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-R4015

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 of Air Quality (PSD) regulations at 40 CFR § 52.21 and the title V Operating Permit Program regulations at 40 CFR part 71,

Anadarko Petroleum Corporation
1201 Lake Robbins Drive
The Woodlands, Texas 77380

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 Eastern Gulf of Mexico. The drilling area is located on the OCS east of longitude 87.5, west of the Military Mission Line (86°41' west longitude), at least 100 miles from the Louisiana shoreline, and at least 125 miles from the Florida shoreline.

Upon commencing activities in the area identified as the project location, 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 is effective on October 16, 2014, unless review of the permit decision is requested in accordance with 40 CFR 124.19.

This permit shall expire two years from the date that the OCS source commences activity under this permit, not to exceed October 16, 2019.

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

_____
Date Signed

_____
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 regulations at 40 CFR part 71. This permit is based upon application materials submitted to EPA by Anadarko Petroleum Corporation (Anadarko) dated December 26, 2012, March 27, 2013, April 26, 2013, May 3, 2013, and July 2, 2013; supplemental submittals and information in the administrative record for this permit action; and upon the technical analysis performed by EPA.

2 APPLICANT

Anadarko Petroleum Corporation
1201 Lake Robbins Drive
The Woodlands, Texas 77380

3 PROJECT LOCATION

Anadarko's project is located on the OCS in the Eastern Gulf of Mexico. The drilling sites are located east of longitude 87.5, west of the Military Mission Line (86°41' west longitude), at least 100 miles from the Louisiana shoreline, and at least 125 miles from the Florida shoreline.

4 PROJECT DESCRIPTION

The proposed project will mobilize the Transocean *Discoverer Spirit* and associated support vessels. The support vessels may consist of supply boats to transport personnel and supplies, and a combination of a tug boat, a barge, and a stimulation vessel for well completion activities.. The proposed project will consist of three phases: the drilling phase, the well completion phase, and the production well maintenance phase. The operation will last no more than two years, and operate no more than 208 calendar days per year. Anadarko will conduct drilling activities at multiple locations within the Eastern Gulf of Mexico area described 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 project include carbon monoxide (CO), oxides of nitrogen (NO_x), particulate matter (PM), particulate matter with an aerodynamic diameter less than 2.5 microns ($PM_{2.5}$), particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}), sulfur dioxide (SO_2) and volatile organic compounds (VOC) (known as criteria pollutants), as well as other regulated air pollutants, including greenhouse gases. VOC and NO_x are the measured precursors for the criteria pollutant ozone, and NO_x and SO_2 are measured precursors for $PM_{2.5}$. Based on emissions estimates and applicable permitting thresholds, the project is subject to the PSD and title V programs and has significant emissions of NO_X, CO, PM, PM_{10}, $PM_{2.5}$, and VOC. In addition, the *Discoverer Spirit* is an area source of hazardous air pollutants pursuant to 40 CFR 63 subpart ZZZZ.

The *Discover Spirit* emission units can be found in Table 1. Additional units on the stimulation vessel that will be used for OCS activities are shown in Table 2. Table 3 lists the representative support vessels.

Support vessels operating within 25 miles of the OCS source will include supply boats (work or crew boat), an anchor handling boat, and support vessels used during well completion activities that run marine diesel engines.

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

Table 1 – *Discoverer Spirit* Emissions Units

Emissions Unit ID	Description	Make & Model	Rating[a] (hp)	Manufacture Year
DR-GE-01 - 04	Main propulsion generator #1-#4	Wärtsilä 18V32 LNE	9,910 hp*	1998
DR-GE-05 - 06	Main propulsion generator #5-#6	Wärtsilä 12V32 LNE	6,610 hp	1998
DR-GE-07	Emergency diesel engine	Wärtsilä 6R32LNE	3,300 hp	1998
DR-GE-08	Remotely operated vehicle (ROV) emergency generator	Cummins QSM11-G2NR3 (or equivalent)	427 hp	2004
DR-EC-01 - 04	Escape capsule diesel engines	Lister Petter L4 (or equivalent)	39 hp	1997
DR-EC-05 - 06	Escape capsule diesel engines	Lister Petter L3 (or equivalent)	29 hp	1997
DR-FR-01	Fast rescue craft engine	Steyr M16 TCAM-MO236 K42(or equivalent)	230 hp	2000
DR-AC-01	Air compressor diesel engine #1	Sperre M-HL2/140 (or equivalent)	18 hp	1997
DR-AC-02	Air compressor diesel engine #2	Sperre M-HL2/140 (or equivalent)	15 hp	1997
DR-FL-01	Diesel powered forklift engine	Caterpillar DP30K (or equivalent)	30 hp	
DR-VG-01	Mud degassing vent	-	-	
DR-DC-01	Dust collectors #1	ASPA Engineering #9-1400	1400 cfm	
DR-DC-02	Dust collectors #2	ASPA Engineering #16-2400	2400 cfm	
DR-DC-03	Dust collector #3	Tenkay 6D Mark IV	4000 cfm	
DR-PO-01	Painting operations	-	-	
DR-WO-01	Welding operations			
DR-DT-01 - 09	Various diesel fuel tanks	-	-	
DR-FT-01 -03	Various helicopter fuel tanks	-	-	
DR-FE-01	Fugitive Emissions	-	-	
Third Party Engines[b]				
DR-WL-01 - 02	Wireline engines #1 & #2	Cummins C8.3 (or equivalent)	275hp	
DR-EL-01 - 02	Electric line engines #1 & #2	Caterpillar 3126B (or equivalent)	300 hp	
DR-CU-01 - 02	Casing unit engines #1 & #2	Deutz F6L914 (or equivalent)	124 hp	
DR-WB-01	Water blasting engines	Deutz BF 6 M 2012C (or equivalent)	208 hp	
DR-VS-01 - 05	Well evaluation engines #1-#5	Detroit 4-71 (or equivalent)	140 hp	
Well Completion - Third Party Sources on the Drillship[b]				
DR-WC-01	Tubing running unit engine	Deutz F6L914 (or equivalent)	92 hp	

DR-WC-02	Fluid filtration pump engine	Deutz BF 4 M 2012 (or equivalent)	100 hp	
DR-WC-03	Eline powerpack engine	John Deere 6068H (or equivalent)	225 hp	
DR-WC-04	Slickline powerpack engine	FPT N45 MST (or equivalent)	126 hp	
DR-WC-05	Flowback boiler	"Sigma Fired" SF-200SE (or equivalent)	8 MMBtu/hr	
DR-WC-06	Boom flare	-	-	
DR-WC-07	CT powerpack engine	Detroit Diesel 6063KH74 (or equivalent)	600 hp	
DR-WC-08	CT pump engine	Caterpillar C27 ACERT (or equivalent)	860 hp	
DR-WC-09 - 10	Wireline engines #3 & #4	Cummins C8.3 (or equivalent)	275 hp	
WC-CT-01 - 03	Condensate tanks	-	-	

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

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

[*] Horsepower

Table 2 – Well Completion Stimulation Vessel Emission Units[a]

Emissions Unit ID	**Description**	**Make & Model**	**Rating**[b] **(hp)**[*]
SV-PE-01 - 08	Stimulation vessel pump engines	Caterpillar 3512 DITA (or equivalent)	2,250 hp

[a] The specific stimulation vessel available for use during the drilling project had not been identified at the time of application. The engine and vessel used during the project will be an equivalent or a higher EPA Tier standard.

