

Environment and Social Compliance Audit Report

Project Number: 50273-001

No. 3 Water Plant Construction Project (Phase I) of Henan Luyi Yinlong Water Supply Co., Ltd.
May 2021

People's Republic of China: Integrated Urban Water Management Project

Prepared by China Water Affairs Group Limited for Asian Development Bank.

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No.3 Water Plant Construction Project (Phase I) of Henan Luyi Yinlong
Water Supply Co., Ltd.

Environmental and Social Security Assurance Compliance Audit

China Water Affairs Group Limited

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I . Introduction

A. Introduction to project

i. Project company

As a wholly-owned subsidiary of China Water Affairs Group Limited, Henan Luyi Yinlong Water Supply Co., Ltd. was incorporated on December 10, 2004, and is exclusively responsible for the water supply business in Luyi County, Henan Province. Lying in the southeast of Henan province (see Figure 1 for specific location), Luyi County is 279 km away from Zhengzhou, the capital of Henan Province. It is in the middle reaches of Guohe River which runs through the Huanghuai Plain. Luyi County is a county directly under the jurisdiction of Henan Province, and managed by Zhoukou City, with a total area of 1,238 km² and a total population of 1.18 million.

Currently, Henan Luyi Yinlong Water Supply Co., Ltd. manages 2 water plants in urban area, namely No. 1 Water Plant and No. 2 Water Plant, with a total combined capacity of 40,000 m³/d with necessary extraction permits . Additionally, in villages and towns, there are 21 water plants with a total capacity of 80,000 m³/d. All water is from groundwater sources (both Plant #1 - 4wells; Plant #2 - 8 wells will be closed down in phases as new plant kicked in). See Table 1 for details.



Figure 1

Table 1 Water plants conditions of Henan Luyi Yinlong Water Supply Co., Ltd.

Water plant	Water supply capacity (10,000 m ³ /d)	Water source	Water supply area
No. 1 Water Plant	1	Deep groundwater	Urban area of Luyi County
No. 2 Water Plant	3	Deep groundwater	Urban area of Luyi County
21 water plants in villages and towns	8	Deep groundwater	Villages and towns of Luyi County

ii. Project background

In recent years, with the rapid development of Luyi County, large quantities of urban infrastructure and industrial projects have been or are about to be constructed. With respect to the construction and operation of those projects, favorable water supply conditions and better water supply facilities are required. However, the current urban water supply conditions tend to be incompatible with the development trend of Luyi County and the construction of a new modern city, restricting the social and economic development of the new city to a large extent. Therefore, it is necessary to build a new water plant, i.e., No. 3 Water Plant project which will be undertaken by Henan Luyi Yinlong Water Supply Co., Ltd., aiming to increase the water supply and meet the requirements for stable development of local economy.

iii. General construction conditions of project

The phase I of the No. 3 Water Plant construction project will be conducted by Luyi Yinlong Water Supply Co., Ltd. in Wangdagua Administrative Village which is located on the south side of Binhe Jingguan Road and the east side of Xiyinbin Avenue at the south bank of Guohe River in Luyi County. Covering an area of 80 mu (see Figure 2 for specific location) and with a total investment of 179 million CNY, the phase I project can supply 50,000 m³ water per day. For the main equipment and facilities of this project, see Table 2. Phase I with 50,000m³/day capacity will use surface water from the Yangtze River to Huaihe River Diversion Project as raw water. The Yangtze River to Huaihe River Diversion Project is expected to commence the same time as the No.3 Water Plant Phase I construction project, so that extraction of underground water will be no longer needed.



Figure 2

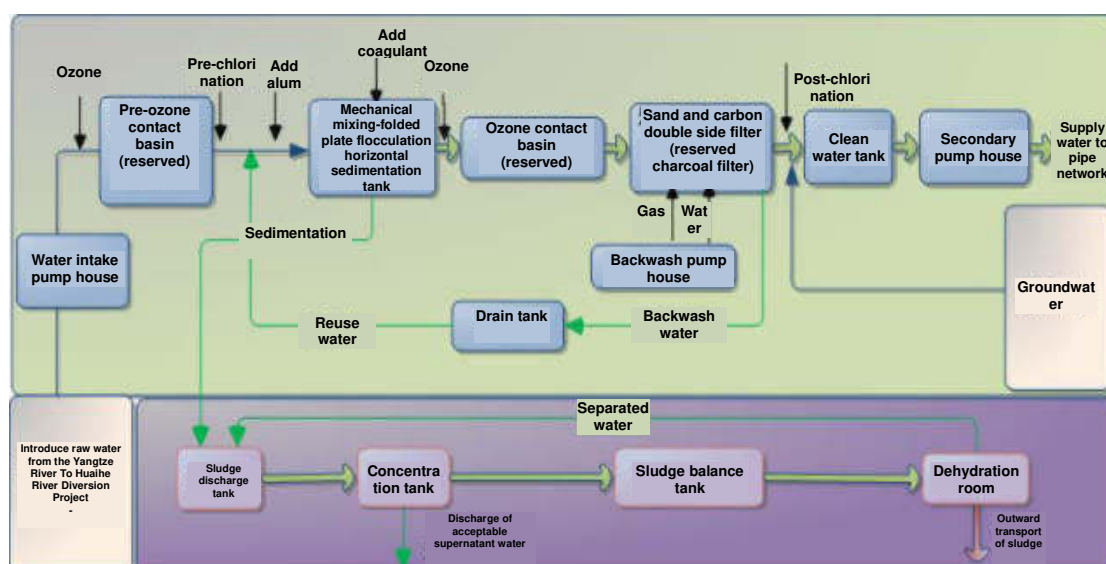
Table 2 Main equipment and facilities

Name of equipment and facilities	Quantity	Specification
Horizontal double suction centrifugal pump (for water supply)	2 sets	Q=730 m ³ /h, H=35 m, N=110 kw
Horizontal double-suction centrifugal pump (water supply)	2 sets	Q=1,450 m ³ /h, H=35 m, N=200 kw
Backwash centrifugal pump	3 sets	2 in service and 1 standby, Q=390 m ³ /h, H=8 m, N=45 kw
Backwash blower	2 sets	1 in service and 1 standby, Q=2,510m ³ /h, H=5 m, N=75 kw
Air compressor	2 sets	1 in service and 1 standby, with a set of gas storage tank, dryer, etc.
Siphon suction dredge equipment	2 sets	Lk=7.58 m, N=1.1 kw
Blender	2 sets	N=4.5 kw

Ultra high pressure elastic press	2 sets	Filter area 200 m ²
PAM preparation device	1 set	Preparation capacity 2 kg/h

This project aims to construct a water purification plant (excluding pipe network), which involves pretreatment facilities, conventional treatment facilities, advanced treatment facilities (space reserved for Phase II equipments), sludge treatment facilities, as well as power distribution systems, automatic control instrument systems, and general floor layout of water plant, etc. This project takes the groundwater meeting the requirements of CAT III in the *Standard for Groundwater Quality* (GB/T14848-2017) (see Attachment 1 for the source water test report) as water source, which can be used as centralized drinking water.

Project process:



Project progress:

The project commenced in March 2020 after a series of preliminary preparations had been completed, including project filing, feasibility study, construction drawing design, land transfer, land certificate processing, construction bidding, contract signing, etc. The civil construction of the structures and buildings in the water purification plant has been completed by 55% of the total workload of the project. (As of the time of submission of this report, 70% of project has been accomplished). The plant is expected to be put into operation in end 2021 or early 2022 (see Figure 3 for the project design renderings).



