud ratio to ensure it does not exceed 2:5 based on a 12-month rolling average.

6.6.3.4 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.14 and 6.18.

6.6.4 Source Identification: EU-011D, emergency generator engine, equipped with positive crankcase ventilation, turbocharger and aftercooler, and high-pressure fuel injection with aftercooler.

6.6.4.1 NO_X BACT Emission Limit: 1.60 tons per year on a 12-month rolling total basis.

6.6.4.2 CO BACT Emission Limit: 0.37 tons per year on a 12-month rolling total basis.

6.6.4.3 VOC BACT Emission Limit: 0.04 tons per year on a 12-month rolling total basis.

6.6.4.4 PM BACT Emission Limit: 0.05 tons per year on a 12-month rolling total basis.

6.6.4.5 $PM_{10}/PM_{2.5}$ BACT Emission Limit: 0.03 tons per year on a 12-month rolling total basis.

6.6.4.6 GHG BACT Emission Limit: 77.84 tons per year of CO_2e on a 12-month rolling total basis.

6.6.4.7 BACT Work Practice Standards:

6.6.4.7.1 Use of ultra low sulfur diesel fuel, and

6.6.4.7.2 Good combustion practices based on the current manufacturer's specifications for this engine.

6.6.4.8 Operating Limit: This unit shall be operated no more than 60 hours per year on a 12-month rolling total basis.

6.6.4.9 Compliance with this operating limit will be assured by maintaining a record of hours of operation and summing such hours on a rolling 12-month basis.

6.6.4.10 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.10 and 6.18.

6.6.5 Source Identification: EU-012D through -015D, cementing engines, cementing nitrogen pump engine, and cement batch mixer engine, equipped with closed crankcase ventilation, turbocharger (without aftercooler), and high-pressure fuel injection with aftercooler.

6.6.5.1 The permittee shall not discharge or cause the discharge of emissions into the atmosphere from the engines <u>combined</u> in excess of:

6.6.5.1.1 NO_X BACT Emission Limit: 9.50 tons per year on a 12-month rolling total basis.

6.6.5.1.2 CO BACT Emission Limit: 3.73 tons per year on a 12-month rolling total basis.

6.6.5.1.3 VOC BACT Emission Limit: 0.57 ton per year on a 12-month rolling total basis.

6.6.5.1.4 PM BACT Emission Limit: 0.41 ton per year on a 12-month rolling total basis.

6.6.5.1.5 PM_{10} BACT Emission Limit: 0.25 ton per year on a 12-month rolling total basis.

6.6.5.1.6 $PM_{2.5}$ BACT Emission Limit: 0.25 ton per year on a 12-month rolling total basis.

6.6.5.1.7 GHG BACT Emission Limit: 715.5 tons per year of CO_2e on a 12-month rolling total basis.

6.6.5.2 BACT Work Practice Standards:

6.6.5.2.1 Use of certified EPA Tier 1 Marine engines for EU-012D and -013D, Tier 1 Nonroad (or better) for EU-014D, and Tier 2 Nonroad engine for EU-015D;

6.6.5.2.2 Use of ultra low sulfur diesel fuel; and

6.6.5.2.3 Good combustion practices based on the current manufacturer's specifications for these engines.

6.6.5.3 Operating Limit: Units EU-012D and -013D shall be operated no more than 1,200 hours per year combined on a 12-month rolling total basis.

6.6.5.4 Operating Limit: Unit EU-014D shall be operated no more than 100 hours per year on a 12-month rolling total basis.

6.6.5.5 Operating Limit: Unit EU-015D shall be operated no more than 600 hours per year on a 12-month rolling total basis.

6.6.5.6 Compliance with these operating limits will be assured by maintaining a record of hours of operation and summing such hours on a rolling 12-month basis.

6.6.5.7 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.10 and 6.18.