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

[*] Horsepower

Table 3 – Support Vessels

Vessel Description	**Representative Vessel**[a]
Supply Boat	*HOS Coral*
Anchor Handling Boat	*Kirt Chouest*
Well Completion Vessels	Tug, Barge, Stimulation Vessel

[a] Specific supply boats, anchor handling boats, and well completion vessels available for use during the 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:

5.2.1 The provisions of CAA section 303 (emergency orders), including the authority of the Administrator under that section;

5.2.2 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

5.2.3 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 5.20 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 prior to operation of any subject emissions unit

[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. The EPA may extend the 18-month period upon a satisfactory showing that an extension is justified. For the purposes of this permit, periods greater than 18 months between drilling campaigns are not considered to be a discontinuation of construction.

[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 in the lease block area of the Gulf of Mexico 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 or the approval to construct has not become invalid pursuant to Condition 5.7.1, then the permit expires on the date printed on page one of this permit. Expiration of this permit terminates the permittee's right to operate unless a timely and complete permit renewal application has been submitted at least six (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 expiration 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 §71.7(c)(1)(i)]

5.7.6 An 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 the 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 times 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:

5.10.1 An emergency occurred and that the permittee can identify the cause(s) of the emergency;

5.10.2 The permitted facility was at the time being properly operated;

5.10.3 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

5.10.4 The permittee submitted notice of the emergency to EPA within two (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), 71.6(g)(3), and 71.6(g)(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 required by this permit will be extended automatically until the permittee receives written notice from EPA that the permittee no longer needs to retain these records.

5.16.4 The permittee shall hold at the corporate offices of Anadarko Petroleum Corporation, 1201 Lake Robbins Drive, The Woodlands, Texas 77380, all records required by the permit including, but not limited to, monitoring data and support information required by the 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, or report unless otherwise specified. Records of all data used to complete the permit application must be kept for five years from the date of the application, unless otherwise specified. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by the permit.

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

5.16.5 Records of monitoring information shall include:

5.16.5.1 the date and time of sampling or measurements;
5.16.5.2 the emission unit or other place as defined in this permit, and time of sampling or measurements;
5.16.5.3 the operating conditions as existing at the time of sample or measurement;
5.16.5.4 the results of such analyses;
5.16.5.5 the date(s) the analyses were performed;
5.16.5.6 the name of the person who performed the sampling or measurements; and
5.16.5.7 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, the permittee shall, upon becoming aware of such facts or corrected information, promptly submit such facts or corrected information to EPA.

[40 CFR §§ 71.5(b) and 55.8]

5.16.7 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
Eva Land	land.eva@epa.gov	404-562-9103

5.16.8 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 when the OCS source commences activity subject to 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.

5.17.2 The permittee shall promptly report to EPA, by telephone or facsimile, deviations from permit conditions, 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

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:

5.17.3.2.1 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;

5.17.3.2.2 for emissions of any regulated pollutant excluding those referenced in Condition 5.17.3.2.1, that continue for more than two (2) hours in excess of permit requirements, the report must be made within 48 hours of the occurrence; or

5.17.3.2.3 for all other deviations from permit requirements, the report shall be submitted with the semi-annual monitoring report required in Condition 5.17.1.

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.

5.17.5 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:

5.17.5.1 OCS Source (Facility) Name;
5.17.5.2 OCS Air Permit Number;
5.17.5.3 company Name;
5.17.5.4 date/time when the deviation was discovered;
5.17.5.5 date/time when the event began (24-hour clock);
5.17.5.6 date/time when the event ended (24-hour clock);
5.17.5.7 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);
5.17.5.8 if the deviation was intermittent or continuous;
5.17.5.9 brief description of what happened and the cause, including information regarding the operating conditions during the deviation;
5.17.5.10 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;
5.17.5.11 identification of each emission limit potentially exceeded during the event and the level of exceedance, if applicable;
5.17.5.12 whether the deviation was unavoidable;
5.17.5.13 describe corrective action taken and action taken to prevent future recurrence;
5.17.5.14 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
5.17.5.15 certification: Based on information and belief formed after reasonable inquiry, certify that the statements and information reported are true, accurate, and complete.

5.17.6 For the purposes of Conditions 5.17.1 through 5.17.7, 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:

5.17.6.1 a situation where emissions exceed an emission limitation or standard;
5.17.6.2 a situation where process or emissions control device parameter values indicate that an emission limitation or standard has not been met;
5.17.6.3 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
5.17.6.4 a situation in which any testing, monitoring, recordkeeping or reporting required by this permit is not performed or not performed as required.

5.17.7 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 §§ 55.8, 71.6(a)(3)(i)(B), and 71.6(a)(3)(iii)]

5.18 Off Permit Changes

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

5.18.1 Each change is not addressed or prohibited by this permit.
5.18.2 Each change shall meet all applicable requirements and shall not violate any existing permit term or condition.
5.18.3 Each change may not include changes subject to any requirement under any provision of title I of the Clean Air Act.
5.18.4 The permittee shall provide contemporaneous written notice to EPA of each change under the provision, except for changes that qualify as insignificant activities under 40 CFR § 71.5(c)(11). The written notice shall include the following:

5.18.4.1 a description of each change;
5.18.4.2 date of the change;
5.18.4.3 any change in emissions;
5.18.4.4 list of pollutants emitted; and
5.18.4.5 any applicable requirements that would apply as a result of the change.

5.18.5 The permit shield in Condition 5.2 does not apply to changes made under this provision.
5.18.6 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 Clean Air Act (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.

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 of this permit.

5.19.2 Any permit shield provided under Condition 5.2 does not apply to changes made under this provision.

[40 CFR §§ 71.2 and 71.6(a)(13)(i)]

5.20 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 date the OCS commences activities subject to 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:

5.20.1 The identification of each permit term or condition that is the basis of the certification;

5.20.2 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;

5.20.3 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

5.20.4 A report 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, including actual fuel usage and actual hours of operation. The report shall include the emission factors used for each unit and a description of the reproducible methodology used to calculate the emissions for the reporting period.

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

5.21 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)]

5.22 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 entities, 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)]

5.23 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. The 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)]

5.24 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)]

5.25 General Testing Requirements

5.25.1 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 5.25.2 through 5.25.10 whenever conducting a performance test required by this permit unless specifically stated otherwise in this permit.

5.25.2 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 seven (7) days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with EPA by mutual agreement.

5.25.3 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:

5.25.3.1 purpose and scope of testing;
5.25.3.2 source description, including a description of the operating scenarios and mode of operation during testing and including fuel sampling and analysis procedures;
5.25.3.3 schedule/dates of testing;
5.25.3.4 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;
5.25.3.5 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, eight (8) hours, 24 hours, etc.) and minimum sample volume;
5.25.3.6 sampling location description and compliance with the reference test methods;
5.25.3.7 analysis procedures and laboratory identification;
5.25.3.8 quality assurance plan;
5.25.3.9 calibration procedures and frequency;
5.25.3.10 sample recovery and field documentation;
5.25.3.11 chain of custody procedures;
5.25.3.12 quality assurance/quality control project flow chart;
5.25.3.13 data processing and reporting;
5.25.3.14 description of data handling and quality control procedures; and
5.25.3.15 report content and timing.

5.25.4 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.

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

5.25.5.1 all data which is required to be monitored during the test per the applicable condition of this permit that is requiring a test; and

5.25.5.2 all continuous monitoring system data that is required to be routinely monitored in the applicable condition of this permit for the emission unit being tested.

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

5.25.7 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:

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

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.

5.25.8 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).

5.25.9 Emission test reports shall be submitted to EPA within 45 days of completing any emission test required by this permit. The report shall include the information required to be recorded pursuant to Condition 5.25.5 above.

