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

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**Self-monitoring technology guidelines for pollution sources.
Petroleum refining industry**

排污单位自行监测技术指南 石油炼制工业

(English Translation)

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Foreword

To implement the "Law of the People's Republic of China on Environmental Protection," "Water Pollution Prevention and Control Law of the People's Republic of China" and the Law of the People's Republic of China on Prevention and Control of Atmospheric Pollution "to guide and regulate the self-monitoring work by the oil refining industrial sewage units and formulate this standard.

This standard proposes the general requirements for self-monitoring by the oil refinery industrial effluent units, the development of monitoring plans, information recording and the basic content and requirements of the report.

This standard is released for the first time.

This standard by the Environmental Protection Department of Environmental Monitoring Division, Science and Technology Standards Division proposed and organized.

This standard is mainly drafted by. China Environmental Monitoring Station, China Petroleum Group Safety and Environmental Protection Technology Research Institute, Hebei Province Environmental Monitoring Center Station, PetroChina Dushanzi Petrochemical Company Environmental Monitoring Center, PetroChina Natural Gas Co., Ltd. Liaoyang Petrochemical Branch Environmental Monitoring Station.

This standard MEP approved on December 21, 2017.

This standard since January 01, 2018 into effect.

This standard is interpreted by the MEP.

Sewage Unit Self-Monitoring Technical Guide Petroleum Refining Industry

1 Scope of application

This standard proposes the general requirements for self-monitoring by the oil refinery industrial effluent units, the development of monitoring plans, information recording and the basic content and requirements of the report.

This standard applies to the petroleum refining industry sewage units in the production and operation of the discharge of water and air pollutants, noise and the impact on the surrounding environment quality monitoring.

Sewage units own thermal power units (plants), self-supporting boiler requirements in accordance with the HJ 820 implementation.

2 Normative references

This standard references the following documents or the terms of them. For dated references, the effective version is valid Used for this standard.

GB 14554 Odor pollutant emission standards GB 18484 hazardous waste incineration pollution control standards GB 31570 petroleum refining industrial pollutant discharge standards HJ/T 55 Guidelines for Unorganized Emissions Monitoring of Air Pollutants HJ/T 91 Technical Specifications for Surface Water and Sewerage Monitoring HJ/T 164 Groundwater Environmental Monitoring Technical Specifications HJ/T 166 Soil Environmental Monitoring Technical Specifications HJ/T 194 Environmental Air Quality Manual Monitoring Technical Specifications HJ 442 Marine environment monitoring code HJ 664 Technical Specifications for Ambient Air Quality Monitoring Sites (Trial Implementation) HJ 733 Technical Guidelines for the Testing of Volatile Organic Compounds for Leakage and Open Surface Emissions HJ 819 Technical Guidelines for Self-Monitoring of Sewage Disposal Units General HJ 820 Self-Monitoring Technical Guidelines for Sewage Disposal Units Thermal Power Generation and Boilers "National List of Hazardous Wastes" (Ministry of Environmental Protection, National Development and Reform Commission, Ministry of Public Security Order No. 39)

3 Terms and definitions

GB 31570, HJ 819 and defined by the following terms and definitions apply to this standard.

Petroleum refining industry with crude oil, heavy oil as raw materials, the production of gasoline fractions, diesel fractions, fuel oil, lubricants, petroleum wax, oil Green and petrochemical raw materials and other industries.

Volatile organic compounds Refers to the atmospheric photochemical reactions of organic compounds, or according to the prescribed method of measurement or accounting to determine the organic compound Things. This standard uses non-methane total

hydrocarbons as a comprehensive control indicator of exhaust and volatile organic compounds at the enterprise boundary.

Hydrogenated crude oil hydrargyrate crude oil this standard specifically refers to the mercury content greater than 5 µg/g of crude oil.