6.6.6 Source Identification: EU-016D, -017D, -019D, and -020D; wireline unit engines (including primary, alternative #2, and power plant generator, and hydraulic generator), equipped with turbocharger and aftercooler (EU-016D and -017D only), and high-pressure fuel injection with aftercooler.

6.6.6.1 The permittee shall not discharge or cause the discharge of emissions into the atmosphere from the engines combined in excess of:

6.6.6.1.1 NO_X BACT Emission Limit: 8.92 tons per year on a 12-month rolling total basis.

6.6.6.1.2 CO BACT Emission Limit: 2.90 tons per year on a 12-month rolling total basis.

6.6.6.1.3 VOC BACT Emission Limit: 1.17 tons per year on a 12-month rolling total basis.

6.6.6.1.4 $PM/PM_{10}/PM_{2.5}$ BACT Emission Limit: 0.60 tons per year on a 12-month rolling total basis.

6.6.6.1.5 GHG BACT Emission Limit: 536.6 tons per year of CO_2e on a 12-month rolling total basis.

6.6.6.2 BACT Work Practice Standards:

6.6.6.2.1 Use of certified EPA Tier 2 Nonroad (or better) engines for EU-019D and -020D and Tier 3 Nonroad (or better) engines for EU-016D and -017D;

6.6.6.2.2 Use of ultra low sulfur diesel fuel; and

6.6.6.2.3 Good combustion practices based on the current manufacturer's specifications for these engines.

6.6.6.3 Operating Limit: Units EU-016D and -017D shall be operated no more than 1,500 hours per year combined on a 12-month rolling total basis.

6.6.6.4 Operating Limit: Unit EU-019D shall be operated no more than 1,700 hours per year on a 12-month rolling total basis.

6.6.6.5 Operating Limit: Unit EU-020D shall be operated no more than 1,300 hours per year on a 12-month rolling total basis.

6.6.6.6 Compliance with these operating limits will be assured by maintaining a record of hours of operation and summing such hours on a rolling 12-month basis.

6.6.6.7 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.10 and 6.18.

6.6.7 Source Identification: EU-021D, fast rescue craft engine, equipped with turbocharger (without aftercooler).

6.6.7.1 Work Practice Standards:

6.6.7.1.1 Use of ultra low sulfur diesel fuel, and

6.6.7.1.2 Good combustion practices based on the current manufacturer's specifications for this engine.

6.6.7.2 Operating Limit: This unit shall be operated no more than 25 hours per year on a 12-month rolling total basis.

6.6.7.3 Compliance with these operating limits will be assured by maintaining a record of hours of operation and summing such hours on a rolling 12-month basis.

6.6.7.4 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.10 and 6.18.

6.6.8 Source Identification: EU-022D through -025D, life boat engines.

6.6.8.1 Work Practice Standards:

6.6.8.1.1 Use of ultra low sulfur diesel fuel, and

6.6.8.1.2 Good combustion practices based on the current manufacturer's specifications for these engines.

6.6.8.2 Operating Limit: These units shall be operated no more than 25 hours per year <u>each</u> on a 12-month rolling total basis.

6.6.8.3 Compliance with these operating limits will be assured by maintaining a record of hours of operation and summing such hours on a rolling 12-month basis.

6.6.8.4 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.10 and 6.18.

6.6.9 Source Identification: EU-026D through -047D and EU-078D through -081D, storage tanks.

6.6.9.1 The permittee shall not discharge or cause the discharge of emissions into the atmosphere from the storage tanks <u>combined</u> in excess of:

6.6.9.1.1 VOC BACT Emission Limit: 0.44 tons per year on a 12-month rolling total basis.

6.6.9.2 BACT Work Practice Standard: Use of good maintenance practices.

6.6.9.3 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.11 and 6.18.