5.25.10 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)]

5.26 Fee Payment

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

5.26.1.1 Full payment of the annual permit fee, as specified in Conditions 5.26.2 through 5.26.11;

5.26.1.2 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 5.26.4 through 5.26.8; and

5.26.1.3 An annual emissions report of actual emissions, as specified in Condition 5.26.6, for the preceding calendar year.

5.26.2 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.

5.26.3 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)

5.26.4 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 5.26.1, to:

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

5.26.5 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.

5.26.5.1 "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.

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

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

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

5.26.5.4.1 the amount of actual emissions of each regulated pollutant (for fee calculation) that the source emits in excess of 4,000 tons per year;

5.26.5.4.2 actual emissions of any regulated pollutant (for fee calculation) already included in the fee calculation; and

5.26.5.4.3 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).

5.26.6 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 5.26.1. The annual emissions report shall be submitted to EPA at the address listed in Condition 5.26.4 of this permit.

5.26.7 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.

5.26.8 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.

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

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

5.26.11 If the permittee believes that 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]

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 latitude/longitude and Universal Transverse Mercator grid system formats;

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

6.1.3 the certification of maintenance and no physical changes required by Condition 6.6.1.1 (if applicable); and

6.1.4 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.

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

6.2 Drilling Limitations

6.2.1 The total combined hours for drilling and well completion by the *Discoverer Spirit* shall not exceed 4,992 hours per year on a rolling 12-month basis.

6.2.2 The permittee shall maintain a record of operating hours and sum such hours on a rolling 12-month basis.

6.2.3 A report providing the rolling 12-month totals shall be submitted with the annual compliance certification in accordance with Condition 5.20.

[40 CFR § 55.6(a)]

6.3 Support Vessel Identification

6.3.1 The permittee shall maintain records, in accordance with Condition 5.16, of the engine specifications and number of hours each engine is operated within 25 miles of the *Discover Spirit* for any support vessel used in place of the *HOS Coral* (supply boat), the *Kirt Chouest* (anchor handling boat), or any vessel used during well completion.

6.3.2 These records, as well as a table of engine emission factors used and calculated mass emissions in tons per year of each regulated pollutant, shall be submitted as part of the Annual Compliance Certification in accordance with Condition 5.20.

[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 the *Discoverer Spirit* or on any support vessel.

6.4.1 The permittee shall obtain a certification of sulfur content from the fuel supplier for all diesel fuel used on the *Discoverer Spirit*, and all equipment and vessels used during well completion (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 *Discoverer Spirit* for activities covered by this permit, the permittee shall determine and record the sulfur content of the diesel fuel on the *Discoverer Spirit* 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 *Discoverer Spirit* 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 records required by Condition 6.4.2 and the certification(s) of sulfur content or results of all fuel sample analyses required by Conditions 6.4.1 and 6.4.2 with the Annual Compliance Certification required by Condition 5.20.

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

6.5 Source-wide Greenhouse Gas Emissions Limits

6.5.1 The permittee shall not discharge or cause the discharge into the atmosphere in excess of the following limit for the total emissions from all permitted units on the *Discoverer Spirit* drilling vessel and support vessels:

6.5.1.1 CO_2e: 74,571 tons per year on a 12-month rolling total.

6.5.2 The permittee shall calculate and maintain a record of monthly fuel consumption as required by Conditions 6.7.20, 6.8.2, 6.9.2, 6.10.2, and 6.11, and determine emissions from all diesel units by multiplying fuel usage by the respective pollutant-specific emissions rates from the most up-to-date emission factors or from the emission certificates for each unit, and determine emissions from all non-diesel units by multiplying total hours of operation for each non-diesel unit by the pollutant-specific emissions rates presented in the application.

6.5.3 The permittee shall provide the records required by Condition 6.5.2 and a summary table of CO_2e tons per year on a 12-month rolling total basis with the Annual Compliance Certification required by Condition 5.20.

6.5.4 Global Warming Potential (GWP)

For the purposes of showing compliance with any GHG emission limit in this permit, the GWP factors listed in 40 CFR Part 98 Subpart A, Table A-1 as of the date of this permit shall be used. The current GWP factors are listed below:

GHG Pollutant	GWP Factor
CO_2	1
CH_4	25
N_2O	298
SF_6	23,900

[40 CFR § 98 Subpart A]

6.6 General Stack Test Requirements

6.6.1 Within 90 days of the start of drilling that the drilling vessel operates under this permit, the six main engines (DR-GE-01 through DR-GE-06) of the *Discoverer Spirit* shall have been stack tested under the requirements of Condition 6.6 and Condition 5.25 within the previous 12-month period.

6.6.1.1 If, after the initial stack tests, the drilling vessel discontinues drilling under the permit for more than 12 months, the permittee shall certify that a continuous maintenance program has been conducted and that no physical changes that could impact emissions have occurred since the latest stack test, or the permittee shall conduct a new stack test prior to restarting drilling operations in accordance with the general stack testing requirements set forth in Condition 5.25 and Conditions 6.6.2 through 6.6.6.

6.6.1.2 If a continuous maintenance program is selected from the options in Condition 6.6.1.1, the certification shall be included with the drill site notification required pursuant to Condition 6.1. Maintenance records shall be kept in accordance with the recordkeeping requirements set forth in Condition 5.16

6.6.2 Each stack test shall be conducted by using stack testing data collected according to an EPA-approved source test plan set forth in Condition 5.25.

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

6.6.4 At a minimum, each stack test run shall test for emissions of CO, NO_X, $PM_{2.5}$, PM_{10}, VOC, CO_2 or O_2, and visible emissions.

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

6.6.5.1 Density of the fuel used (in lbs/gallon);

6.6.5.2 Heat content of the fuel used (in Btu/gallon); and

6.6.5.3 Electrical power produced (in kW-hr).

6.6.6 For each engine, each load, and each pollutant (CO, CO_2, NO_X, PM, $PM_{2.5}$, PM_{10}, VOC), the permittee shall determine emission rates in g/kW-hr. Pollutant test data obtained in accordance with Condition 6.6 or fuel usage monitoring data may be used to calculate CO_2 and PM.

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

6.7 *Discoverer Spirit* Emission and Operating Limits

6.7.1 Source Identification: DR-GE-01 through -06, main propulsion generator engines.

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

6.7.1.1.1 NO_X BACT Limit: 12.7 g/kW-hr on a rolling 24-hour average basis.

6.7.1.1.2 CO BACT Limit: 0.8 g/kW-hr on a rolling 24-hour average basis.

6.7.1.1.3 VOC BACT Limit: 0.08 lb/MMBtu (0.35 g/kW-hr) on a rolling 24-hour average basis.

6.7.1.1.4 PM BACT Limit: 0.1 lb/MMBtu (0.43 g/kW-hr) on a rolling 24-hour average basis.

6.7.1.1.5 PM_{10}/ $PM_{2.5}$ BACT Limit: 0.06 lb/MMBtu (0.24 g/kW-hr) on a rolling 24-hour average basis.

6.7.1.2 The permittee shall use the following BACT work practice standards:

6.7.1.2.1 main propulsion generator engines with turbocharger, aftercooler, and high injection pressure;

6.7.1.2.2 diesel fuel with sulfur content less than or equal to 15 ppm by weight;

6.7.1.2.3 engines certified to IMO Tier I (or better);

6.7.1.2.4 good combustion practices based on the most recent manufacturer's specifications issued for these engines at the time that the engines are operating under this permit; and

6.7.1.2.5 a Power Management System (PMS) and NO_x concentration maintenance system as defined in the permit application received (by EPA) and found in the administrative record. The permittee will develop and implement an enhanced monitoring protocol and NO_x concentration maintenance system, which at a minimum shall include the following:

6.7.1.2.5.1 indicator ranges that will trigger an alarm if the NO_x concentration reaches a specified threshold, at which time the operator will investigate the cause of the emission increase and determine corrective action;

6.7.1.2.5.2 development and implementation of the enhanced maintenance protocol to ensure good combustion practices;

6.7.1.2.5.3 enhanced load management of the engines to maintain load levels to ensure combustion efficiency.

