

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4
Atlanta, Georgia

Preliminary Determination
For a Technical Exemption Under the
Outer Continental Shelf Air Regulations

for

Eni US Operating Company Incorporated
Holy Cross Drilling Project: Lloyd Ridge 411

March 08, 2012

Introduction

Eni US Operating Co., Incorporated (“Eni”) has applied for an exemption under Title 40, Code of Federal Regulations (CFR), part 55.7 from the United States Environmental Protection Agency (EPA) Region 4 for two crane engines onboard their Transocean *Pathfinder* drillship that will operate at Lloyd Ridge Lease Block 411, on the Outer Continental Shelf (OCS) in the Gulf of Mexico.

The EPA Region 4 is the agency responsible for implementing and enforcing Clean Air Act (CAA) requirements for OCS sources in the Gulf of Mexico east of 87°30” (87.5).¹ Eni proposes to drill for natural gas in Lloyd Ridge (Lease Block 411) located in the OCS waters of the Gulf of Mexico east of longitude 87.5. The drill site is located at latitude 27° 35” and longitude 87° 12”, or approximately 154 miles southeast of the mouth of the Mississippi River and 189 miles south of the nearest Florida coast.

Pursuant to section 328 of the CAA, 42 U.S.C. § 7627, and the air quality regulations applicable to OCS sources set forth in 40 CFR part 55, an OCS source is required to obtain an air quality permit before beginning construction and an operating permit within 12 months of becoming an OCS source. Under the OCS regulations Eni must also comply with any New Source Performance Standard (NSPS) applicable to its source category. *See* 40 CFR § 55.13(c).

Eni initially applied for an OCS air permit that incorporated Prevention of Significant Deterioration (PSD) preconstruction and title V operating permit program requirements. The EPA issued this permit, OCS-EPA-R4007, to Eni on November 28, 2011. This permit can be found at http://www.epa.gov/region4/air/permits/ocspermits/eni_ocs.html. Subsequent to the issuance of this permit, but prior to drilling in Lease Block 411, Eni informed the EPA of modifications to the *Pathfinder* drillship, discussed below.

The modifications to the drillship required Eni to request an exemption, pursuant to 40 CFR § 55.7, from NSPS 40 CFR part 60 subpart IIII, for two crane engines. The EPA has completed review of Eni’s request and supplemental materials and proposes to grant an exemption under 40 CFR § 55.7 for two crane engines onboard the *Pathfinder* drillship.

Applicant Name and Address

Eni US Operating Co., Incorporated
1201 Louisiana, Suite 3500
Houston, Texas 77002

OCS Air Regulations

The OCS Air Regulations at 40 CFR part 55 implement section 328 of the CAA and establish the air pollution control requirements for OCS sources and the procedures for implementation and enforcement of these requirements. The regulations define “OCS source” by incorporating and interpreting the statutory definition of OCS source:

OCS source means any equipment, activity, or facility which:

¹ *See* CAA § 328. The U.S. Department of Interior has jurisdiction for Clean Air Act implementation west of 87°30”.

- (1) Emits or has the potential to emit any air pollutant;
- (2) Is regulated or authorized under the OCSLA (43 U.S.C. §1331 et seq.); and
- (3) Is located on the OCS or in or on waters above the OCS.

This definition shall include vessels only when they are:

- (1) Permanently or temporarily attached to the seabed and erected thereon and used for the purpose of exploring, developing or producing resources there from, within the meaning of section 4(a)(I) of OCSLA (43 U.S.C. §1331 et seq.); or
- (2) Physically attached to an OCS facility, in which case only the stationary source aspects of the vessels will be regulated [40 CFR § 55.2; *see also* CAA § 328(a)(4)(C), 42 U.S.C. § 7627].

Section 328 and part 55 distinguish between OCS sources located within 25 miles of a state's seaward boundary and those located beyond 25 miles of a state's seaward boundary [CAA § 328(a)(1); 40 CFR §§ 55.3(b) and (c)]. In this case, Eni is seeking to conduct an exploratory drilling operation exclusively beyond 25 miles of any state's seaward boundary.

The OCS Air Regulations set forth the federal CAA requirements that apply to OCS sources. Sources located beyond 25 miles of a state's seaward boundaries are subject to the NSPS (40 CFR part 60); the PSD preconstruction program (40 CFR § 52.21) if the OCS source is also a major stationary source or a major modification to a major stationary source; standards promulgated under Section 112 of the CAA if rationally related to the attainment and maintenance of federal and state ambient air quality standards or the requirements of part C of title I of the CAA; and the title V operating permit program (40 CFR part 71). *See* 40 CFR §§ 55.13(a), (c), (d)(2), (e), and (f)(2), respectively.

