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

HJ 610-2016

Replacing HJ 610-2011

**Technical guidelines for environmental impact assessment.
Groundwater environment**

环境影响评价技术导则 地下水环境

(English Translation)

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Foreword

In order to implement the Law of the People's Republic of China on Environmental Protection, the Law of the People's Republic of China on the Prevention and Control of Water Pollution and the People's Republic of China Republic of Environmental Impact Assessment Law "to regulate and guide the work of groundwater environmental impact assessment, to protect the environment, to prevent groundwater pollution Dyeing, the development of this standard.

This standard specifies the general principles, contents, working procedures, methods and requirements of groundwater environmental impact assessment.

This standard was first released in 2011, this time for the first revision. The main contents of this revision are as follows.

- to adjust, supplement and standardize the relevant terms and definitions;
- Adjust the groundwater flow and groundwater level as the investigation content;
- adjust the groundwater environmental impact assessment work grade grading decision basis;
- the method of determining the scope of investigation of the present situation of groundwater environment;
- modified to simplify the monitoring requirements for groundwater environment status;
- to strengthen and clarify the groundwater environmental protection measures and countermeasures related requirements;
- the request for the preparation of the thematic documentation on the assessment of the environmental impact assessment of groundwater;
- Increased conclusions on the conclusions of the groundwater environmental impact assessment;

- revised appendix to Appendix A, "Groundwater Environmental Impact Assessment Industry Classification".

As of the date of implementation, the "Environmental Impact Assessment Technical Guidelines for Groundwater Environment" (HJ 610-2011) has been abolished.

Appendix A to this standard is a normative appendix, Appendix B, Appendix C, Appendix D is an informative appendix.

This standard is proposed by the Environmental Impact Assessment Division of the Ministry of Environmental Protection.

This standard is organized by the Ministry of Environmental Protection Science and Technology Standards Division.

The main drafting of this standard. Environmental Engineering Assessment Center for Environmental Protection.

The environmental protection department of this standard approved on January 7, 2016.

This standard has been implemented since January 7, 2016.

This standard is explained by the Ministry of Environmental Protection.

Environmental Impact Assessment Technical Guidelines Groundwater Environment

1 Scope of application

This standard sets out the general principles, working procedures, contents, methods and requirements of groundwater environmental impact assessment.

This standard applies to environmental impact assessment of construction projects that may have an impact on the groundwater environment.

The environmental impact assessment of groundwater in planning environmental impact assessment can be carried out according to the implementation.

2 Normative reference documents

The contents of this standard refer to the terms of the following documents. For those who do not specify a date, the valid version applies to this standard.

GB 3838 Surface Water Environmental Quality Standard Standard for hygiene of drinking water GB/T 14848 Groundwater Quality Standard Standard for Pollution Control of Domestic Refuse Landfill Standard for Hazardous Waste Storage Pollution Control Standard for pollution control of hazardous waste landfills Standard for Pollution Control of Storage and Disposal Site for General Industrial Solid Waste Code for Hydrogeological Investigation of Water Supply Code for construction and acceptance of water supply and

drainage structures GB 50141 Code for construction and acceptance of water supply and sewerage in GB 50268 Technical code for seepage prevention of petrochemical engineering GB/T HJ 2.1 Technical Guidelines for Environmental Impact Assessment HJ/T 2.3 Technical Guidelines for Environmental Impact Assessment Ground Water Environment HJ 25.1 Technical Guidelines for Site Survey Technical Guidelines for Site Environmental Monitoring Technical specification for groundwater environmental monitoring Technical specification for division of drinking water source protection area DZ/T 0290 Groundwater Quality Standard "Construction Project Environmental Impact Assessment Classification Management List" (Ministry of Environmental Protection Order No. 33)

3 Terms and definitions

The following terms and definitions apply to this standard.

Groundwater

The gravity water in the saturated aquifer below the ground.

Hydrogeological condition Groundwater burial and distribution, aqueous media and aquifer structures.

Air zone with vadose zone Between the ground and the groundwater surface with the atmosphere, containing gas zone.

Saturated zone

Underneath the groundwater, the voids of the formation are filled with water.

Diving phreatic water Below the ground, the first stable aquifer above the free surface of the groundwater.

Confined water

Filled with groundwater with pressure on the upper and lower diametrically opposed layers.

Groundwater recharge zone an area in which aquifers are exposed or close to the surface for infiltration of atmospheric precipitation and surface water.

Groundwater discharge zone the range of groundwater from the aquifer to the outside.

Groundwater runoff zone Aquifer groundwater from the supply area to the discharge area of the flow through.

3.10

Centralized drinking water source Into the water supply pipe network to the user and has a certain water supply scale (water supply population is generally not less than 1000 people)
Spare and planned groundwater drinking water sources.

3.11

Distributed drinking water source Water supply is less than a certain size (water supply population is generally less than 1000 people) of groundwater drinking water source.

3.12

The present value of the groundwater environment Monitoring of Groundwater Environmental Quality before Construction Project.

3.13

Control value of groundwater pollution control value of groundwater pollution Investigation and evaluation of the historical data of the groundwater quality indicators, or evaluation of the area by the impact of human activities Small groundwater quality indicators.

3.14

Groundwater pollution Man-made reasons directly lead to groundwater chemistry, physical and biological properties change, so that the phenomenon of deterioration of groundwater quality.

3.15

Normal condition

Construction process equipment and groundwater environmental protection measures are to meet the design requirements of the operating conditions. Such as seepage the system's anti-seepage capacity to achieve the design requirements, impermeable system intact, acceptance qualified.

3.16

Abnormal condition

Construction process equipment or groundwater environmental protection measures due to system aging, corrosion and other reasons can not run properly or Maintenance effect can not meet the design requirements of the operation.

3.17

Groundwater environmental protection target protected target of groundwater environment Diving aquifers and aquifers that may be affected by construction projects and have the value of drinking water development and utilization, centralized drinking water Water and decentralized drinking water sources, as well as the "Construction Project Environmental Impact Assessment Classification Management" Groundwater sensitive areas.

4.1 General principles

Assessment of Groundwater Environmental Impacts The construction project may be constructed of groundwater quality during construction, operation and service expiration