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

- Charge Air Pressure (kPa) after air cooler
- Charge Air Temperature (Celsius) after air cooler
- Turbocharger RPM A&B (RPM)
- Engine Air Inlet Pressure (kPa)
- Engine Air Inlet Temperature (Celsius)
- Engine Air Inlet Relative Humidity (g/kG)
- Generator Load (kW)
- NO_x and CO (ppm); and CO_2 (%) Emission Concentration

6.7.1.2.7 A PMS equivalent to the one identified in the application may be used with prior written EPA approval.

6.7.1.2.8 The permittee shall submit the enhanced monitoring and NO_x concentration maintenance protocol with the annual compliance report as defined in Condition 5.20.

6.7.1.3 Monitoring and Recordkeeping:

6.7.1.3.1 The permittee shall monitor and record NO_X, CO, VOC, and $PM/PM_{10}/PM_{2.5}$ emissions (at a determined reference O_2 or CO_2 concentration) from the main engines by the use of an EPA-approved parametric monitoring method as described in Condition 6.7.1.3.1.1; or an EPA-approved continuous emissions monitoring system described in Condition 6.7.1.3.1.2; or, with prior written approval by EPA, a stack testing emissions monitoring system as described in Condition 6.7.1.3.1.3; or, with prior written approval of EPA, a combination of these methods.

6.7.1.3.1.1 Parametric Monitoring

6.7.1.3.1.1.1 The permittee shall properly monitor and record emissions of one or more of the subject regulated air pollutants (NO_X, CO, VOC, and PM/PM_{10}/$PM_{2.5}$) emissions from the main generator diesel units specified in Condition 6.7.1 by using a parametric monitoring system such as the Power Management System (PMS) monitoring system or a parametric monitoring system equivalent to PMS. The permittee may use a parametric monitoring system equivalent to PMS only upon prior written approval by EPA.

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

- Charge Air Pressure (kPa) after air cooler
- Charge Air Temperature (Celsius) after air cooler
- Turbocharger RPM A& B (RPM)
- Engine Air Inlet Pressure (kPa)
- Engine Air Inlet Temperature (Celsius)
- Engine Air Inlet Relative Humidity (g/kg)
- Generator Load (kW)
- NO_x, CO, and SO_2 (ppm); and CO_2 (%) Emission Concentration

6.7.1.3.1.1.3 The permittee shall record the date and time of the most recent NO_x analyzer calibration, the calibration results from the NO_x analyzer, and the calibration method used.

6.7.1.3.1.2 Continuous Emissions Monitoring

6.7.1.3.1.2.1 The permittee shall install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) in accordance with a plan submitted by the permittee to the EPA and subsequently approved by the EPA to monitor and record emissions from the main generator engines specified in Condition 6.7.1.

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

6.7.1.3.1.2.3 The permittee shall monitor and record engine electric power output in kW-hr that corresponds to emissions readings taken by the CEMS.

6.7.1.3.1.2.4 The quality assurance plan used by the permittee for the certification and operation of the continuous emissions monitoring system shall be included with the plan described in Condition 6.7.1.3.1.2.1.

6.7.1.3.1.3 Stack Testing Emissions Monitoring

6.7.1.3.1.3.1 The permittee shall properly monitor and record emissions from diesel engines specified in Condition 6.7.1 by collecting stack testing data within 12 months preceding the commencement of operation or within 3 months following the commencement of operation according to an EPA approved protocol and in accordance with Conditions 5.25 and 6.7.1.3.1.3.2 through 6.7.1.3.1.3.6. Data collected prior to issuance of this permit may be used with written EPA approval. After three annual/periodic stack tests of the same drilling vessel, stack test frequency may be reduced upon written approval by the EPA.

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

6.7.1.3.1.3.3 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).

6.7.1.3.1.3.4 The permittee shall prepare a graph of engine load versus emission rates expressed in 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.

6.7.1.3.1.3.5 The permittee shall use the load information 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, the permittee shall use linear interpolation between the two load points to determine the emission rate. When the engine load exceeds the maximum load measured during the stack testing, the g/kW-hr emission rate obtained for the highest load point tested during the most recent stack test may be used. When records of engine load are not available, the highest g/kW-hr emission rate calculated for all the load points tested during the most recent stack test may be substituted. The average emission rate for each hour of operation from all individual emission rate results recorded during the hour will then be calculated.

6.7.1.4 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.1 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.2 Source Identification: DR-GE-07, emergency engine.

6.7.2.1 The permittee shall use the following BACT work practice standards:

6.7.2.1.1 an emergency diesel engine with turbocharger, aftercooler, and high injection pressure;

6.7.2.1.2 diesel fuel with sulfur content less than or equal to 15 ppm by weight, and

6.7.2.1.3 good combustion practices based on the most recent manufacturer’s specifications issued for this engine at the time that the engine is operating under this permit.

6.7.2.2 Operating Limit: This unit shall be operated no more than 100 hours per year of non-emergency, planned operation time on a 12-month rolling total basis.

6.7.2.3 The permittee shall maintain a record of hours of operation and sum such hours on a rolling 12-month basis. Hours of operation shall be recorded monthly from a non-resettable hour meter or, if such a meter is not available, by monitoring and maintaining a contemporaneous record of the following information:

6.7.2.3.1 unit ID;
6.7.2.3.2 date/time engine started;
6.7.2.3.3 date/time engine shut down;
6.7.2.3.4 name of person operating equipment (printed); and
6.7.2.3.5 signature of person operating equipment.

6.7.2.4 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.2 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.3 Source Identification: DR-GE-08, remotely operated vehicle emergency generator.

6.7.3.1 The permittee shall use the following BACT work practice standards:

6.7.3.1.1 a remotely operated vehicle emergency generator with turbocharger, aftercooler, and high injection pressure;

6.7.3.1.2 an engine certified to EPA Tier 2 nonroad engine (40 CFR § 89) (or better);

6.7.3.1.3 diesel fuel with sulfur content less than or equal to 15 ppm by weight, and

6.7.3.1.4 good combustion practices based on the most recent manufacturer's specifications issued for this engine at the time that the engine is operating under this permit.

6.7.3.2 Operating Limit: This unit shall be operated no more than 100 hours per year of non-emergency, planned operation time combined on a 12-month rolling total basis.

6.7.3.3 The permittee shall maintain a record of hours of operation and sum such hours on a rolling 12-month basis. Hours of operation shall be recorded monthly from a non-resettable hour meter or, if such a meter is not available, by monitoring and maintaining a contemporaneous record of the following information:

6.7.3.3.1 unit ID;
6.7.3.3.2 date/time engine started;
6.7.3.3.3 date/time engine shut down;
6.7.3.3.4 name of person operating equipment (printed); and
6.7.3.3.5 signature of person operating equipment.

6.7.3.4 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.3 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.4 Source Identification: DR-AC-01 and DR-AC-02, air compressor engines.

6.7.4.1 The permittee shall use the following BACT work practice standards:

6.7.4.1.1 diesel fuel with sulfur content less than or equal to 15 ppm by weight, and

6.7.4.1.2 good combustion practices based on the most recent manufacturer's specifications issued for these engines at the time that the engines are operating under this permit.

6.7.4.2 Operating Limit: These units shall be operated no more than 104 hours per year each on a 12-month rolling total basis.