Figure 3

B. Objective and scope of report

i. Objective

Identify key issues involved in the project such as the environment, involuntary resettlement, and indigenous peoples in the area of influence, determine whether the production and operation activities of the project comply with the *Safeguard Policy Statement of ADB* (2009), and propose corrective action plans for the production and operation activities that do not comply with the *Safeguard Policy Statement of ADB* (2009). This is being prepared as a requirement of the CWA ESMS.

ii. Scope

No.3 Water Plant Construction Project (Phase I) Constructed by Henan Luyi Yinlong Water Supply Co., Ltd.

C. Method

Based on the practical situations, the audit of the project will be conducted with a variety of methods, including:

1. On-site verification. China Water Affairs Group Limited has established an expert group composed of 7 internal and external members dealing with engineering technologies,

environmental assessment, operation and management, etc., and it has conducted a comprehensive inspection of the project site.

2. Data review. The expert group reviews the project data, including the project feasibility study report, environmental impact report form, documents of local government on land acquisition, demolition and resettlement, and related contract agreements, where data is not available or assessment is incomplete, updates will be provided to ADB through the annual monitoring reports :

a. *Feasibility Study Report of No. 3 Water Plant Construction Project (Phase I) Conducted by Henan Luyi Yinlong Water Supply Co., Ltd.*, prepared by Shanghai Municipal Engineering Design Institute (Group) Co., Ltd. in January 2019;

b. *Environmental Impact Report Form of Construction Projects for the No. 3 Water Plant Construction Project (Phase I) Conducted by Henan Luyi Yinlong Water Supply Co., Ltd.*, prepared by Ningxia Zhonglan Zhenghua Environmental Technology Co., Ltd. in November 2019;

c. *Reply to Land Acquisition of the Fourth Batch of Urban-Rural Linkage Pilot Projects in Luyi County in 2018* issued by Henan Provincial People's Government in June 2019;

d. *Reply to Receiving the Right to Use State-owned Construction Land by Henan Luyi Yinlong Water Supply Co., Ltd.* issued by the Luyi County People's Government in October 2019;

e. *Opinions on Planning of No. 3 Water Plant Construction Project Conducted by Henan Luyi Yinlong Water Supply Co., Ltd.* issued by the Urban and Rural Planning Bureau of Luyi County in January 2019;

f. Documents, notices and report forms about the project issued by the local government.

3. Operational investigation. Meetings, seminars and other modes will be adopted to investigate the environmental impact of existing facilities in the production and operation process, the conditions of involuntary resettlement and indigenous peoples, and the measures to avoid potential impacts.

4. System review. The project documents and related systems issued by the project construction unit, survey unit, design unit, and supervision unit will be reviewed, focusing on the institutional arrangements for the environment, indigenous peoples, and other social impacts of all parties in the project construction process.

5. Soliciting opinions. The environmental and social impact of the project will be verified with local government and departments such as the Environmental Protection Agency, the Construction

Bureau, the Development and Reform Commission, the Ministry of Land and Resources, and Village Committees. All the necessary environmental permits for this Phase 1-No.3 Water Plant permits have been received, including Project Approval, environmental assessment related approval, construction land planning permission, land use right approval.

II. Audit results

A. Relevant information about assurance issues

i. Environment

1. Environmental assessment report of project. The No. 3 Water Plant Construction Project (Phase I) Conducted by Henan Luyi Yinlong Water Supply Co., Ltd. strictly complies with *the Environmental Protection Law of the People's Republic of China, the Environmental Protection Management Regulations for Construction Projects, the Law of the People's Republic of China on Evaluation of Environmental Effects* and other laws and regulations, and employs Ningxia Zhonglan Zhenghua Environmental Technology Co., Ltd. to conduct environmental assessment and issue a report.

2. Surroundings of the project. The No. 3 Water Plant is to be situated in Wangdagua Administrative Village which is located on the south side of Binhe Jingguan Road and the east side of Xiyinbin Avenue at the south bank of Guohe River in Luyi County (see Attachment 2 for the surroundings of the plant). At the north of the project is the Binhe Jingguan Road at the south bank of the Guohe River; the Zhang Monument (sensitive point) is 635 m to the northwest of the project; the highway is at the west of the project and the Wangdagua hamlet (sensitive point) is 18 m from the west of the project; the Songzhuang Village (sensitive point) is 616 m from the southwest of the project (616m is from the nearest sensitive receptor); at the south of the project is Xiaozhuang Road and vacant space; 145 m from the south of the project is Xiaozhuang (sensitive point); 230 m from the southeast is the Wangdagua Village (sensitive point); the east of the project is Shangren Road and vacant space; 365 m from the northeast of the project is Fengqiao Village (sensitive point).

3. Site selection of project. The siting of the No.3 Water Plant to be conducted by Henan Luyi Yinlong Water Supply Co., Ltd. was approved by the Urban and Rural Planning Bureau of Luyi County. According to the site survey, the site where the project is to be conducted is currently vacant, free from environmentally sensitive points such as scenic spots and historical sites, scenic tourist areas, and nature reserves. There are no original pollution and environmental problems.

4. Impact of project construction and operation on the environment and measures taken. The main

factors affecting the environment during the construction and operation of the project are wastewater, flying dust, noise, exhaust gas, solid waste, and sodium hypochlorite.

a. Wastewater: Construction wastewater and domestic wastewater generated by constructors are the main wastewater during the construction of the project (with no addition treatment volume undertaken for domestic wastewater). Both construction wastewater and domestic wastewater generated by constructors are discharged into the preset temporary sedimentation tank in the construction site. The supernatant water is used to wash vehicles and spray the road surface, and the sediment is regularly transported by surrounding farmers as farm manure. The wastewater generated during the operation period of the project is mainly the backwash water from the filter tank of the water purification plant and the sludge water in the sedimentation tank. The backwash water in the filter tank is directly reused at the front end of the production process; the sludge water in the sedimentation tank is discharged into the sludge treatment system, and the supernatant water in the concentration tank is collected through the sewage pipe system to the sewage treatment plant in the new district of Luyi County, where the sludge is dehydrated and disposed of properly.

b. Flying dust: Flying dust is directly generated during the excavation, site leveling, and construction materials transportation in the construction period. The amount of flying dust and the impact on the surroundings depend on the construction method and protective measures. Keep the construction site of the project clean and tidy. Spray water 1 to 2 times a day. The independent bare ground must be 100% covered. Set a 2 m high fence around the plant; strengthen construction management, and do not carry out dust-generating construction projects under strong winds. Fill and compact the foundation in the plant timely to reduce the exposure time of dust sources; strengthen transportation management, transport powder materials in a closed manner, remove dust by water spraying when loading and unloading, drive transport vehicles to enter the construction site at a speed limit, and reasonably plan the transportation route. After a series of measures are taken, the dust generated during the construction period will have a relatively small impact on the surrounding environment. No complaints about noises were received since the project started.