[40 CFR §§ 52.21, 71.6(a)(1), (a)(3) and (c)(1), and 55.8]

6.6.10 Source Identification: EU-082, flaring operations.

6.6.10.1 NO_X BACT Emission Limit: 0.03 tons per year on a 12-month rolling total basis.

6.6.10.2 CO BACT Emission Limit: 0.18 tons per year on a 12-month rolling total basis.

6.6.10.3 VOC BACT Emission Limit: 0.07 tons per year on a 12-month rolling total basis.

6.6.10.4 GHG BACT Emission Limit: 64.72 tons per year of CO_2e on a 12-month rolling total basis.

6.6.10.5 BACT Work Practice Standards:

6.6.10.5.1 Use of propane fuel for testing.

6.6.10.5.2 Good combustion practices and proper flare maintenance.

6.6.10.6 Operating Limits: Non-emergency flaring shall be limited to 5 minutes per day and 274 days on a 12-month rolling total basis.

6.6.10.7 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.15 and 6.18.

6.6.11 Source Identification: EU-083, welding operations.

6.6.11.1 $PM/PM_{10}/PM_{2.5}$ BACT Emission Limit: 0.02 tons per year on a 12-rolling total basis.

6.6.11.2 BACT Work Practice Standard: Best management practices to include:

6.6.11.2.1 Maintaining an accurate account of the quantity of welding rods used.

6.6.11.2.2 Following manufacturer's recommendations for all equipment used in welding operations, including voltage levels.

6.6.11.3 Operating Limits: Total welding rods used shall be limited to 700 pounds per year of Type E6010 (or equivalent) and 1100 pounds per year of Type E7018 (or equivalent) on a 12-month rolling total basis.

6.6.11.4 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.16 and 6.18.

6.6.12 Source Identification: EU-084, painting operations.

6.6.12.1 VOC BACT Emission Limit: 4.79 tons per year on a 12-month rolling total basis

6.6.12.2 $PM/PM_{10}/PM_{2.5}$ Emission Limit: 1.96 tons per year on a 12-month rolling total basis.

6.6.12.3 BACT Work Practice Standards:

6.6.12.3.1 Best management practices to include: use of low-VOC coatings, use of drip pan and drop cloth in mixing/painting areas, and proper storage of coatings (and thinners) in non-leaking containers.

6.6.12.3.2 Use of only brushes and rollers for coating applications.

6.6.12.4 Operating Limits: Total coating and thinner usage shall be limited to 1825 and 480 gallons per year, respectively, on a rolling 12-month total basis.

6.6.12.5 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.17 and 6.18.

6.6.13 Source Identification: EU-085 through -087, seismic operations engines equipped with turbochargers and aftercoolers.

6.6.13.1 The permittee shall not discharge or cause the discharge of emissions into the atmosphere from the engines <u>combined</u> in excess of:

6.6.13.1.1 NO_X BACT Emission Limit: 3.54 tons per year on a 12-month rolling total basis.

6.6.13.1.2 CO BACT Emission Limit: 1.94 tons per year on a 12-month rolling total basis.

6.6.13.1.3 VOC BACT Emission Limit: 6.67 tons per year on a 12-month rolling total basis.

6.6.13.1.4 $PM/PM_{10}/PM_{2.5}$ BACT Emission Limit: 0.11 tons per year on a 12-month rolling total basis.

6.6.13.1.5 GHG BACT Emission Limit: 384.97 tons per year on a 12-month rolling total basis.

6.6.13.2 BACT Work Practice Standards:

6.6.13.2.1 Use of certified EPA Tier 2 Nonroad (or better) engines.

6.6.13.2.2 Use of ultra low sulfur diesel fuel; and

6.6.13.2.3 Good combustion practices based on the current manufacturer's specifications for these engines.

6.6.13.3 Operating Limit: These engines shall be operated no more than 540 hours per year each on a 12-month rolling total basis.

6.6.13.4 Compliance with the operating limit will be assured by maintaining a record of hours of operation and summing such hours on a rolling 12-month basis.