6.7.4.3 The permittee shall maintain a record of hours of operation for each engine and a record of the sum of such hours for each engine on a rolling 12-month basis. Hours of operation shall be recorded monthly from a non-resettable hour meter or, if such a meter is not available, by monitoring and maintaining a contemporaneous record of the following information:

6.7.4.3.1 unit ID;
6.7.4.3.2 date/time engine started;
6.7.4.3.3 date/time engine shut down;
6.7.4.3.4 name of person operating equipment (printed); and
6.7.4.3.5 signature of person operating equipment.

6.7.4.4 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.4 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.5 Source Identification: DR-FL-01, diesel powered forklift engine.

6.7.5.1 The permittee shall use the following work practice standards:

6.7.5.1.1 diesel fuel with sulfur content less than or equal to 15 ppm by weight, and

6.7.5.1.2 good combustion practices based on the most recent manufacturer's specifications issued for this engine at the time that the engine is operating under this permit.

6.7.5.2 Operating Limit: This unit shall be operated no more than 4,992 hours per year on a 12-month rolling total basis.

6.7.5.3 The permittee shall maintain a record of hours of operation and sum such hours on a rolling 12-month basis. Hours of operation shall be recorded monthly from a non-resettable hour meter or, if such a meter is not available, by monitoring and maintaining a contemporaneous record of the following information:

6.7.5.3.1 unit ID;
6.7.5.3.2 date/time engine started;
6.7.5.3.3 date/time engine shut down;
6.7.5.3.4 name of person operating equipment (printed); and
6.7.5.3.5 signature of person operating equipment.

6.7.5.4 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.5 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.6 Source Identification: DR-FR-01, fast rescue craft engine with turbocharger, aftercooler and high injection pressure.

6.7.6.1 The permittee shall use the following work practice standards:

6.7.6.1.1 a remotely operated vehicle emergency generator with turbocharger, aftercooler, and high injection pressure;

6.7.6.1.2 an engine certified to EPA marine Tier 2 engine (40 CFR § 94) (or better);

6.7.6.1.3 diesel fuel with sulfur content less than or equal to 15 ppm by weight, and

6.7.6.1.4 good combustion practices based on the most recent manufacturer's specifications issued for this engine at the time that the engine is operating under this permit.

6.7.6.2 Operating Limit: This unit shall be operated no more than 100 hours per year on a 12-month rolling total basis.

6.7.6.3 The permittee shall maintain a record of hours of operation and sum such hours on a rolling 12-month basis. Hours of operation shall be recorded monthly from a non-resettable hour meter or, if such a meter is not available, by monitoring and maintaining a contemporaneous record of the following information:

6.7.6.3.1 unit ID;
6.7.6.3.2 date/time engine started;
6.7.6.3.3 date/time engine shut down;
6.7.6.3.4 name of person operating equipment (printed); and
6.7.6.3.5 signature of person operating equipment.

6.7.6.4 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.6 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.7 Source Identification: DR-EC-01 through DR-EC-06, escape capsule engines.

6.7.7.1 The permittee shall use the following work practice standards:

6.7.7.1.1 diesel fuel with sulfur content less than or equal to 15 ppm by weight, and

6.7.7.1.2 good combustion practices based on the most recent manufacturer's specifications issued for these engines at the time that the engines are operating under this permit.

6.7.7.2 Operating Limit: These units shall be operated no more than 100 hours per year total each of non-emergency, planned operation time on a 12-month rolling total basis.

6.7.7.3 The permittee shall maintain a record of hours of operation for each engine and a record of the sum of such hours for each engine on a rolling 12-month basis. Hours of operation shall be recorded monthly from a non-resettable hour meter or, if such a meter is not available, by monitoring and maintaining a contemporaneous record of the following information:

6.7.7.3.1 unit ID;
6.7.7.3.2 date/time engine started;
6.7.7.3.3 date/time engine shut down;
6.7.7.3.4 name of person operating equipment (printed); and
6.7.7.3.5 signature of person operating equipment.

6.7.7.4 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.7 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.8 Source Identification: DR-DC-01 and DR-DC-02, mud and cement mixing, equipped with dust collectors.

6.7.8.1 The permittee shall use the following BACT work practice standard: proper maintenance and operation of the dust collectors in accordance with current manufacturer specifications.

6.7.8.2 The permittee shall ensure that the dust collector bin is not over capacity, and report any times where there is a high-level alarm, at which time the operator will investigate the cause and take corrective actions. For each high alarm event, the permittee shall record the following:

6.7.8.2.1 unit ID;
6.7.8.2.2 date/time of alarm;
6.7.8.2.3 corrective action taken, if any;
6.7.8.2.4 name of person operating equipment (printed); and
6.7.8.2.5 signature of person operating equipment.

6.7.8.1 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.8 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.9 Source Identification: DR-DC-03, mud and cement mixing, equipped with dust collector.

6.7.9.1 The permittee shall use the following BACT work practice standard: proper maintenance and operation of the dust collector in accordance with current manufacturer specifications including maintaining a constant minimum air supply pressure reading (at the cyclone-filter pressure regulator gauge) between 90 and 105 psi, for the volume based upon 0.9 SCFM per pulse.

6.7.9.2 The permittee shall perform a daily visual check of air supply pressure reading, and record the following:

6.7.9.2.1 unit ID;
6.7.9.2.2 date/time visual inspection;
6.7.9.2.3 air pressure at time of reading;
6.7.9.2.4 name of person operating equipment (printed); and
6.7.9.2.5 signature of person operating equipment.

6.7.9.3 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.9 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.10 Source Identification: DR-VG-01, mud degassing operations.

6.7.10.1 VOC BACT Emission Limit: 5.57 tons per year on a 12-month rolling total basis.

6.7.10.2 The permittee shall use the following BACT work practice standard: proper maintenance and operation of the mud degassing operations units in accordance with current manufacturer specifications.

6.7.10.3 The permittee shall monitor and record the daily throughput of the synthetic based mud.

6.7.10.1 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.10 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.11 Source Identification: DR-WL-01 and DR-WL-02, wireline engines; DR-EL-01 and DR-EL-02, electric line engines; DR-CU-01 and DR-CU-02, casing unit engines; DR-WC-01, tubing running engine; DR-WC-02, fluid filtration pump engine; DR-WC-03, eline powerpack engine; DR-WC-04, slickline powerpack engine; DR-WC-07, CT powerpack engine; DR-WC-08, CT pump engine; and DR-WC-09 and DR-WC-10, wireline unit engines #3 and #4.

6.7.11.1 The permittee shall use the following BACT work practice standards:

6.7.11.1.1 engines with turbocharger, aftercooler, and high injection pressure;

6.7.11.1.2 engines certified to EPA Tier 2 nonroad engine (40 CFR § 89) (or better);

6.7.11.1.3 diesel fuel with sulfur content less than or equal to 15 ppm by weight; and

6.7.11.1.4 good combustion practices based on the most recent manufacturer's specifications issued for these engines at the time that the engines are operating under this permit.

6.7.11.2 Operating Limit for DR-WL-01 and DR-WL-02, wireline engines; DR-EL-01 and DR-EL-02, electric line engines; DR-CU-01 and DR-CU-02, casing unit engines: These units shall be operated no more than 4,992 hours per year <u>each</u> on a 12-month rolling total basis.

6.7.11.3 Operating Limit for DR-WC-01, tubing running engine: This unit shall be operated no more than 684 hours per year on a 12-month rolling total basis.

6.7.11.4 Operating Limit for DR-WC-02, fluid filtration pump engine: This unit shall be operated no more than 1,008 hours per year on a 12-month rolling total basis.

6.7.11.5 Operating Limit for DR-WC-03, eline powerpack engine; DR-WC-07, CT powerpack engine; DR-WC-08, CT pump engine: These units shall be operated no more than 720 hours per year <u>each</u> on a 12-month rolling total basis.