c. Noise: The noises generated during the construction period of the project are mainly from construction machinery and transport vehicles. To avoid the noises, the following prevention measures can be taken: (1) arrange the construction time reasonably, and strictly forbid construction at night (22:00 at night till 8:00 in the next morning); (2) carry out the construction layout reasonably, keep high-noise machinery away from residential areas and prevent

simultaneous construction of multiple high-noise machineries; These measures were actually considered during design and layout. (3) select high-efficiency and low-noise machinery and equipment, and pay attention to maintenance and correct use; (4) set up a 2 m high enclosure around the construction site which has already been implemented. After the above measures are taken, the noise generated during the construction period can meet the relevant requirements in the Emission Standard of Environmental Noise for Boundary of Construction Site (GB12523-2011), i.e., sound level is ≤ 70 dB(A) at daytime and ≤ 55 dB(A) at night. (test conducted from the nearest receptor and confirmed sound level is ≤ 70 dB(A) at daytime and ≤ 55 dB(A) at night.) The noise generated during the operation period of the project is mainly from the transmission machinery in the plant, including water pump, blower, dehydration equipment, etc. Those equipment is installed indoors, thus sound attenuation has been realized to a large extent by walls. In order to further reduce the impact on the environment, sound insulation and noise reduction measures are taken for the key equipment that can make noise, and at the same time, a large number of trees are planted around the plant to maintain landscaping and to form a noise isolation zone (plantation work start right after construction of plant completed.). After the above measures are taken, the noise generated during the operation period can meet the CAT II requirements in the Emission Standard for Industrial Enterprises Noise at Boundary (GB12348-2008), i.e., the sound level is ≤ 60 dB(A) at daytime and ≤ 50 dB(A) at night. No complaints about noises were received since the project started.

d. Exhaust gas: The exhaust gas generated during the operation period of the project is mainly cooking oil fume from the dining hall. The dining hall constructed in this project is of a small scale and equipped with oil fume purifier having a purification efficiency of not less than 90% (with no-one live on site). Through treatment by the oil fume purifier, the fume emission value is 0.143 mg/m^3 , and the emission concentration can meet the requirements in the local standard of Henan Province, i.e., *Emission Standard of Fume Pollutants from Catering Industry* (DB41 /1604-2018) (for small-scale dining hall, the maximum allowable emission concentration is 1.5 mg/m^3).

e. Solid waste: The solid waste generated during the construction period of the project is mainly the soil that is no longer used in excavation and filling and the domestic garbage of constructors. Only a small amount of soil is no longer used in this project, and all soil is used for land leveling. Therefore, there is no need to build a fixed slag yard. The domestic waste generated by constructors is collected in buckets or bags in a centralized manner and then transported to the urban garbage disposal station. The solid waste generated during the operation period of the project includes solid waste from production and domestic solid waste. The solid waste from production is mainly mud cake formed after sludge dehydration, with an annual output of about

900 t/a. Third-party mud collection contractor will be selected prior to construction. The frequency of collection would be depend on utilization rate of Phasel water plant.

Those waste is collected in a uniform manner and transported regularly. The domestic solid waste and the solid waste generated by employee are collected in a uniform manner and then transported to the sanitation department for treatment.

f. Sodium hypochlorite: Sodium hypochlorite is used as a kind of sanitizer during the operation period of the project. Sodium hypochlorite is included as a hazardous substance of environmental emergency in the *Technical Guidelines for Environmental Risk Assessment on Projects* (HJ/T169-2018). The maximum storage capacity of sodium hypochlorite in this project is 2.2 t, far from the maximum critical volume of 45 t, storage arrangements including OHS considerations, and emergency procedures in the event of accidental spills is included as usual practice,

and the environmental risk potential of sodium hypochlorite is I. Thus, a simple analysis is required for the environmental risk assessment. The potential environmental risk that may occur in this project is mainly the leakage of sodium hypochlorite. Therefore, the sodium hypochlorite risk prevention measures proposed in the *Environmental Impact Report Form of Construction Projects* must be strictly implemented. The environmental risk of this project is acceptable.

ii. Involuntary resettlement

1. Land use of the project. The water purification plant to be constructed in this project is situated in Wangdagua Administrative Village which is located on the south side of Binhe Jingguan Road and the east side of Xiyinbin Avenue at the south bank of Guohe River in Luyi County. It covers an area of 80 mu. The land on which the plant is to be constructed is a land used for utilities, and owned by the Department of Natural Resources of Luyi County. It was originally a state-owned construction land. On September 17, 2019, Henan Luyi Yinlong Water Supply Co., Ltd. won the bid for the land publicly transferred by Luyi County People's Government through online listing. On September 27, Henan Luyi Yinlong Water Supply Co., Ltd. signed the *Contract on Transferring the State-owned Construction Land Use Rights* (see Attachment 3) with the Natural Resources Bureau of Luyi County. The transfer price is 378 yuan/m², and the Land Use Certificate has been applied for (see Attachment 4). Before transfer, the land was vacant and covered with crops and trees planted by farmers in the surrounding villages. According to the *Approval of Henan Provincial People's Government on Land Acquisition of the Fourth Batch of Urban-Rural Linkage Pilot Projects in Luyi County in 2018* (see Attachment 5), the Luyi County

Government negotiated with the local villagers and implemented the compensation measures for land acquisition. The compensation measures for land acquisition have been completely implemented. For details, please refer to the *Land Compensation Certificate* and the *Confirmation Form for Implementation of Compensation with Regard to Demolition and Resettlement of Land No. 1y2019-86* (see Attachment 6). No appeal was received during the land acquisition process of the project.

2. Land use of pipeline works. Government will build pipeline providing surface raw water to the future No.3 Water Plant. According to our local ESMS team, the pipeline will be built within Right of Way along the main roads, thus should cause no land acquisition. As well, No.3 Water Plant will be merged with the city existing water distribution networks, thus no major pipeline construction anticipated except for some connection works and rehabilitation works that cause no land acquisition. ESMS team will keep monitoring pipeline construction process, and updating ADB ESMS experts in future monitoring reports.
3. Public participation. In the advancement of the No.3 Water Plant project, Henan Luyi Yinlong Water Supply Co., Ltd. timely announced the project information on the news media and online platforms, actively solicited opinions from all walks of life, properly coordinated the issues of temporary land use during the construction process, and ensured that the project was open and transparent.
4. Appeal mechanism. Henan Luyi Yinlong Water Supply Co., Ltd. established a project department for the No.3 Water Plant construction project, which receives the complaints from the persons and carries out coordination so as to protect the legal rights of the persons. At the same time, according to the relevant provisions of the *Civil Procedure Law of the People's Republic of China*, the affected persons can also sue through the Government Department of Letters and Calls or the People's Court at the same level to protect their legal rights. Since the construction of the first phase of the phase I project of No. 3 Water Plant, no complaints about involuntary resettlement have been received.

iii. Indigenous peoples

Within the range of construction and water supply of the No. 3 Water Plant Construction Project (Phase I) conducted by Henan Luyi Yinlong Water Supply Co., Ltd., there is no residential area for ethnic minorities, and no aboriginal issues occur.

B. Other social issues

i. Gender and development

1. Current water price in Luyi County. In Luyi County, the domestic water price for urban residents in 2019 was 2.1 yuan/m³, which means the per capita monthly water expenditure was 16 yuan provided the current per capita monthly domestic water consumption was 7.6 m³ in Luyi County. In 2019, the per capita monthly disposable income of urban residents in Luyi County was about 2,500 yuan, and monthly water expenses accounted for only 0.6%. Therefore, the water price adjustment had little impact on residents' living standards.