6.6.13.5 Monitoring, recordkeeping and reporting shall be conducted in accordance with Conditions 6.10 and 6.18.

6.7 Work Boat Operating Limits

6.7.1 The vessel *Allie* or substitute work boats (with equivalent or lower potential emissions), used in any combination within 25 nautical miles of the *C.R. Luigs* or *DD1*, shall not exceed a combined total of 7,500 operating hours per year on a rolling 12-month total basis.

6.7.2 Utilized work boats shall not combust any diesel fuel with sulfur content greater than 15 ppm by weight.

6.7.3 Compliance with this operating limit will be demonstrated through the monitoring, recordkeeping and reporting conditions as set forth in Conditions 6.12 and 6.18.

[40 CFR §§ 52.21, 55.2, 55.6(a)(4), 55.8, and 71.6(a)(1), (a)(3) and (c)(1)]

6.8 Crew Boat Operating Limits

6.8.1 The vessel *Fast Skipper* or substitute crew boats (with equivalent or lower potential emissions), used in any combination within 25 nautical miles of the *C.R. Luigs* or *DD1*, shall not exceed a combined total of 800 operating hours per year on a rolling 12-month total basis.

6.8.2 Utilized crew boats shall not combust any diesel fuel with sulfur content greater than 15 ppm by weight.

6.8.3 Compliance with this operating limit will be demonstrated through the monitoring, recordkeeping and reporting conditions as set forth in Conditions 6.12 and 6.18.

[40 CFR §§ 52.21, 55.2, 55.6(a)(4), 55.8 and 71.6(a)(1), (a)(3) and (c)(1)]

6.9 Monitoring and Recordkeeping Requirements for Main Generator Diesel Engines

6.9.1 Compliance demonstration method for the main generator diesel units EU-001L through -008L on the *C.R. Luigs* and EU-001D through -008D on the *DD1*: In accordance with Conditions 6.5.1.3 and 6.6.1.3, the permittee shall monitor NO_X, CO, VOC, CO_2, and $PM/PM_{10}/PM_{2.5}$ emissions from the main engines by the use of an EPA-approved parametric monitoring method as described in Condition 6.9.1.1, or an EPA-approved continuous emissions monitoring system described in Condition 6.9.1.2, or, with prior written approval by EPA, a stack testing emissions monitoring system as described in Condition 6.9.1.3, or with prior written approval of EPA, a combination of these methods.

6.9.1.1 Parametric Monitoring

6.9.1.1.1 The permittee shall properly monitor NO_X, CO, VOC, CO_2, and $PM/PM_{10}/PM_{2.5}$ emissions from the main generator diesel units specified in Condition 6.9.1 by using a parametric monitoring system such as the Transocean Diesel Engines with Turbochargers (DEWT) monitoring system or an equivalent system upon prior written approval by EPA.

6.9.1.1.2 The permittee shall monitor and record the following parameters once every 30 seconds for 30 minutes twice a day:

- Charge Air Pressure (bar) before and after air cooler;
- Charge Air Temperature (Celsius) before and after air cooler;
- Turbocharger RPM A&B (RPM);
- Exhaust Air Temperature (Celsius);
- Engine Air Inlet Pressure (mbar);
- Engine Air Inlet Temperature (Celsius);
- Engine Air Inlet Relative Humidity (%);
- Generator Load (kW); and
- NO_X, CO, SO_2, CO_2, $PM/PM_{10}/PM_{2.5}$, and O_2 Emission Concentration (ppm).

6.9.1.2 Continuous Emissions Monitoring

6.9.1.2.1 The permittee shall properly install, maintain in good working order, and operate a continuous emissions monitoring system to monitor emissions from the main generator diesel units specified in Condition 6.9.1.

6.9.1.2.2 The permittee shall obtain stack gas volumetric flow rates using a calibrated flow monitor that records data on a continuous basis.

6.9.1.2.3 The permittee shall monitor and record engine electric power output in kW-hr.

6.9.1.2.4 The permittee shall install, calibrate and maintain the continuous emissions monitoring system with a plan approved by EPA.