6.7.11.6 Operating Limit for DR-WC-04, slickline powerpack engine; DR-WC-09 and DR-WC-10, wireline unit engines #3 and #4: These units shall be operated no more than 1,440 hours per year each on a 12-month rolling total basis.

6.7.11.7 The permittee shall maintain a record of hours of operation for each engine and a record of the sum such hours for each engine on a rolling 12-month basis. Hours of operation shall be recorded monthly from a non-resettable hour meter or, if such a meter is not available, by monitoring and maintaining a contemporaneous record of the following information:

6.7.11.7.1 unit ID;
6.7.11.7.2 engine tier certification;
6.7.11.7.3 date/time engine started;
6.7.11.7.4 date/time engine shut down;
6.7.11.7.5 name of person operating equipment (printed); and
6.7.11.7.6 signature of person operating equipment.

6.7.11.8 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.11 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.12 Source Identification: DR-WB-01, water blasting engine.

6.7.12.1 The permittee shall use the following BACT work practice standards:

6.7.12.1.1 a water blasting engine with turbocharger, aftercooler, and high injection pressure;

6.7.12.1.2 engine certified to EPA Tier 3 nonroad engine (40 CFR § 89) (or better);

6.7.12.1.3 diesel fuel with sulfur content less than or equal to 15 ppm by weight; and

6.7.12.1.4 good combustion practices based on the most recent manufacturer's specifications issued for this engine at the time that the engine is operating under this permit .

6.7.12.2 Operating Limit: This unit shall be operated no more than 2,496 hours per year on a 12-month rolling total basis.

6.7.12.3 The permittee shall maintain a record of hours of operation and sum such hours on a rolling 12-month basis. Hours of operation shall be recorded monthly from a non-resettable hour meter or, if such a meter is not available, by monitoring and maintaining a contemporaneous record of the following information:

6.7.12.3.1 unit ID;
6.7.12.3.2 engine tier certification;
6.7.12.3.3 date/time engine started;
6.7.12.3.4 date/time engine shut down;
6.7.12.3.5 name of person operating equipment (printed); and
6.7.12.3.6 signature of person operating equipment.

6.7.12.4 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.12 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.13 Source Identification: DR-VS-01 through DR-VS-05, well evaluation engines.

6.7.13.1 The permittee shall use the following BACT work practice standards:

6.7.13.1.1 diesel fuel with sulfur content less than or equal to 15 ppm by weight, and

6.7.13.1.2 good combustion practices based on the most recent manufacturer's specifications issued for these engines at the time that the engines are operating under this permit.

6.7.13.2 Operating Limit: These units shall be operated no more than 125 hours per year <u>each</u> on a 12-month rolling total basis.

6.7.13.3 The permittee shall maintain a record of hours of operation for each engine and a record of the sum of such hours for each engine on a rolling 12-month basis. Hours of operation shall be recorded monthly from a non-resettable hour meter or, if such a meter is not available, by monitoring and maintaining a contemporaneous record of the following information:

6.7.13.3.1 unit ID;
6.7.13.3.2 engine tier certification;
6.7.13.3.3 date/time engine started;
6.7.13.3.4 date/time engine shut down;
6.7.13.3.5 name of person operating equipment (printed); and
6.7.13.3.6 signature of person operating equipment.

6.7.13.4 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.13 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.14 Source Identification: DR-WC-05, flowback boiler.

6.7.14.1 The permittee shall use the following BACT work practice standards:

6.7.14.1.1 diesel fuel with sulfur content less than or equal to 15 ppm by weight; and

6.7.14.1.2 good combustion practices based on the most recent manufacturer's specifications issued for this boiler at the time that the boiler is operating under this permit.

6.7.14.2 Operating Limit: This unit shall be operated no more than 144 hours per year combined on a 12-month rolling total basis.

6.7.14.3 The permittee shall maintain a record of hours of operation and sum such hours on a rolling 12-month basis. Hours of operation shall be recorded monthly from a non-resettable hour meter or, if such a meter is not available, by monitoring and maintaining a contemporaneous record of the following information:

6.7.14.3.1 unit ID;
6.7.14.3.2 date/time boiler started;
6.7.14.3.3 date/time boiler shut down;
6.7.14.3.4 name of person operating equipment (printed); and
6.7.14.3.5 signature of person operating equipment.

6.7.14.4 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.14 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.15 Source Identification: DR-WC-06, boom flare.

6.7.15.1 The permittee shall use the following BACT work practice standards:

6.7.15.1.1 maintain compliance with 40 CFR 60.18; and

6.7.15.1.2 use good combustion practices and proper flare maintenance.

6.7.15.2 Operating Limit: Non-emergency flaring shall be limited to no more than 360 MMscf per year on a 12-month rolling total basis.

6.7.15.3 The permittee shall monitor and maintain a record of the following:

6.7.15.3.1 date/duration of each flaring episode;
6.7.15.3.2 type of fuel burned; and
6.7.15.3.3 amount of gas flared in MMscf and the sum of such MMscf on a rolling 12-month basis.

6.7.15.4 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.15 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.16 Source Identification: DR-PO-01, painting operations.

6.7.16.1 The permittee shall use the following BACT work practice standards:

6.7.16.1.1 best management practices that include, but are not limited to: down spraying of paint and use of a containment system such as a shroud or a barrier around the section of the ship being painted whenever practical to prevent the airborne particulate matter from drifting into the atmosphere, and proper storage of coatings (and thinners) in non-leaking containers; and

6.7.16.1.2 either an airless spray gun with transfer efficiency of 50% or greater, or an air assisted spray gun with transfer efficiency of 30% or greater for all coating operations.

6.7.16.2 Operating Limits: The airless spray gun shall be limited to 57 and 24 gallons per calendar week of primer and thinner, respectively.

6.7.16.3 Operating Limits: The air assisted spray gun shall be limited to 60 and 25 gallons per calendar week of primer and thinner, respectively.

6.7.16.4 The permittee shall maintain and record the types and amounts (in gallons) of coatings and thinners used on a weekly basis. Also, MSDS information for all coatings and thinners used must be kept on file.

6.7.16.5 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.16 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.17 Source Identification: DR-WO-01, welding operations.

6.7.17.1 The permittee shall use the following BACT work practice standard: follow current manufacturer's recommendations for all equipment used in welding operations, including but not limited to, voltage levels.

6.7.17.2 The permittee shall maintain an accurate account of the quantity (in pounds) and type of welding rods used during the duration of the project.

6.7.17.3 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.17 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.18 Source Identification: DR-DT-01 through DR-DT-09 and DR-FT-01 through DR-FT-03, storage tanks; and WC-CT-01 through WC-CT-03, condensate tanks.

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

6.7.18.1.1 VOC BACT Emission Limit for DR-DT-01 through DR-DT-09 and DR-FT-01 through DR-FT-03: 0.71 tons per year on a 12-month rolling total basis.

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

6.7.18.1.1 VOC BACT Emission Limit for WC-CT-01 through WC-CT-03: 9.26 tons per year on a 12-month rolling total basis.

6.7.18.2 The permittee shall use the following BACT work practice standard: good maintenance practices.

6.7.18.3 The permittee shall use EPA's TANKS 4.0.9d program to calculate emissions for the semi-annual report.

6.7.18.4 The permittee shall monitor and maintain the following information:

6.7.18.4.1 unit ID; and

6.7.18.4.2 the dimensions, fuel type or condensate stored, and capacities of units DR-DT-01 through DR-DT-09, DR-FT-01 through DR-FT-03, and WC-CT-01 through WC-CT-03.