The OCS regulations also contain provisions relating to monitoring, reporting, inspections, compliance, and enforcement. *See* 40 CFR §§ 55.8 and 55.9. Sections 55.8(a) and (b) authorize the EPA to require monitoring, reporting and inspections for OCS sources and provide that all monitoring, reporting, inspection and compliance requirements of the CAA apply to OCS sources. These provisions, along with the provisions of the applicable substantive programs listed above, provide authority for the monitoring, recordkeeping, reporting and other compliance assurance measures included in Eni's permit.

Eni's exploration drilling program is a major source under the applicable PSD and title V permitting requirements. Eni is applying Best Available Control Technology for carbon monoxide, volatile organic carbon, particulate matter, particulate matter with an aerodynamic diameter less than 2.5 microns, particulate matter with an aerodynamic diameter less than 10 microns, and greenhouse gas, measured as carbon dioxide equivalents.

New Source Performance Standards (NSPS) and 40 CFR § 55.7

An OCS source must comply with any NSPS applicable to its source category. *See* 40 CFR § 55.13(c). In addition, per 40 CFR § 52.21(j)(1), the PSD regulations require each major stationary source or major modification to meet applicable NSPS. A specific NSPS subpart applies to a source based on source category, equipment capacity, and the date when the equipment commenced construction or modification.

NSPS, 40 CFR part 60, subpart IIII, applies to stationary compression-ignition internal combustion

engines that commence construction after July 11, 2005, and were manufactured after April 1, 2006. In a letter to the EPA dated December 13, 2011, Eni reported that two of their previously exempt 1997, 3408 Caterpillar crane engines had been replaced with two 2007, 3406 Caterpillar crane engines. These crane engines were manufactured in 2007 and are therefore subject to 40 CFR part 60, subpart IIII.

To comply with 40 CFR part 60, subpart IIII, the crane engines need to meet the certification requirements for non-road engines set forth at 40 CFR 89, or the certification requirements for marine compression-ignition engines set forth at 40 CFR 94, or meet the manufacturer standards for replacement engines in parts 89 or 94. However, the crane engines were constructed to MARPOL Annex VI standards and are not EPA-certified.

The OCS regulations at 40 CFR § 55.7 allow the administrator to exempt a source from a control technology requirement if “the administrator or the delegated agency finds that compliance with the control technology requirement is technically infeasible or will cause an unreasonable threat to health and safety.” If a request for an exemption is granted, the applicant must comply with substitute control requirements as close in stringency to the original requirement as possible and must offset the difference between the original requirement and the substitute requirements. Sources located beyond 25 miles from a state’s seaward boundary must consult with the EPA to identify suitable emissions reductions. *See* 40 CFR § 55.7.

In a letter dated January 3, 2012, Eni requested an exemption pursuant to 40 CFR § 55.7, from 40 CFR part 60 subpart IIII, for the crane engines. This letter referenced an earlier request submitted on August 17, 2011, in which Eni requested an exemption for the same model engines.² These engines provide power for the *Pathfinder’s* Seatrax model cranes and are located in a housing unit below deck. To comply with 40 CFR part 60 subpart IIII, Eni would have to replace these engines with engines that meet the EPA’s Tier III certification standard or engines that are certified by the manufacturer as replacement engines for the older equipment. At present, however, there are no compliant engines available as replacements for these cranes. While Caterpillar does manufacture a Tier III-compliant crane engine, it is currently not approved for offshore use on these type vessels. In addition, these Tier III engines are not readily compatible with the cranes that are onboard the *Pathfinder*, and replacing the current models with a Tier III compliant model would require significant redesign of the ship and the cranes. The EPA independently verified this information with Seatrax, Transocean, Caterpillar, and ABS, the underwriter that determines the seaworthiness of such vessels. Thus, the EPA has determined that at this time, Eni’s compliance with the control technology requirement of 40 CFR part 60, subpart IIII is technically infeasible with respect to the crane engines. Based on that determination, the EPA proposes to grant Eni’s request for an exemption. Since there are no other alternatives, the EPA determined that the next most stringent standards are the MARPOL IMO certified crane engines.

In addition to complying with a substitute requirement, in accordance with 40 CFR § 55.7(e)(3) Eni must obtain emission reduction credits of a sufficient quantity to offset the estimated emissions resulting from the exemption of the crane engines from 40 CFR part 60 subpart IIII. The crane engines qualify as category 1, commercial marine engines under 40 CFR part 94. The applicable emission standards are found in 40 CFR part 94.8 Table A-1. The EPA calculated the difference in emissions that would be achieved by compliance with 40 CFR part 94 emission standards versus the estimated emissions from the available MARPOL certified crane engines. Eni must provide emission offsets for approximately 4 total tons of NO_x and hydrocarbons combined, and approximately 1 ton of particulate matter.