6.9.1.2.5 The quality assurance plan used by the permittee for the certification and operation of the continuous emissions monitoring system shall be made available to EPA upon request.

6.9.1.2.6 The permittee shall demonstrate compliance based on a 24-hour period.

6.9.1.3 Stack Testing Emissions Monitoring

6.9.1.3.1 The permittee shall properly monitor NO_X, CO, VOC, CO_2, and $PM/PM_{10}/PM_{2.5}$ emissions from diesel units specified in Condition 6.9.1 by using stack testing data collected according to an EPA approved protocol and in accordance with Conditions 5.26 and 6.9.1.3.1.1 to 6.9.1.3.1.4, to prepare a graph of engine load versus emission rates expressed in grams per kilowatt-hour (g/kW-hr) for each engine. Plot the engine load as the independent (or x) variable and the pollutant emission rates as the dependent (or y) variable for each load point tested. Construct the graph by drawing straight-line segments between each load point. Draw a horizontal line to the y-axis from the minimum load point tested.

6.9.1.3.1.1 Within 90 days of the start of the drilling campaign, the main generator diesel units of the MODU that will be in operation under this permit, EU-001L through -008L on the C.R. Luigs or EU-001D through -008D on the DD1, shall be stack tested under the requirements of this section. Data collected prior to issuance of this permit may be used with EPA approval.

6.9.1.3.1.2 Each stack test shall be conducted at three different loads within the expected range of operations.

6.9.1.3.1.3 At a minimum, each stack test run shall test for emissions of CO, NO_X, $PM_{2.5}$, PM_{10}, VOC, CO_2, and visible emissions.

6.9.1.3.1.4 During each test run, the permittee shall monitor and record the following information:

- Density of the fuel used (in lbs/gallon);
- Heat content of the fuel used (in Btu/gallon); and
- Electrical power produced (in kW-hr).

6.9.1.3.2 Use the load information recorded per Condition 6.9.1.3.1., along with the graph of engine load versus emission rates to determine the emission rate in g/kW-hr for each engine load recorded. Linear interpolation shall be used to determine the emission rate when the actual load falls between two tested load points When the engine load exceeds the maximum load measured during the stack testing, report the g/kW-hr emission rate obtained for the highest load point tested during the most recent stack test. Calculate the average emission rate for each hour of operation from all the individual emission rate results recorded during the hour.

6.9.1.3.3 When records of engine load are not available, substitute the highest g/kW-hr emission rate calculated for all the load points tested during the most recent stack test.

6.9.1.3.4 Determine the average emission rate (g/kW-hr) for each unit from the hourly emission rate results in each rolling 24-hour period.

[40 CFR §§ 52.21, and 71.6(a)(1), (a)(3) and (c)(1)]

6.10 Monitoring and Recordkeeping Requirements for Emergency Generators and Small Onboard Engines

Compliance demonstration method for the emergency generator diesel units (EU-015L on *C.R. Luigs* and EU-011D on *DD1*) and the small on-board diesel engines (EU-009L through -012L, -016L, -017L, -019L through -028L, and -092L on *C.R. Luigs* and EU-012D through -017D, -019D through -025D, and -085 through -087 on *DD1*): In accordance with Conditions 6.5.2, 6.5.5 through 6.5.10, and 6.6.4 through 6.6.8, and 6.6.13, the permittee shall monitor and maintain a contemporaneous record of the following information:

- Unit ID;
- Date/time engine started;
- Date/time engine shut down;
- Name of person operating equipment (printed); and
- Signature of person operating equipment.

[40 CFR §§ 52.21, 55.8, and 71.6(a)(1), (a)(3) and (c)(1)]

6.11 Monitoring and Recordkeeping Requirements for Storage Tanks

6.11.1 Compliance with applicable operating limits in Conditions 6.5.11 and 6.6.9 will be assured by using EPA's TANKS 4.0.9d program.