6.7.18.5 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.18 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.19 Source Identification: DR-FE-01, fugitive emissions.

6.7.19.1 The permittee shall use the following BACT work practice standard: good maintenance practices to minimize fugitive emissions; including minimizing the release of emissions from valves, pump seals, and connectors.

6.7.19.2 Compliance will be assured by performing a daily check to ensure that there are no leaks. Upon detection of a leak, the permittee shall maintain and record the following information:

6.7.19.2.1 date/duration of leak detection from critical components;
6.7.19.2.2 type of component;
6.7.19.2.3 method of detection;
6.7.19.2.4 corrective action taken;
6.7.19.2.5 date of component reinspection;
6.7.19.2.6 name of person inspecting equipment (printed); and
6.7.19.2.7 signature of person inspecting equipment.

6.7.19.3 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.19 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.7.20 Fuel Use Limit

6.7.20.1 Operating Limit: The OCS source shall not use more than 425 barrels (17,850 gallons) per day of diesel fuel, not to exceed 67,600 barrels (2,840,336 gallons) of diesel fuel on a 12-month total basis.

6.7.20.2 The permittee shall maintain a record of fuel consumption for the duration of the project.

6.7.20.3 The permittee shall monitor and maintain a record of the following information:

6.7.20.3.1 initial number of barrels/gallons of diesel fuel on the OCS source at the beginning of the project;
6.7.20.3.2 date of each diesel fuel delivery;
6.7.20.3.3 number of barrels/gallons of diesel fuel in each delivery;
6.7.20.3.4 name of person recording delivery (printed);
6.7.20.3.5 signature of recorder; and
6.7.20.3.6 final number of barrels/gallons of diesel fuel on the OCS source at the end of the project.

6.7.20.4 All information required to be collected, recorded, or maintained pursuant to Condition 6.7.20 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

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

6.8 Stimulation Vessel Emission and Operating Limits

6.8.1 Source Identification: SV-PE-01 through SV-PE-08, stimulation vessel pump engines.

6.8.1.1 The permittee shall use the following BACT work practice standards:

6.8.1.1.1 diesel fuel with sulfur content less than or equal to 15 ppm by weight; and

6.8.1.1.2 good combustion practices based on the most recent manufacturer's specifications issued for these engines at the time that the engines are operating under this permit.

6.8.1.2 Operating Limit: These units shall be operated no more than 504 hours per year each on a 12-month rolling total basis.

6.8.1.3 The permittee shall maintain a record of hours of operation for each engine and a record of the sum of such hours for each engine on a rolling 12-month basis. Hours of operation shall be recorded monthly from a non-resettable hour meter or, if such a meter is not available, by monitoring and maintaining a contemporaneous record of the following information:

6.8.1.3.1 unit ID;
6.8.1.3.2 unit rating;
6.8.1.3.3 date/time engine started;
6.8.1.3.4 date/time engine shut down;
6.8.1.3.5 name of person operating equipment (printed); and
6.8.1.3.6 signature of person operating equipment.

6.8.1.4 All information required to be collected, recorded, or maintained pursuant to Condition 6.8.1 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.8.2 Stimulation Vessel Fuel Consumption Limit

6.8.2.1 The stimulation vessel or substitute stimulation vessel (with equivalent or lower potential emissions) shall not use more than 21,008 gallons (500 barrels) of diesel fuel per day when within 25 miles of the drilling vessel.

6.8.2.2 The stimulation vessel or substitute stimulation vessel shall not use any diesel fuel with sulfur content greater than 15 ppm by weight.

6.8.2.3 The permittee shall monitor and maintain a contemporaneous record of the following information:

6.8.2.3.1 operating time and diesel fuel use within the 25-nautical mile radius of the *Discoverer Spirit*; and

6.8.2.3.2 a record of the sulfur content upon receiving each fuel shipment as specified in Condition 6.4.

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

6.8.2.4.1 name of vessel;
6.8.2.4.2 units onboard vessel, with short description and applicable ratings of each unit;
6.8.2.4.3 date/time entering the 25 nautical mile radius;
6.8.2.4.4 date/time exiting the 25 nautical mile radius;
6.8.2.4.5 sulfur content of all fuel used in any engine as specified in Condition 6.4;
6.8.2.4.6 gallons of diesel fuel on the vessel entering the 25 nautical mile radius;

6.8.2.4.7 gallons of diesel fuel on the vessel exiting the 25 nautical mile radius; and

6.8.2.4.8 gallons of diesel fuel loaded on to the vessel within the 25 nautical mile radius.

6.8.2.5 All information required to be collected, recorded, or maintained pursuant to Condition 6.8.2 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

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

6.9 Supply Boat Emission and Operating Limits

6.9.1 Source Identification: SB-DT-01 through SB-DT-15, storage tanks.

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

6.9.1.1.1 VOC BACT Emission Limit: 0.08 tons per year on a 12-month rolling total basis.

6.9.1.2 The permittee shall use the following BACT work practice standard: good maintenance practices.

6.9.1.3 The permittee shall use EPA's TANKS 4.0.9d program to calculate emissions for the semi-annual report.

6.9.1.4 The permittee shall monitor and maintain the following information:

6.9.1.4.1 Unit ID; and

6.9.1.4.2 the dimensions, fuel type or condensate stored, and capacities of units SB-DT-01 through SB-DT-15.

6.9.1.5 All information required to be collected, recorded, or maintained pursuant to Condition 6.9.1 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.9.2 Supply boat fuel consumption limit

6.9.2.1 The supply boat *HOS Coral* or substitute supply boat (with equivalent or lower potential emissions) shall not use more than 17,098 gallons of diesel fuel per day when within 25 miles of the drilling vessel.

6.9.2.2 The supply boat or substitute supply boat shall not combust any diesel fuel with sulfur content greater than 15 ppm by weight.

6.9.2.3 The permittee shall monitor and maintain a contemporaneous record of the following information:

6.9.2.3.1 operating time and diesel fuel use within the 25-nautical mile radius of the *Discoverer Spirit*; and

6.9.2.3.2 the sulfur content upon receiving each fuel shipment as specified in Condition 6.4.

6.9.2.4 The permittee shall monitor and maintain a contemporaneous record with the following information:

6.9.2.4.1 name of vessel;
6.9.2.4.2 units onboard vessel, with short description and applicable ratings of each unit;
6.9.2.4.3 date/time entering the 25 nautical mile radius;
6.9.2.4.4 date/time exiting the 25 nautical mile radius;
6.9.2.4.5 sulfur content of all fuel used in any engine as specified in Condition 6.4;
6.9.2.4.6 gallons of diesel fuel on the vessel entering the 25 nautical mile radius;
6.9.2.4.7 gallons of diesel fuel on the vessel exiting the 25 nautical mile radius; and
6.9.2.4.8 gallons of diesel fuel loaded on to the vessel within the 25 nautical mile radius.

6.9.2.5 All information required to be collected, recorded, or maintained pursuant to Condition 6.9.2 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17..

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

6.10 Anchor Handling Boat Emission and Operating Limits

6.10.1 Source Identification: AB-DT-01 through AB-DT-19 diesel storage tanks.

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

6.10.1.1.1 VOC BACT Emission Limit: 0.10 tons per year on a 12-month rolling total basis.

6.10.1.2 The permittee shall use the following BACT work practice standard: good maintenance practices.

6.10.1.3 The permittee shall use EPA's TANKS 4.0.9d program to calculate emissions for the semi-annual report.

6.10.1.4 The permittee shall monitor and maintain the following information:

6.10.1.4.1 Unit ID; and

6.10.1.4.2 The dimensions, fuel type or condensate stored, and capacities of units AB-DT-01 through AB-DT-19.

6.10.1.5 All information required to be collected, recorded, or maintained pursuant to Condition 6.10.1 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

6.10.2 Anchor handling boat fuel consumption limit

6.10.2.1 The anchor handling boat *Kirt Chouest* or substitute anchor handling boat (with equivalent or lower potential emissions) shall not use more than 7,500 gallons of diesel fuel per day when within 25 miles of the drilling vessel.