² The exemption was initially granted as part of OCS-EPA-R4007 permit issued on November 28, 2011. OCS-40 CFR 55.7 Exemption-03/08/2012

Eni will receive emission reduction credits from the replacement of a 40 CFR 89 Tier 1 diesel engine with a 40 CFR 89 Tier 2 diesel engine at the Alabama State Port Authority (ASPA) McDuffie Coal Terminal, a large import and export coal handling facility. In an email dated, November 30, 2011, the ASPA confirmed that Eni purchased one 458 hp, 18 L, 40 CFR 89 Tier 2, 2004 Caterpillar 3408 diesel engine to replace of one 458 hp, 18 L, 40 CFR 89 Tier 1, 1998 Caterpillar 998F diesel engine. The Tier 2 Caterpillar engine was placed into service on November 25, 2011, at the McDuffie Coal Terminal. This replacement will result in sufficient reductions required for the emission offsets pursuant to 40 CFR § 55.7.

Location of Reduction:

McDuffie Coal Terminal
1901 Ezra Trice Boulevard
Mobile, AL 36603

In addition, Eni must operate the crane engines in compliance with all other applicable requirements of 40 CFR part 60, subpart IIII. Condition 6.7.1.1 of the permit requires Eni operate, and maintain the crane engines per the manufacturer's instructions (40 CFR part 60.4211(a) and (c)). Eni provided Caterpillar engine maintenance data to the EPA, which can be found in the administrative record. Also, Condition 6.4 of the permit requires that crane engines utilize fuel that meets the requirements of 40 CFR part 80.510(b) (40 CFR part 60.4207(b)). In particular, Condition 6.4 of the permit limits the sulfur fuel content to 15 ppm (ultra low sulfur diesel), which has a cetane index of 40, and is therefore in compliance with the provisions of subpart IIII and 40 CFR part 80.51(b).

The EPA will update the OCS permit through a minor permit amendment to reflect the equipment change and increased offset requirement. The original permit already contained conditions for the newer Caterpillar 3406 engines, as well as an offset requirement due to the technical exemption granted for identical engines in November 2011. Hence, no significant changes to the permit or new monitoring requirements are required. In addition, this change does not trigger any new applicable requirements nor result in an increase in emissions.

Opportunity for Public Comment

As provided in 40 CFR § 55.7, the EPA is seeking public comment on the preliminary determination to grant exemption to Eni during the public comment period as specified in the public notice.

Any interested person may submit written comments on the preliminary determination during the public comment period. If you believe any part of the preliminary determination is inappropriate, you must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting your position by the end of the comment period. Any documents supporting your comments must be included in full and may not be incorporated by reference unless they are already part of the record for this action or consist of state or federal statutes or regulations, the EPA documents of general applicability, or other generally available referenced materials.

Comments should focus on the preliminary determination and the air quality aspects of the project. The objective of the OCS air quality program is to prevent significant adverse environmental impact from air emissions by a new or modified OCS source. If you have more general concerns regarding non-air quality impacts, such as offshore leasing, drilling safety, discharge, etc., these should be addressed

during the leasing and permitting proceedings of BOEM, which is the lead permitting agency for this project.

All timely comments will be considered in making the final decision, included in the record, and responded to by the EPA. The EPA may group similar comments together in our response, and will not respond to individual commenters directly.

All comments on the preliminary determination must be received by email or postmarked by April 23, 2012. An extension of the 30-day comment period may be granted if the request for an extension adequately demonstrates why additional time is required to prepare comments. Comments must be sent or delivered in writing to the address below. All comments will be included in the public docket without change and may be made available to the public, including any personal information provided, unless the comment includes Confidential Business Information or other information in which disclosure is restricted by statute. Information that you consider Confidential Business Information or otherwise protected should be clearly identified as such and should not be submitted through email. If you send email directly to the EPA, your email address will be captured automatically and included as part of the public comment. Please note that an email or postal address must be provided with your comments if you wish to receive direct notification of the EPA's final decision and the EPA's response to comments submitted during the public comment period. For questions on the preliminary determination, please contact: Ms. Eva Land at 404-562-9103 or land.eva@epa.gov.

Submit comments on the preliminary determination to:

EPA Region 4, APTMD
61 Forsyth Street, SW
Atlanta, GA 30303
Attn: Eva Land

Fax: (404) 562-9019
Email: R4OCSpermits@epa.gov

Administrative Record

The administrative record contains the application, supplemental information submitted by Eni, and correspondence, including emails, between Eni and the EPA clarifying various aspects of Eni's application. The administrative record is available to the public on the EPA's website at:

<http://www.epa.gov/region4/air/permits/ocspermits/ocspermits.html>.

Free internet access is available at your local public library. The administrative record is available for public review at the EPA Region 4 office at the addresses listed below. Please call in advance for available viewing times.

EPA Region 4 Office
61 Forsyth Street, SW
Atlanta, GA 30303
Phone: (404) 562-9103

To request a copy of the preliminary determination, or notice of the final action, please contact: Ms. Rosa Yarbrough, Permit Support Specialist at: 404-562-9643, or R4OCSpermits@epa.gov.

Final Determination

A decision to issue or deny the exemption shall be made after all comments have been considered. Notice of the final decision shall be sent to each person who has submitted written comments or requested notice of the final decision, provided the EPA has adequate contact information.