6.11.2 The permittee shall monitor and maintain the following information:

- Unit ID; and
- The dimensions and capacities of units EU-029L through -059L and EU-090L through -091L on *C.R. Luigs* and EU-026D through -047D and EU-078D through -081D on *DD1*. These records shall be kept for the life of the unit.

[40 CFR §§ 52.21, 55.8, and 71.6(a)(1), (a)(3) and (c)(1)]

6.12 Monitoring and Recordkeeping Requirements for Support Vessel Engines

6.12.1 Compliance demonstration method for the support vessels for both *C.R. Luigs* and *DD1*, in accordance with Conditions 6.7 through 6.8, the permittee shall monitor and maintain a contemporaneous record of the following information:

6.12.1.1 Compliance with this operating limit will be assured by maintaining a record of operating time and diesel fuel use within the 25-nautical mile radius of the *C.R. Luigs* or *DD1* and during standby time at the *C.R. Luigs* or *DD1*.

6.12.1.2 The permittee shall show compliance by determining and recording the sulfur content upon receiving each fuel shipment as specified in Condition 6.4.

6.12.2 Monitoring and Recordkeeping Requirements: The permittee shall monitor and maintain a contemporaneous record with the following information:

- Date/time entering the 25 nautical mile radius;
- Date/time exiting the 25 nautical mile radius;
- Sulfur content of all fuel used in any engine as specified in Condition 6.4;
- Gallons of diesel fuel on the support vessel entering the 25 nautical mile radius; and
- Gallons of diesel fuel on the support vessel exiting the 25 nautical mile radius.
- Gallons of diesel fuel loaded on to the support vessel within the 25 nautical mile radius.

[40 CFR §§ 52.21, 55.2, 55.6(a)(4), 55.8, and 71.6(a)(1), (a)(3) and (c)(1)]

6.13 Monitoring and Recordkeeping Requirements for Mud and Cement Mixing Operations

6.13.1 Compliance with Conditions 6.5.3.1 and 6.5.3.2 (for EU-013L) will be assured by maintaining a constant minimum air supply pressure reading (at the cyclone-filter pressure regulator gauge) of 65 psig. The permittee shall monitor and record this reading at least daily to ensure a pressure drop of no more than 4 psig when the system pulses.

6.13.2 Compliance with Conditions 6.6.2.1 and 6.6.2.2 (for EU-009D) will be assured by complying with manufacturer specifications including maintaining the minimum air supply pressure reading specified by the manufacturer (not to exceed 78 psia). The permittee shall monitor and record this reading at least daily.

[40 CFR §§ 52.21, 55.8 and 71.6(a)(1), (a)(3) and (c)(1)]

6.14 Monitoring and Recordkeeping Requirements for Mud Degassing Operations

Compliance with Conditions 6.5.4.1, 6.5.4.2, 6.5.4.3, 6.6.3.1, 6.6.3.2, and 6.6.3.3 (for EU-014L and EU-010D, respectively) will be assured by monitoring and recording the daily throughput of both water-based and oil-based mud.

[40 CFR §§ 52.21, 55.8 and 71.6(a)(1), (a)(3) and (c)(1)]

6.15 Monitoring and Recordkeeping Requirements for Flaring Operations

Compliance with Conditions 6.6.10.1 through 6.6.10.6 will be assured by monitoring and recording the date/duration of each flaring episode as well as the type of fuel burned.

[40 CFR §§ 52.21, 55.8 and 71.6(a)(1), (a)(3) and (c)(1)]

6.16 Monitoring and Recordkeeping Requirements for Welding Operations

Compliance with Conditions 6.6.11.1 through 6.6.11.3 will be assured by monitoring and recording the types and amounts (in pounds) of welding rods used on a daily basis.