6.10.2.2 The anchor handling boat or substitute anchor handling boat shall not combust any diesel fuel with sulfur content greater than 15 ppm by weight.

6.10.2.3 The permittee shall monitor and maintain a contemporaneous record of the following information:

6.10.2.3.1 operating time and diesel fuel use within the 25-nautical mile radius of the *Discoverer Spirit*; and

6.10.2.3.2 the sulfur content upon receiving each fuel shipment as specified in Condition 6.4.

6.10.2.4 The permittee shall monitor and maintain a contemporaneous record with the following information:

6.10.2.4.1 name of vessel;
6.10.2.4.2 units onboard vessel, with short description and applicable ratings of each unit;
6.10.2.4.3 date/time entering the 25 nautical mile radius;
6.10.2.4.4 date/time exiting the 25 nautical mile radius;
6.10.2.4.5 sulfur content of all fuel used in any engine as specified in Condition 6.4;
6.10.2.4.6 gallons of diesel fuel on the vessel entering the 25 nautical mile radius;
6.10.2.4.7 gallons of diesel fuel on the vessel exiting the 25 nautical mile radius;
6.10.2.4.8 gallons of diesel fuel loaded on to the vessel within the 25 nautical mile radius.

6.10.2.5 All information required to be collected, recorded, or maintained pursuant to Condition 6.10.2 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

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

6.11 Tug Operating Limits

6.11.1 The Tug or substitute Tug (with equivalent or lower potential emissions) shall not use more than 14,285 gallons (340 barrels) of diesel fuel per day when within 25 miles of the drilling vessel.

6.11.2 The tug or substitute tug shall not combust any diesel fuel with sulfur content greater than 15 ppm by weight.

6.11.3 The permittee shall monitor and maintain a contemporaneous record of the following information:

6.11.3.1 operating time and diesel fuel use within the 25-nautical mile radius of the *Discoverer Spirit*.

6.11.3.2 the sulfur content upon receiving each fuel shipment as specified in Condition 6.4.

6.11.4 The permittee shall monitor and maintain a contemporaneous record with the following information:

6.11.4.1 name of vessel;
6.11.4.2 units onboard vessel, with short description and applicable ratings of each unit;
6.11.4.3 date/time entering the 25 nautical mile radius;
6.11.4.4 date/time exiting the 25 nautical mile radius;
6.11.4.5 sulfur content of all fuel used in any engine as specified in Condition 6.4;
6.11.4.6 gallons of diesel fuel on the vessel entering the 25 nautical mile radius;
6.11.4.7 gallons of diesel fuel on the vessel exiting the 25 nautical mile radius;
6.11.4.8 gallons of diesel fuel loaded on to the vessel within the 25 nautical mile radius.

6.11.5 All information required to be collected, recorded, or maintained pursuant to Condition 6.11 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

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

6.12 Barge Electric Generator Operating Limits

6.12.1 The Barge or any substitute barge (with equivalent or lower potential emissions) shall not operate more than 504 hours per year on a rolling 12-month total basis when within 25 miles of the drilling vessel.

6.12.2 The barge or any substitute barge shall not combust any diesel fuel with sulfur content greater than 15 ppm by weight.

6.12.3 The permittee shall monitor and maintain a contemporaneous record of the following information:

6.12.3.1 operating time and diesel fuel use within the 25-nautical mile radius of the *Discoverer Spirit*.

6.12.3.2 the sulfur content upon receiving each fuel shipment as specified in Condition 6.4.

6.12.4 The permittee shall monitor and maintain a contemporaneous record with the following information:

6.12.4.1 name of vessel;
6.12.4.2 units onboard vessel, with short description and applicable ratings of each unit;
6.12.4.3 date/time entering the 25 nautical mile radius;
6.12.4.4 date/time exiting the 25 nautical mile radius; and
6.12.4.5 sulfur content of all fuel used in any engine as specified in Condition 6.4.

6.12.5 All information required to be collected, recorded, or maintained pursuant to Condition 6.12 shall be submitted to EPA by the permittee in accordance with the reporting specifications detailed in Condition 5.17.

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

7.1.1 The third party engines (DR-WL-01 and DR-WL-02; DR-EL-01 and DR-EL-02; DR-CU-01 and DR-CU-02; DR-WC-01 through DR-WC-04; DR-WC-07 through DR-WR-10; and DR-WB-01) are subject to 40 CFR part 60, subpart IIII based on engine size, per cylinder displacement, and model year. The permittee shall demonstrate compliance with the applicable requirements through the following:

7.1.1.1 The permittee shall maintain documentation in accordance with Condition 5.16 that engines specified in Condition 7.1.1 were installed and configured according to manufacturer's specifications.

7.1.1.2 The permittee shall maintain records in accordance with Condition 5.16 of manufacturer data indicating compliance with EPA Tier standards, if applicable, to the engine.

7.1.1.3 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.

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

7.1.2 As identified in the permit application, the third party engines (DR-WL-01 and DR-WL-02, DR-EL-01 and DR-EL-02, DR-CU-01 and DR-CU-02, DR-WC-01 through DR-WC-04, and DR-WC-07 through DR-WR-10, and DR-WB-01) are subject to and shall comply with the applicable requirements of 40 CFR part 63, subpart ZZZZ. The permittee shall demonstrate compliance with subpart ZZZZ for each engine by demonstrating compliance with the applicable requirements of 40 CFR part 60, subpart IIII and Condition 7.1.1.

7.1.3 Based on engine model years and engine use (summarized in Tables 1 and 2 of Section 4), the Main Diesel Engines (DR-GE-01 through DR-GE-06), Emergency Generator Engines (DR-GE-07), Well Evaluation Engines (DR-VS-01 through DR-VS-05), Air Compressor Engines (DR-AC-01 and DR-AC-02), Stimulation Vessel Pump Engines (SV-PE-01 through SV-PE-08) are subject to and shall comply with the applicable requirements of 40 CFR part 63, subpart ZZZZ.

7.1.3.1 Existing stationary engines located at an area source of HAP emissions on the OCS must comply with the applicable requirements in 40 CFR § 63.6603(c) and Table 2d in subpart ZZZZ in accordance with the compliance schedule requirements of Condition 5.21.

7.1.3.2 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.

7.1.3.3 Compliance with Condition 7.1.3 shall be determined based upon recordkeeping required by the Annual Compliance Certification set forth in Condition 5.20.

[40 CFR part 63, subpart ZZZZ and 55.8]

7.1.4 Compliance with the requirements of Condition 7 shall be determined based upon recordkeeping required by the Annual Compliance Certification set forth in Condition 5.20.

7.1.5 Any new, modified, or reconstructed engine shall comply with all applicable NESHAP and NSPS, including but not limited to 40 CFR part 60, subpart IIII and 40 CFR part 63, subpart ZZZZ, or obtain a technical exemption under 40 CFR § 55.7.

7.1.6 The permittee shall notify EPA prior to use of any new, modified, or reconstructed engine intended to be used on the drilling vessel or in replacement of an engine in Tables 1 and 2 of Section 4 of this permit, and shall submit to EPA a reevaluation of the applicability of pertinent NESHAP and NSPS regulations, as well as copies of the manufacturer engine certification to EPA standards.

7.1.7 The permittee shall maintain records in accordance with Condition 5.16 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)]