2. Preferential water price and preferential water gauge improvement fees for vulnerable groups. According to current regulations, water price adjustment was jointly coordinated by the local government, water supply enterprises and user representatives through a hearing, and the government made the final decision. Companies must take into account the living standards and affordability of vulnerable social groups, such as poverty groups, low-income groups, and female groups when raising the water price, and appropriate preferential measures shall be taken. The specific content and water price adjustments must be made known to public. In this regard, the water price adjustments will not have a significant impact on vulnerable groups. Henan Luyi Yinlong Water Supply Co., Ltd. is always a company having a strong sense of social responsibility. In terms of implementation of water prices, the water price for low-income families determined by the Ministry of Civil Affairs is the price adopted before the reform of ladder water price was implemented, i.e., 1.85 yuan/m³. The current water price will be implemented if the first-level water volume (10 m³) is exceeded. In terms of improvement of household water gauge, tap water is supplied to five types of rural households (households enjoying the minimum living guarantee, five guarantee households, disabled households, single-person elderly households, and households with seriously ill family members) free of charge to fully embody the care for the vulnerable social groups.

3. Improve user service and publicity work. In recent years, Henan Luyi Yinlong Water Supply Co., Ltd. has been actively creating the service brand "China Water · Care for Every Family ", greatly improving the service awareness and service level. The company implements external service commitment systems, opens a 24-hour customer service hotline, and regularly organizes public benefit activities such as serving the community and propaganda of water-saving knowledge to help users solve various problems. In addition, Luyi Yinlong Water Supply Co., Ltd. is also one of

the first batch of companies using the Fingertip Water application. The Fingertip Water application is a comprehensive water supply service app developed by China Water Affairs Group Limited, aiming to increase service dimensions, enrich user experience, and strengthen community support.

ii. Gender and employment issues

1. Serving as the construction party of the phase I of No. 3 Water Plant construction project, Henan Luyi Yinlong Water Supply Co., Ltd. currently has 67 employees, including 34 female employees which accounts for 50.7% of the total number of employees. See Table 3 for details. The company maintains gender equality principle in the recruitment of employees and the selection of management personnel. It implements the post salary + performance appraisal mechanism in salary distribution, i.e., equal pay for the same post and more pay when taking more work.

Table 3 Employees of Henan Luyi Yinlong Water Supply Co., Ltd.

Employee classification	Number of employees	Number and percentage of male employees	Number and percentage of female employees
Senior management	5	4 (80%)	1 (20%)
Middle management	12	7 (58%)	5 (42%)
Technical and operational staff	50	22 (44%)	28 (56%)
Total	67	33 (49%)	34 (51%)

2. Henan Luyi Yinlong Water Supply Co., Ltd. fully protects the rights and interests of female employees. Female employees can enjoy maternity leave in accordance with national policies, and during such period, the salary and benefits are the same as those of the on-the-job employees. The company will arrange suitable positions for female employees and organize regular health examinations every year. The company will organize activities and grant subsidies for female employees on International Women's Day, Labor Day and other holidays.

iii. Labor and community health and safety

1. Henan Luyi Yinlong Water Supply Co., Ltd. pays pension insurance, medical insurance, unemployment insurance, work-related injury insurance and maternity insurance for employees in accordance with national policies and regulations.

2. Henan Luyi Yinlong Water Supply Co., Ltd. recruits employees strictly in accordance with the requirements of the Labor Law, and the vast majority of employees are recruited locally to support community employment and development. The working hours of employees meet the requirements of the Ministry of Labor and Social Security, which stipulate that, the working hours must not exceed 40 hours per week, and the continuous working hours must not exceed 8 hours per day. Where extension of working hours is required as needed, it must be agreed with the employee and the company must give financial compensation or arrange compensatory time off in accordance with national regulations.

3. Henan Luyi Yinlong Water Supply Co., Ltd. conducts induction training for newly recruited employees to make them familiarize with the work process so that they can meet the job requirements in aligned with the ESMS training plan. The company formulates an annual training plan for all employees to strengthen the training of reserve talents, regularly organizes technical competitions for front-line operators, such as electricians, fitters, pump workers, line inspection and leak detection workers, etc., and recognizes employees for good performance to establish a harmonious and progressive working atmosphere.

4. The contractors of Henan Luyi Yinlong Water Supply Co., Ltd. recruit employees in the formal market through compliance procedures, and most of the employees are local residents.

5. Henan Luyi Yinlong Water Supply Co., Ltd. transports, stores, uses and manages chemical agents in strict accordance with the requirements of the local Public Security Bureau and the Safe Production Supervision Administration. The operators regularly participate in the training organized by the Safe Production Supervision Administration and obtain the certificate of employment before taking the relevant job. This is included in any reporting to ADB.

6. Henan Luyi Yinlong Water Supply Co., Ltd. has prepared an emergency plan for urban water supply, which can be implemented in case of sudden accidents such as water source pollution, insufficient water source, sudden power outage, and extreme weather (no major flood since commence of existing water plants). The emergency plan defines the responsible departments, persons responsible and emergency measures for handling various accidents, with an aim to effectively guarantee the urban water safety.

7. In the past 5 years, no major safety accidents and no work-related injuries or deaths occur in Henan Luyi Yinlong Water Supply Co., Ltd. Since the construction of the phase I of the No. 3 Water Plant conducted by Luyi Yinlong Water Supply Co., Ltd., no safety accidents have occurred including LTI.

III. Conclusion and recommendations

A. Conclusion

Based on the current economic development and water supply status of the central urban area of Luyi County, and considering the regional development plan, the construction of the phase I of the No. 3 Water Plant conducted by Luyi Yinlong Water Supply Co., Ltd. is necessary and urgent. As a nationally encouraged project, this project is supported by Luyi County People's Government, and relevant government departments have reviewed and agreed this project. The construction procedures of the project are strictly in accordance with the relevant national, provincial, and municipal requirements. Professional institutions are hired to conduct project feasibility studies and environmental impact assessments and issue reports. The project planning is approved by the Urban and Rural Planning Bureau of Luyi County. The construction of the project is undertaken by qualified enterprises through bidding. During the construction process, environmental protection is emphasized to reduce the impact on the surroundings. The environmental protection issues to be considered after completion of the project have also been properly arranged. The land for construction of the project is transferred by the government with transparent pricing, rationality and legitimacy.

Attachment 1: Source Water Test Report



161612050915

Date of expiry: October 1, 2022

Test Report

ZXJZ SZ [2020]0410-03-01

Description of sample: Domestic drinking water (water from water source of No. 1 Water Plant)

Client: Henan Luyi Yinlong Water Supply Co., Ltd.

Inspected unit: Henan Luyi Yinlong Water Supply Co., Ltd.

Report date: April 20, 2020



Henan Zhengxin Testing Technology Co., Ltd.

Special testing seal for Henan Zhengxin Testing Technology Co., Ltd. (seal)