4 Self-monitoring of the general requirements

Sewage units should check their own sources of pollution, pollutants and potential environmental impact indicators, the development of monitoring programs, set and maintain the monitoring facilities, carry out self-monitoring according to the monitoring plan, conduct quality assurance and quality control, record and save the monitoring Data, in accordance with the law to the public monitoring results.

5.1.1 Monitoring point

The pollutant discharging unit shall set the monitoring points at the total waste water discharge and the rainwater discharge. Workshop or production facilities wastewater discharge supervision Set the measuring point in accordance with the provisions of Table 1.

5.1.2 Monitoring indicators and frequency

Wastewater discharge monitoring indicators and the minimum monitoring frequency according to Table 1 implementation.

Table 1 Wastewater discharge monitoring indicators minimum monitoring frequency

Monitoring point	Monitoring indicators	Monitoring frequency	Direct emissions	indirect emissions
Total discharge of waste water	Flow, COD, ammonia nitrogen	automatic monitoring	week	Petroleum, pH, suspended solids, total nitrogen, total Phosphorus, sulfide, volatile phenol
Zhou Yue on the 5th	biochemical oxygen demand, total organic carbon, total vanadium, Benzene, toluene, o-xylene, m-xylene, para Xylene, ethylbenzene, total cyanide	Rose quarter	Delayed coking unit cold coke water, cut coke water effluent discharge	Benzo (a) pyrene
six months	a Atmospheric and vacuum distillation unit electric desalination wastewater discharge port b Total mercury	months	Alkyl mercury	six months
a	Acidic water stripping device Wastewater discharge port Total arsenic	month	FCCU flue gas desulfurization wastewater discharge port Catalytic gasoline adsorption desulfurization device flue gas desulfurization wastewater discharge port Total nickel	month
Aviation gasoline reconcile workshop wastewater discharge	Tetraethyl lead production plant wastewater discharge port Total lead	month	Rainwater discharge	pH, COD, ammonia nitrogen, petroleum, Suspended matter
Day	c			

Note 1: The environmental protection department at the municipal level or above designated by the district explicitly requires that the indicators of pollutants for the automatic monitoring equipment be installed and automatically monitored.

Note 2: Monitoring the concentration of pollutants should be monitored simultaneously flow.

Note: a2020 on January 1 from the monthly implementation.

b for the processing of mercury-containing crude oil situation.

c Monitor emissions by day.

5.2.1.1 Monitoring points

Exhaust gas discharged through the exhaust pipe to the external environment, etc., should be set in the flue monitoring points; the same monitoring indicators, multiple Exhaust gas mixture should be in the exhaust after the confluence of the common flue or respectively set in each flue monitoring points; there is a bypass of the bypass flue should also set the monitoring point; organic waste gas recovery treatment unit should be set at the inlet and exhaust emissions Measuring point.

5.2.1.2 Monitoring indicators and frequency

Organized emissions monitoring indicators and the minimum monitoring frequency according to Table 2 implementation.

Table 2 Minimum Monitoring Frequency of Organized Exhaust Gas Monitoring Indicators

Monitoring point monitoring indicators monitoring frequency Technology furnace exhaust tube (single rated power $\geq 14\text{MW}$) Nitroxide automatic monitoring Sulfur dioxide, particulate matter Quarterly (month a) Process Furnace Exhaust Gas Cylinder (Single Nominal Power 6 Information Recording and Reporting

6.1.1 Monitoring information record

Manual monitoring records and automatic monitoring of operation and maintenance records in accordance with HJ 819 implementation.

6.1.2.1 Production facilities operating conditions

a) main facility

Record the operating status and production load of each unit of each main production unit in normal working conditions by frequency and record each unit the amount of raw materials, the amount of excipients, the output of the main product, the yield of by-products, the water withdrawal (fresh water), the discharge of waste water, the fuel consumption Consumption, sulfur content of fuel, sulfur content of raw materials and various metal content, operating time and other parameters. Catalytic cracking unit also should record the main components of the new catalyst and the amount of waste catalyst emissions, catalyst recycling and so on.