

ICS 13.060.30  
CCS Z61



**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB 4914-2008**

Replacing GB 4914-1985

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**Effluent limitations for pollutants from offshore petroleum  
exploration and production**

海洋石油勘探开发污染物排放浓度限值

**Issued on: October 19, 2008**

**Implemented on: May 1, 2009**

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**Issued by: General Administration of Quality Supervision, Inspection and  
Quarantine of the People's Republic of China;  
Standardization Administration of China**

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### Foreword

The standard of Chapters 4 and 5 are mandatory, the rest are recommended. This standard replaces GB 4914-1985 "offshore petroleum development industry oily wastewater discharge standards." This standard and GB 4914-1985 phase Than the main changes are as follows:

- Redefined the sea level (see Chapter 4);
- Redefined the emission concentration limits for produced water contaminants (see Chapter 5);
- Increasing the drilling fluid and cuttings emission concentration limits specified pollutants (see Chapter 5);
- Increased provision requirements for offshore oil exploration and development of emissions generated in sewage and solid waste/concentration limit (see Chapter 5);
- Increase the informative Appendix A "Extraction - Determination of the weight of the material can be extracted with n-hexane (HEM; Oil) and silica gel can be adsorbed Substance is extracted with n-hexane (SGT-HEM; Non-polar substances) "(see Appendix A), cited in Appendix A Part EPA USEPA1664A standard of technical content;
- Increase the informative Appendix B "water-based and water-based drilling mud cuttings analysis of oil content" (see Appendix B). Appendix A of this standard and Appendix B is an informative annex. This standard was proposed by the State Oceanic Administration. This standard by the National Standardization Technical Commission for Oceanography (SAC/TC283) centralized. This standard was drafted. the National Marine Environmental

Monitoring Center. The main drafters of this standard. Wangju Ying, Xu Lina, Han Geng Chen, ZHANG Zhi-feng, Zhaoyun Ying, Chen Chang Shu, Han Jianbo, Li Jun. This standard replaces the standards previously issued as follows:

--- GB 4914-1985. Offshore Oil Exploration Development of pollutant emission concentration limits

## 1 Scope

GB 4914-2008 is the Chinese national standard on effluent limitations for pollutants from offshore petroleum exploration and production, in the field of environment and health protection, safety. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 19 October 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 May 2009.

Classification: ICS 13.060.30, CCS Z61. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the direct discharge of pollutants into the sea offshore oil exploration and development activities in the emissions concentrations in different sea areas Limit. This standard applies to waters, territorial sea and other waters within the jurisdiction of our country, to any legal person engaged in the exploration and development of petroleum and natural and other Direct discharge of the economic entity is used or generated in the job into the sea of produced water, drilling fluids, drill cuttings and other pollutants emissions management.

## 2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB 8978 Integrated Wastewater Discharge Standard

GB/T 11914 Water quality Determination of chemical oxygen demand dichromate method

GB/T 16782-1997 oil-based drilling fluids field testing program

GB/T 16783.1-2006 oil and natural gas industries - Field testing of drilling fluids - Part 1. Water-based drilling fluids

GB 18486 wastewater ocean disposal pollution control standards

GB 17378.2 specification for marine monitoring Part 2. Data processing and quality control analysis

GB 17378.3 specification for marine monitoring Part 3. Sample collection, storage and transportation

GB 17378.4 specification for marine monitoring Part 4. Seawater Analysis

GB 17378.7 specification for marine monitoring Part 7. Ecological survey of offshore pollution and biological monitoring

GB/T 17923-1999 offshore petroleum development industry oily wastewater analysis

GB 18420.1-2001 offshore oil exploration and exploitation of biological contaminants toxicity grading

GB/T 18420.2 offshore oil exploration and exploitation of biological contaminants toxicity test method  
SN/T 1325.1-2003 Determination of cold atoms and export barite content of mercury absorption spectrometry Atomic  
SN/T 1325.2-2003 Importers barite cadmium absorption spectrometry

### 3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 Discharged into the sea after the offshore oil exploration and exploitation and use or generate any substance that may affect the marine environment.

Note 1. The offshore oil exploration and development activities include the development of pollutants discharged directly into the sea generated pollutants into the atmosphere and associated gas.

Note 2. rewrite GB 18420.1-2001, Definition 3.1.

3.2 Drilling mud drillingmuds Of water or oil, clay, chemical processing agents and some of the inert material composition used to lubricate and cool the drill in petroleum exploration and development drilling Head, carry cuttings, balance the formation pressure and stabilize the wall and so on.

Note 1. The water-based drilling fluids and drilling fluid into non-water-based drilling fluids.

Note 2. rewrite GB 18420.1-2001, definitions 3.3.

3.2.1 Formulated by the water, clay and chemical treatment agent from the water as the continuous phase of the drilling fluid. NOTE. rewrite GB 18420.1-2001, the definition of 3.4.1.

3.2.2 Configured by crude oil, diesel oil, mineral oil or synthetic substances, and chemical

treatment agent from clay, not with water as the continuous phase of drilling Well fluid.

Note. Non-water-based drilling fluids including oil-based drilling fluids and synthetic-based drilling fluids.

3.2.2.1 In all types of oil (including crude oil, diesel and mineral oil) drilling fluid continuous phase. NOTE. rewrite GB 18420.1-2001, the definition of 3.4.2.

3.2.2.2 Synthetic drilling fluid as the continuous phase.

3.3 The formation during drilling drill grinding, crushing after cutting by the drilling fluid from the well to the ground with rock fragments.

Note 1. The drill cuttings into a water-based drilling fluids and drill cuttings non-water-based drilling cuttings.

## 5 Analysis of pollution features No. factor analysis method reference standard

1 oil in produced water

(1) infrared spectrophotometry (1) GB/T 17923-1999 (2) Extraction - Gravimetric method (2) See Appendix A Produced water, drilling fluids and drill cuttings toxicity Permissible value Biological toxicity test method GB/T 18420.2 3 oil content of water-based drilling fluids (1) distillation (1) GB/T 16783.1-2006 (2) infrared spectrophotometry (2) See Appendix B 4 water-based drilling fluid oil content of drill cuttings (1) distillation (1) GB/T 16783.1-2006 (2) infrared spectrophotometry (2) See Appendix B 5 non-water-based drilling cuttings oil content of distillation GB/T 16782-1997 Appendix B Cabin, engine room and deck of oily wastewater Petro (1) infrared spectrophotometry (1) GB/T 17923-1999 (2) UV spectrophotometry (2) GB 17378.4 7 levels of mercury in barite by cold vapor atomic absorption spectrometric method SN/T 1325.1-2003 8 barite content of cadmium by atomic absorption spectrometry SN/T 1325.2-2003

9 Sewage COD potassium dichromate method GB/T 11914 10 production of garbage visually -

### 6.1.1 Collect samples

6.1.1.1 number of samples It should be based on the method used, collecting enough samples three times the amount of duplicate tests.

6.1.1.2 sampling locations Various types of offshore oil exploration and development of pollutants sampling locations determined according to the following requirements.

--- Produced water at the discharge of produced water sampling port;

--- Drilling through shale shaker after the separation of drilling fluid discharges or pool