[40 CFR §§ 52.21, 55.8 and 71.6(a)(1), (a)(3) and (c)(1)]

6.17 Monitoring and Recordkeeping Requirements for Painting Operations

Compliance with Conditions 6.6.12.1 through 6.6.12.4 will be assured by monitoring and recording the types and amounts (in gallons) of coatings and thinners used on a daily basis. Also, MSDS information for all coatings and thinners used must be kept on file.

[40 CFR §§ 52.21, 55.8 and 71.6(a)(1), (a)(3) and (c)(1)]

6.18 Reporting Requirements

The permittee shall submit the information required in Conditions 6.2, 6.4, and 6.9 through 6.17 in accordance with reporting specifications detailed in Condition 5.17.

[40 CFR § 71.6(a)(3)(iii) and 55.8]

6.19 New Source Performance Standards and National Emission Standard for Hazardous Air Pollutants (HAP) Requirements

6.19.1 Cementing engines EU-016L through -018L and wireline engines EU-019L and -020L on *C.R. Luigs* and cementing engines EU-012D through -015D and wireline engines EU-016D and -017D and seismic operations engines EU-085 through -087 on *DD1* are subject to 40 CFR part 60, subpart IIII based on their per cylinder displacement and model year. The permittee shall demonstrate compliance with the applicable requirements through the following:

6.19.1.1 The permittee shall maintain documentation in accordance with Condition 5.16 that engines specified in Condition 6.19.1 were installed and configured according to manufacturer's specifications.

6.19.1.2 The permittee shall maintain records in accordance with Condition 5.16 of manufacturer data indicating compliance with EPA Tier 2 or Tier 3 standards.

6.19.1.3 The permittee shall operate and maintain the engines according to the manufacturer's written instructions or procedures developed by the permittee that are approved in writing by the engine manufacturer. The permittee shall only change those settings that are approved by the manufacturer. The permittee shall maintain records of the manufacturer's written instructions for operation and maintenance of the engine or the procedures the permittee developed that are approved in writing by the manufacturer in accordance with Condition 5.16.

6.19.1.4 The permitted engines shall not combust any diesel fuel that does not meet the requirements of Condition 6.4.

[40 CFR § 60 subpart IIII and 55.8]

6.19.2 Any new, modified or reconstructed engine that triggers 40 CFR part 60, subpart IIII applicability will comply with 40 CFR part 60, subpart IIII or obtain a technical exemption under 40 CFR § 55.7.

[40 CFR § 60 subpart IIII and 55.7]

6.19.3 Based on engine model years and engine use (summarized in Tables 1 and 2 of Section 4), all diesel engines on *C.R. Luigs* and *DD1* (with the exception of: EU-016L through -020L, -024L through -028L, -060L, and -061L on *C.R. Luigs* and EU-012D through -017D, -021D through -025D, -048D, -049D, and -085 through -087 on *DD1*) are subject to and shall comply with the applicable requirements of 40 CFR part 63, subpart ZZZZ.

6.19.3.1 Existing stationary engines located at an area source of HAP emissions must comply with the applicable requirements in Tables 1b, 2b, and 2d in subpart ZZZZ no later than May 3, 2013 in accordance with the compliance schedule requirements of Condition 5.22.

6.19.3.2 Compliance with any applicable numerical emission limitation established in subpart ZZZZ is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in 40 CFR § 63.6620.

6.19.3.3 Compliance with Condition 6.19.3 shall be determined based upon recordkeeping required by the Annual Compliance Certification set forth in Condition 5.21.

[40 CFR part 63, subpart ZZZZ and 55.8]

6.19.4 The permittee shall submit to EPA prior notification of any upgrades to or replacements of diesel units specified in Tables 1 and 2 of Section 4 in addition to a reevaluation of the applicability of pertinent NESHAP and NSPS regulations for the modified diesel unit.

[40 CFR §§ 71.6(a)(1), (a)(3) and (c)(1)]

6.19.5 The permittee shall maintain records of the certifications of all diesel units specified in Tables 1 and 2 of Section 4.

[40 CFR §§ 71.6(a)(1), (a)(3) and (c)(1)]