Test Report

Client	Henan Luyi Yinlong Water Supply Co., Ltd.	Detailed address of client	/
Inspected unit	Henan Luyi Yinlong Water Supply Co., Ltd.	Detailed address of inspected unit	/
Description of sample	Domestic drinking water (water from water source of No. 1 Water Plant)	Testing method	Submitted for testing
Submitted by	Li Jiaqian	Contact information	15225720010
Sample No.	SZ [2020] 0410-03-01	Date of receipt	April 10, 2020
Number of samples	2.5 L×3 bottles+500 mL×4 bottles	Sample description	Liquid
Test date	April 10 to 18, 2020	Testing conditions	20.8°C, 53%RH
Test items	Color, turbidity, odor and taste, substances visible to naked eye, pH, volatile phenols, lead, arsenic, iron, copper, manganese zinc, hexavalent chromium, chloride, fluoride, cyanide, iodide, sulfate, oxygen consumption, nitrate-nitrogen and nitrite-nitrogen (calculated in terms of nitrogen), anionic surfactant, total hardness (calculated in terms of CaCO ₃), total dissolved solids, sulfide, ammonia nitrogen, cadmium, mercury, selenium, aluminum, Ag, nickel, barium, antimony, beryllium, thallium, sodium, boron, cobalt, molybdenum, carbon tetrachloride, total number of colonies, total coliform group, pentachlorophenol, 1,2-dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane, vinyl chloride, 1,1-dichloroethylene, 1,2-dichloroethylene, 1,2-dichloropropane, chloroform, trichloroethylene, tetrachloroethylene, bis (2-ethylhexyl) phthalate, 2,4-dinitrotoluene, 2,6-dinitrotoluene, benzene, toluene, xylene, ethylbenzene, chlorobenzene, hexachlorobenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, trichlorobenzene, styrene, anthracene, fluoranthene, benzo(b)fluorescein, benzo(a)pyrene, polychlorinated biphenyl, DDT, BHC, methyl parathion, malathion, dimethoate, chlorothalonil, 2,4-dichlorophenoxyacetic acid, carbofuran, aldicarb, dichlorvos, chlorpyrifos-methyl, atrazine, glyphosate, heptachlor, tribromomethane, dichloromethane, 2,4,6-trichlorophenol, total alpha radioactivity, total beta radioactivity		

Testing basis	<i>Standard Examination Methods for Drinking Water (GB/T 5750-2006), Water Quality - Determination of Volatile Phenolic Compounds - 4-AAP Spectrophotometric Method (HJ 503-2009), Water Quality - Determination of Volatile Organic Compounds - Purge and Trap/Gas Chromatography-Mass Spectrometer (HJ 639-2012), Water Quality - Determination of Sulfide - Methylene Blue Spectrophotometric Method (GB/T16489-1996), Water Quality - Determination of Nitroaromatics by Gas Chromatography (HJ 648-2013), Water Quality - Determination of Polycyclic Aromatic Hydrocarbons by Liquid-liquid Extraction and Solid-Phase Extraction - High Performance Liquid Chromatography (HJ 478-2009), Water Quality - Determination of BHC and DDT - Gas Chromatography (GB/T 7492-1987), Standard Methods for the Examination of Water and Wastewater (15th edition)</i>
Limit standard	Three types of limits in Table 1 of <i>Standard for Groundwater Quality (GB/T 14848-2017)</i>
Test conclusion	All the testing items meet the requirements of the three types of limits in Table 1 of <i>Standard for Groundwater Quality (GB/T 14848-2017)</i>
Remarks	The limits for disinfectants and their by-products are not determined, and are represented by "----"

List of test results (continued)

S/N	Test items	Unit of measurement	Test method	Method detection limit	Test results	Reference limit
74	Naphthalene	mg/L	HJ 639-2012	0.001	<0.001	0.1
75	DDT	mg/L	GB 7492-1987	0.2	<0.2	0.001
76	BHC	mg/L	GB 7492-1987	0.004	<0.004	0.005
77	Methyl parathion	mg/L	GB/T 5750.9-2006	0.0001	<0.0001	0.02
78	Malathion	mg/L	GB/T 5750.9-2006	0.0001	<0.0001	0.25
79	Dimethoate	mg/L	GB/T 5750.9-2006	0.0001	<0.0001	0.08
80	Chlorothalonil	mg/L	GB/T 5750.9-2006	0.0004	<0.0004	0.01
81	2,4-dichlorophenoxyacetic acid	mg/L	GB/T 5750.9-2006	0.00005	<0.00005	0.03
82	Dichlorvos	mg/L	GB/T 5750.9-2006	0.00005	<0.00005	0.001
83	Chlorpyrifos	mg/L	GB/T 5750.9-2006	0.002	<0.002	0.03
84	Atrazine	mg/L	GB/T 5750.9-2006	0.0005	<0.0005	0.002
85	Glyphosate	mg/L	GB/T 5750.9-2006	0.025	<0.025	0.7
86	Carbofuran	mg/L	GB/T 5750.9-2006	0.000125	<0.000125	0.007
87	Aldicarb	mg/L	<i>Standard Methods for the Examination of Water and Wastewater</i> (15th edition)	5×10 ⁷	<5×10 ⁷	0.003
88	Heptachlor	mg/L	GB/T 5750.9-2006	0.0002	<0.0002	0.0004
89	Tribromomethane	mg/L	GB/T 5750.8-2006	0.006	<0.006	0.1
90	Dichloromethane	mg/L	GB/T 5750.10-2006	0.009	<0.009	0.02
91	2,4,6-Trichlorophenol	mg/L	GB/T 5750.10-2006	0.00004	<0.00004	0.2
92	Total α radioactivity	Bq/L	GB/T 5750.13-2006	0.016	<0.016	0.5
93	Total β radioactivity	Bq/L	GB/T 5750.13-2006	0.028	<0.028	1



Special testing seal for Henan Zhengxin Testing Technology Co., Ltd. (seal)

Prepared by:		Reviewed by:		Approved by:	
Date:	2020.4.20	Date:	2020.4.20	Date:	2020.4.20

End of report

Attachment 2: Surroundings of the Plant



Attachment 3:



Electronic supervision code: 4116282019B00370

Contract on Transferring State-owned Construction Land Use Rights

Ministry of Land and Resources of the People's Republic
of China

Prepared by
State Administration for Industry & Commerce (SAIC) of
the People's Republic of China

—1—

Contract No.:

411628-CR-2019-0927-036

Contract on Transferring the State-owned Construction Land Use Rights

Parties to the contract:

Transferor: Department of Natural Resources of Luyi County;

Address: North side of Shangli Road, Luyi County, south bank of Guohe River;

Postal code: 477200;

Tel: 0394-722301;

Fax: / ;

Deposit bank: / ;

Account number: / .

Transferee: Henan Luyi Yinlong Water Supply Co., Ltd.;

Address: South section of Minglu Road, Luyi County;

Postal code: 477200;

Tel: 15938616222

Fax: / ;

Bank of deposit: / ;

Account number: / .

This contract has been executed in four (4) duplicate originals, and each duplicate original shall have the same legal effect.

Transferor (seal):




Department of Natural Resources of Luyi County
(seal)

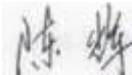
Transferee (seal):




Henan Luyi County Yinlong Water Supply Co.,
Ltd. (seal)

Legal representative (authorized agent)

(Signature): 



