



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

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Emission standard of pollutants for petroleum refining industry

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Foreword

In order to implement "Environmental Protection Law of the People's Republic of China", "Water Pollution Prevention Law of the People's Republic of China", "Air Pollution Prevention Law of the People's Republic of China" and other laws and regulations; to protect environment; to prevent pollution; and to promote technical progress and sustainable development of petroleum refining industry, this Standard is formulated.

This Standard specifies water pollutants, air pollutant discharge limits, monitoring and supervision management requirements OF petroleum refining industrial enterprises and the production facilities.

Odorous pollutants discharged and environmental noise of petroleum refining industrial enterprises shall follow relevant pollutant discharge standards; identification, treatment and disposal of generated solid wastes shall follow relevant solid waste pollutant control standards. Supporting power boiler shall follow "Emission Standard of Air Pollutants for Boiler" or "Emission Standard of Air Pollutants for Thermal Power Plants".

This Standard is issued for the first time.

Water pollutants and air pollutants emission control shall be based on this Standard - for new facilities, it is implemented from July 1, 2015; for existing facilities, it is implemented from July 1, 2017. The relevant provisions in "Integrated Wastewater Discharge Standard" (GB8978-1996), "Comprehensive Emission Standard of Air Pollutants" (GB16297-1996), and "Standard of Smoke and Dust Emission for Industrial Kiln and Furnace" (GB9078-1996) shall not be implemented. Various regions may implement this Standard earlier than above dates, according to the demand of local environmental protection and economic and technical conditions, and approved by the People's Government at the provincial level.

This Standard is the basic requirements for emission control over water pollutants and air pollutants for petroleum refining industry. For the items that are not required by local provincial people's government, local pollutant emission standards may be developed; for items that have already been specified in this Standard, local pollutant emission standards may develop more stringent requirements than this Standard. If the requirements of environmental impact assessment document or sewage discharge license/permit are more stringent than this Standard or local standard, then implement in accordance with officially replied-approved environment impact assessment document or sewage discharge license/permit.

This Standard is organized and formulated by the Department of Science, Technology and Standards of the Ministry of Environmental Protection.

Drafting organizations of this Standard. Fushun Research Institute Of Petroleum and Petrochemicals, and Chinese Research Academy of Environmental Sciences.

This Standard was approved by the Ministry of Environmental Protection on April 3, 2015.

This Standard shall be implemented from July 1, 2015.

This Standard shall be interpreted by the Ministry of Environmental Protection.

Emission standard of pollutants for petroleum refining industry

1 Scope of application

This Standard specifies emission limits, monitoring and supervision management requirements of water pollutants and air pollutants for petroleum refining industrial enterprises and the production facilities.

This Standard is applicable to emission management of existing pollutants for petroleum refining industrial enterprises or production facilities; it is also applicable to petroleum refining industry's construction projects' environmental impact assessment, environmental protection facility design, completion-acceptance inspection of environmental protection, and water pollutants and air pollutants emission management after being put into operation.

Gasoline storage tank at petroleum refining industrial enterprises and oil gas emission control during oil delivery process shall be implemented in accordance with provisions of this Standard; the relevant provisions of GB 20950-2007 shall not be implemented.

This Standard applies to those behaviors of pollutant emissions that are legally permitted.

For site selection of new pollution sources and management of existing pollution sources within special protection areas, it shall follow "Water Pollution Prevention Law of the People's Republic of China", "Air Pollution Protection Law of the People's Republic of China", "Marine Environmental Protection Law of the People's Republic of China", "Solid Waste Pollution Prevention law of the People's Republic of China", "Environmental Impact

Assessment Law of the People's Republic of China", and other laws, regulations and relevant provisions.

2 Normative references

The articles contained in the following documents have become part of this Standard when they are quoted herein. For the dated documents so quoted, the latest editions shall be applicable to this Standard.

GB 20950 - 2007 Emission standard of air pollutant for bulk gasoline terminals

GB/T 6920 Water quality - Determination of pH value - Glass electrode method

GB/T 7469 Water quality - Determination of total mercury potassium

GB/T 7470 Water quality - Determination of lead - Spectrophotometric method with dithizone

GB/T 7475 Water quality - Determination of copper, zinc, lead and cadmium - Atomic absorption spectrometry

GB/T 7485 Water quality - Determination of total arsenic - Silver diethyldithiocarbamate spectrophotometric method

GB/T 8017 Standard test method for vapor pressure of petroleum products (Reid Method)

GB/T 11890 Water quality - Determination of benzene and its analogies gas chromatographic method

3 Terms and definitions

For the purpose of this Standard, the following terms and definitions apply.

3.1 Petroleum refining industry

The industry that produces gasoline fractions, diesel oil fractions, fuel oil, lubricating oil, petroleum wax, petroleum asphalt and petrochemical materials based on raw materials of crude oil, heavy oil, etc.

3.4 Polluted rainwater

The rainwater of surface runoff in petroleum refining industrial enterprises or production facility area, of which the pollutant concentration is higher than the direct emission limits as specified in this Standard.

3.5 Alkaline wastewater

The wastewater that is generated during alkali refining of oils and gas products in

petroleum refining industry and desulfurization amine liquid regeneration process.

3.6 Sour water

The wastewater, generated during petroleum refining industrial processes, that contains sulfur ≥ 50 mg/L and ammonia nitrogen ≥ 100 mg/L.

3.7 Aromatic hydrocarbon wastewater

The wastewater that is discharged by production equipment, after direct contact with material during aromatic hydrocarbons (benzene, toluene, xylene, styrene) production process.

3.10 Effluent volume of per ton crude oil

The ratio OF the volume of wastewater that is discharged to environment TO the processing volume of crude oil, during production process of petroleum refining enterprises, in a certain measurement time. Processing volume of crude oil includes the volume of crude oil for primary processing and directly for secondary processing.

3.12 Direct discharge

The behavior that pollutant discharging organizations directly drain water pollutants to environmental waters.

3.13 Indirect discharge

The behavior that pollutant discharging organizations drain water pollutants to public sewage treatment system.

3.14 Volatile organic compounds

Organic compounds that involve in atmospheric photochemical reactions, or organic compounds measured or checked according to a predetermined method.

3.15 Non-methane hydrocarbon

A generic term (counted in carbon) of hydrocarbons, except methane, adopting a prescribed monitoring method, to which the detector has a significant response. This Standard uses "non-methane hydrocarbon (NMHC)" as an integrated control indicator for emission of volatile organic compounds in exhaust and at enterprise boundary.

3.26 Existing facility

Oil refining industry enterprises or production facilities that have been constructed and put into operation before the implementation date of this Standard or of which the