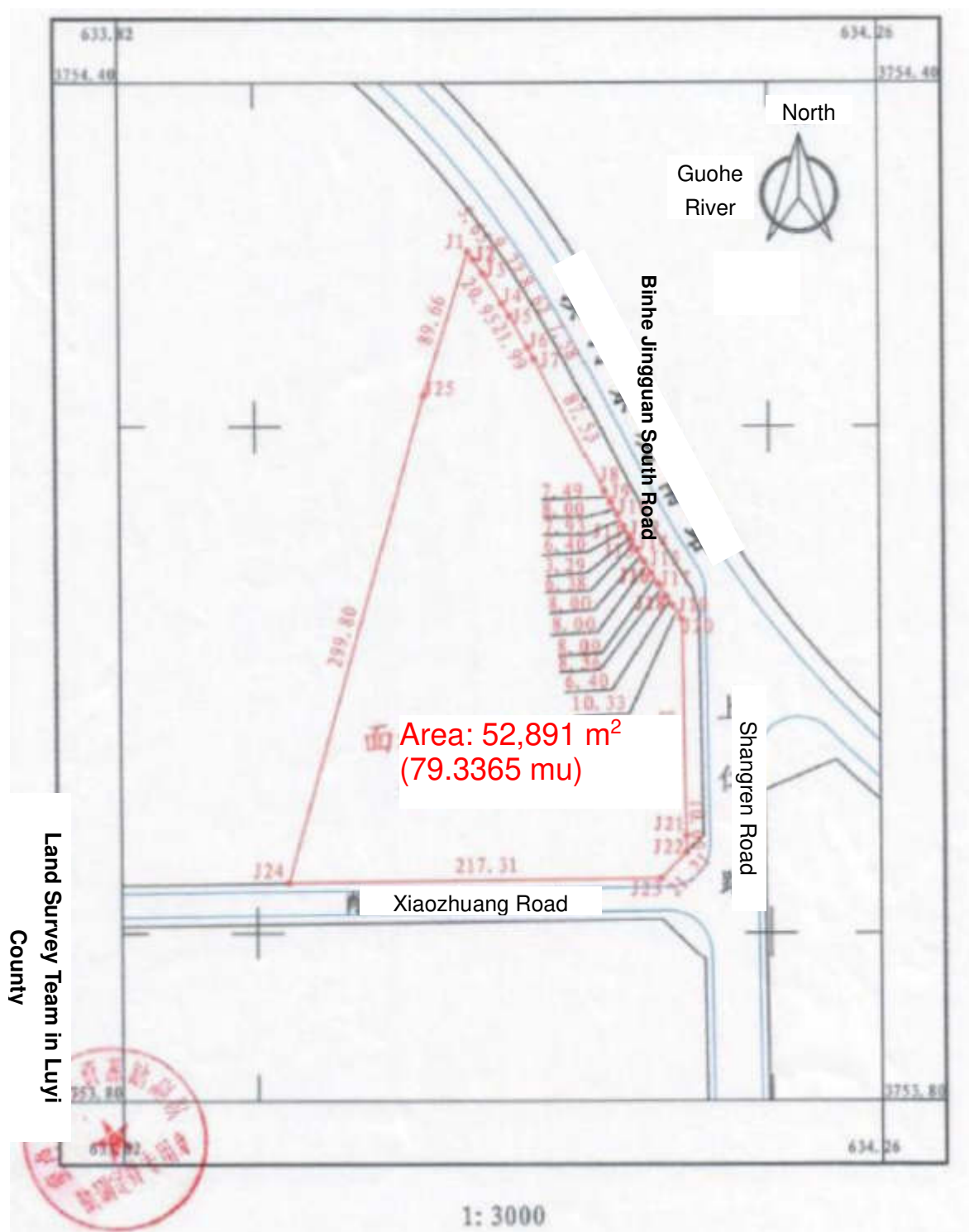
Legal representative (Entrusted Agent)

(Signature): 

September 27, 2019

Survey Boundary Map of the State-owned Construction Land (No. LY2019-86) to be Transferred in Luyi County

3753.80-63382



Attachment 4:

<div>Real Property Certificate</div> <div></div>	<p>In accordance with the <i>Property Law of the People's Republic of China</i> and other laws and regulations, to protect the legal rights and interests of the owner of the real property, the real property rights listed in this certificate and which are to be applied for registration by the owner are permitted for registration after review, and the certificate is hereby issued.</p> <div> </div> <p>Registration agency (seal) October 25, 2019 Supervised by the Ministry of Natural Resources of the People's Republic of China</p> <p>No.: 41006400338</p>
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Yu (2019) Luyi County Real Property No. 0008471

Right holder	Henan Luyi Yinlong Water Supply Co., Ltd.
Co-ownership	Individually owned
Location	North of Xiaozhuang Road and West of Shangren Road (managed by Minglu Street Office), Luyi County, Zhoukou City, Henan Province
Real property unit number	411628 214007 GB00003 W00000000
Type of right	State-owned construction land use right
Nature of right	Transfer
Purpose	For utilities
Area	52,891 m ²
Period of use	September 29, 2019 to September 28, 2069
Other status of rights	

Notes

Land Management Documents of Henan Provincial People's Government

YZT (2019) No. 690

Reply of Henan Provincial People's Government on Land Acquisition of the Fourth Batch of Urban-Rural Linkage Pilot Projects in Luyi County in 2018

To Luyi County People's Government:

We herewith acknowledge receipt of the *Request of Luyi County People's Government's on Land Acquisition for the Fourth Batch of Urban-Rural Linkage Pilot Projects in Luyi County in 2018* (LZT (2019) No. 8). After deliberation, our reply is as follows:

1. Approval is hereby given to the acquisition of the land of 6 rural collective economic organizations (including Zhouzhuang Village) in 4 towns (streets) (including Jiatan Town) as the new land for the construction of the fourth batch of urban-rural linkage pilot projects in Luyi County in 2018. The land to be acquired includes 9.8714 hectares of collective arable land, 0.0036 hectare of collective forest land, and 0.1470 hectare of other agricultural land, totaling 10.220 hectares (including 9.8714 hectares of arable land).

-1-

We hereby approve the land acquisition plan prepared by Luyi County.

2. You must strictly implement the post-approval implementation procedures for land acquisition in accordance with the law, pay compensation fees in a timely manner in accordance with the land acquisition plan, implement resettlement measures, do well in social security work for land-expropriated farmers, properly resolve the problems encountered in the production and living of land-expropriated farmers to maintain their living standard at the original level, ensure the long-term livelihoods, and keep social stability. The land must not be used if the compensation and resettlement measures for the acquired land are not taken in place and social security funds and measures are not implemented properly.

3. The competent department of natural resources in Luyi County shall make follow-up survey on the implementation of the land acquisition plan, urge relevant departments and units to do the relevant work properly, and report the implementation of the compensation and resettlement plan to the Department of Natural Resources of Henan Province.

4. Luyi County must provide the land in strict accordance with the purposes and supply modes specified in national industrial policies and other laws and regulations, and the standards for economical and intensive land use. The competent department of natural resources in Luyi County must report the land supply conditions to the Department of Natural Resources of Henan Province for record.

Attachment: List of Land Acquisition for the Fourth Batch of Urban-Rural Linkage Pilot Projects in Luyi County in 2018



People's Government of Henan Province (seal)

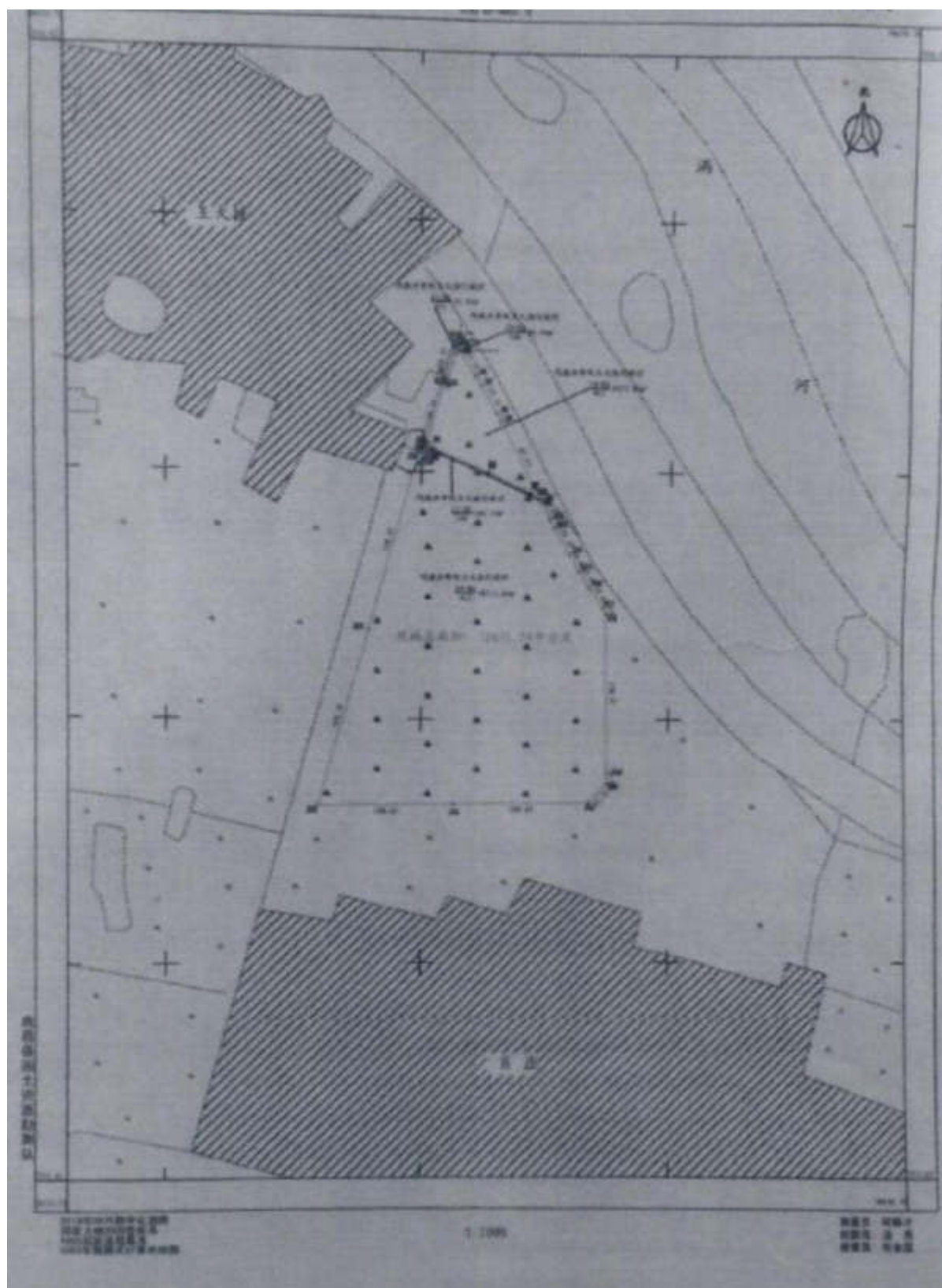
June 11, 2019

Attachment

List of Land Acquisition for the Fourth Batch of Urban-Rural Linkage Pilot Projects in Luyi County in 2018

Ownership		Total land area	Agricultural land			
			Total	Arable land (irrigated land)	Forest land	Other agricultural land
Luyi County (total)		10.0220	10.0220	9.8714	0.0036	0.1470
Collective land	Luyi County (total)	10.0220	10.0220	9.8714	0.0036	0.1470
	Jiatan Town (subtotal)	2.5435	2.5435	2.5435		
	Zhouzhuang Village	2.5435	2.5435	2.5435		
	Minglu Street (subtotal)	5.4299	5.4299	5.4010	0.0036	0.0253
	Wangdagua Village	5.2632	5.2632	5.2343	0.0036	0.0253
	Huban Village	0.1667	0.1667	0.1667		
	Yanghukou Town (subtotal)	0.9711	0.9711	0.9711		
	Suwan Village	0.9711	0.9711	0.9711		
	Guyang Street (subtotal)	1.0775	1.0775	0.9558		0.1217
	Qianluolou Village	0.2697	0.2697	0.2697		
	Houluolou Village	0.8078	0.8078	0.6861		0.1217

Survey Boundary Map of the Fourth Batch of Urban-Rural Linkage Pilot Projects in Luyi County in 2018 (4)



Attachment 6:

Land Compensation Certificate

This is to certify that, regarding the occupation of 78.948 mu of land in Wangdagua Administrative Village managed by Minglu Street Office in Luyi County in accordance with the *Replay to Land Acquisition of the Fourth Batch of Urban-Rural Linkage Pilot Projects in Luyi County in 2018* issued by Henan Provincial People's Government on June 11, 2019 (YZT (2019) No. 690), the land compensation fees, resettlement subsidies, and compensation fees for demolition of ground attachments have all been paid. -

-

Wangdagua Administrative Village

Residential Committee of Wangdagua Administrative Village managed by Minglu Street Office,
Luyi County (seal)



Minglu Street Office

Minglu Street Office, Luyi County (seal)



Wednesday, June 26, 2019

Confirmation Form for Implementation of Compensation with Regard to Demolition and Resettlement of Land No. ly2019-86

Land No.	ly2019-86	Area of land (m ² /mu)	52,632/78.948
Location	Wangdagua Administrative Village managed by Minglu Street Office, South Bank of Guohe River, Luyi County		
Boundaries in four directions	East: adjacent land West: adjacent land South: adjacent land North: Guohe River South Road		
Confirmation opinions of original unit using the land	<p>The compensation area for the land acquired is _____ mu. The compensation to be paid for demolition of ground attachments and land compensation have all been paid to the units whose land was acquired, and the ground attachments have been removed. _____</p> <p>Residential Committee of Wangdagua Administrative Village managed by Minglu Street Office, Luyi County (seal)</p> <p>Signature of the person in charge:  Unit seal mm/dd/yy</p>		
Audit opinions of the Office in the town	<p>The conformation opinions on this land are authentic and the land meets the requirements of "cleared land" and land acquisition conditions. All remaining issues related to the land have been resolved.</p> <p>Investigator:  </p> <p></p> <p>Signature of the person in charge:  Unit seal mm/dd/yy</p> <p>Minglu Street Office, Luyi County (seal)</p>		
Remarks			

RAPID ENVIRONMENTAL ASSESSMENT (REA) CHECKLIST¹**and ENVIRONMENT CATEGORIZATION FORM****Location/Project Title:**

No.3 Water Plant Construction Project (Phase I) of Henan Luyi Yinlong Water Supply Co., Ltd

Subsidiary/Division: China Water Affairs Group Limited**Part I. Rapid Environmental Assessment Checklist**

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
A. Project Siting Is the project area...			
<input type="checkbox"/> Densely populated?		√	The phase I of the No. 3 Water Plant construction project will be conducted by Luyi Yinlong Water Supply Co., Ltd. in Wangdagua Administrative Village which is located on the south side of Binhe Jingguan Road and the east side of Xiyinbin Avenue at the south bank of Guohe River in Luyi County. , which is currently vacant land, not densely populated area.
<input type="checkbox"/> Heavy with development activities?		√	The area is with rapid development, large quantities of urban infrastructure and industrial projects have been or are about to be constructed. With respect to the construction and operation of those projects, favorable water supply conditions and better water supply facilities are required.

¹Major indicators provided but the checklist should be adapted to the specific project or activity. More details are available from the following sources: IFC Environmental, Health and Safety Guidelines, 2007; World Bank Environmental Assessment Sourcebook (1991) and Updates; ADB Environment Assessment Guidelines, 2003.

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<input type="checkbox"/> Adjacent to or within any environmentally sensitive areas?		√	The project is located not adjacent to the cultural heritage site, and thus no environmentally sensitive areas
<input type="checkbox"/> Cultural heritage site		√	Not applicable as the site not adjacent to the cultural heritage site
<input type="checkbox"/> Protected Area		√	Not applicable as no Protected Area in surrounding sites
<input type="checkbox"/> Wetland		√	Not applicable as no Wetland in surrounding sites
<input type="checkbox"/> Mangrove		√	Not applicable as no Mangrove in surrounding sites
<input type="checkbox"/> Estuarine		√	Not applicable as no Estuarine around project site
<input type="checkbox"/> Buffer zone of protected area		√	Not applicable as no buffer zone around project site
<input type="checkbox"/> Special area for protecting biodiversity		√	Not applicable as no special area around project site
<input type="checkbox"/> Bay		√	Not applicable as the project is thousand kms inland
B. Potential Environmental Impacts Will the Project cause...			
<input type="checkbox"/> Pollution of raw water supply from upstream wastewater discharge from communities, industries, agriculture, and soil erosion runoff?		√	Project will use raw water supply from the The Yangtze River to Huaihe River Diversion Project

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<input type="checkbox"/> Impairment of historical/cultural monuments/areas and loss/damage to these sites?		√	Not applicable, there are no historical/cultural monuments near the project site.
<input type="checkbox"/> Hazard of land subsidence caused by excessive ground water pumping?		√	Not applicable, as the project utilizes surface water.
<input type="checkbox"/> Social conflicts arising from displacement of communities?		√	The project land is currently a piece of vacant land without residents
<input type="checkbox"/> Conflicts in abstraction of raw water for water supply with other beneficial water uses for surface and ground waters?		√	Not applicable, the raw water from the Yangtze River to Huaihe River Diversion Project with designated amount allocated by the government.
<input type="checkbox"/> Unsatisfactory raw water supply (e.g. excessive pathogens or mineral constituents)?		√	The project will use the water from the Yangtze River to Huaihe River Diversion Project as raw water resource. The raw water quality expected to be type II or above
<input type="checkbox"/> Delivery of unsafe water to distribution system?		√	The project utilizes the standard tap water treatment processes involving coagulation – sedimentation – filtration and disinfection to treat it up to national drinking water standard-urban water quality standard CJ / T 206-2005
<input type="checkbox"/> Inadequate protection of intake works or wells, leading to pollution of water supply?		√	Raw water intake is from the Yangtze River to Huaihe River Diversion Project with designated amount allocated by the government.
<input type="checkbox"/> Over pumping of ground water, leading to salinization and ground subsidence?		√	Not applicable, the raw water is from Yangtze River to Huaihe River Diversion Project with designated amount allocated by the government.

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<input type="checkbox"/> Excessive algal growth in storage reservoir?		√	Not applicable, the raw water is from Yangtze River to Huaihe River Diversion Project with designated amount allocated by the government.
<input type="checkbox"/> Increase in production of sewage beyond capabilities of community facilities?		√	The waste water from the production with a sludge treatment facilities designed to meet the production capacity.
<input type="checkbox"/> Inadequate disposal of sludge from water treatment plants?		√	Construction period: none Operation period: Sludge from concentration tank will be dried and collected in dewatering room, and be handled by licensed third-party company
<input type="checkbox"/> Inadequate buffer zone around pumping and treatment plants to alleviate noise and other possible nuisances and protect facilities?		√	Construction period: noise level is controlled no more than 70dB (A) during the daytime; and no more than 55dB (A) nighttime; Operation period: noise level is controlled no more than 60dB (A) daytime and no more than 50dB (A) nighttime – considered no impact according GB12523-2011and GB 12348-2008 standard
<input type="checkbox"/> Impairments associated with transmission lines and access roads?		√	Electricity for the project is supplied by the municipal lines, no additional transmission line or access roads needed.
<input type="checkbox"/> Health hazards arising from inadequate design of facilities for receiving, storing, and handling of chlorine and other hazardous chemicals.		√	The project uses sodium hypochlorite instead of chlorine as a disinfectant, which is more convenient to add and safer to transport, also can eliminate security risks of chlorine in transportation, storage, use, and so on.

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<input type="checkbox"/> Health and safety hazards to workers from handling and management of chlorine used for disinfection, other contaminants, and biological and physical hazards during project construction and operation?		√	Construction period: Not applicable. Operation period: For safety concerns, the project uses sodium hypochlorite instead of chlorine as a disinfectant, provides a full set of labor protection equipment for operators, and organize safety training regularly.
<input type="checkbox"/> Involuntary resettlement (physical or economic displacement) of people?		√	company confirms that's the land has been in idle without residents, and has not been involved any confliction or disputes.
<input type="checkbox"/> Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		√	The project can further improve the safety of local water supply system and benefit the people, especially the vulnerable groups. In addition, new employment opportunities have been created for the local area.
<input type="checkbox"/> Noise and dust from construction activities?	√		Noise control: Adopt advanced construction technology, reasonable layout of construction equipment, install sound insulation barriers around the site, strengthen construction vehicle management. Construction period: noise level is controlled no more than 70dB (A) during the daytime; and no more than 55dB (A) nighttime; Operation period: noise level is controlled no more than 60dB (A) daytime and no more than 50dB (A) nighttime Dust control: Keep the construction site of the project clean and tidy. Spray water 1 to 2 times a day. The independent bare ground must be 100% covered. Set a 2 m high fence around the plant; strengthen construction management, and do not carry out dust-generating construction projects under strong winds.

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<input type="checkbox"/> Increased road traffic due to interference of construction activities?		√	Construction site is not a densely populated.
<input type="checkbox"/> Continuing soil erosion/silt runoff from construction operations?	√		- After the construction, trees are planted on the bare ground and both sides of the road, it will coordinate with the surrounding landscape.
<input type="checkbox"/> Delivery of unsafe water due to poor O&M treatment processes (especially mud accumulations in filters) and inadequate chlorination due to lack of adequate monitoring of chlorine residuals in distribution systems?		√	Strictly implement standardized O&M management, Install online water quality monitoring equipment at the outlet of the filtration system and water treatment plant; Select multiple sampling points in distribution system, laboratory department measures chlorine residuals in distribution systems according to the requirements of the urban water quality standard CJ / T 206-2005, ensure water supply meets standard.
<input type="checkbox"/> Delivery of water to distribution system, which is corrosive due to inadequate attention to feeding of corrective chemicals?		√	The project uses PLC (Programmable Logic Controller) to control the dosing equipment, which can precisely adjust the dosage of various chemicals and avoid corrosion of the distribution system.
<input type="checkbox"/> Accidental leakage of chlorine gas?		√	The project uses sodium hypochlorite instead of chlorine gas, which is safer to store and use. For the accidental leakage of sodium hypochlorite, the project formulated a comprehensive emergency response plan, including preventive measures, emergency measures and accident aftermath.
<input type="checkbox"/> Excessive abstraction of water affecting downstream water users?		√	Not applicable, the raw water of the project comes from the water of the Yangtze River to Huaihe River Diversion Project allocated by the government.

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<input type="checkbox"/> Competing uses of water?		√	Not applicable, the raw water of the project comes from the water of the Yangtze River to Huaihe River Diversion Project designated by the government.
<input type="checkbox"/> Increased sewage flow due to increased water supply	√		<p>The sewage pipe network at the project site is in place and to be discharged into Luyi County New District Sewage Treatment Plant which operated under reasonable utilization rate:</p> <ul style="list-style-type: none"> - construction period wastewater generated during the construction period is reused after sedimentation for site sprinkling and equipment washing; - Operation period: the water plant will recycle its waste water back into treatment cycle; and domestic sewage will NOT increase much due to limited number of new hires (30 staffs) by operation of the project;
<input type="checkbox"/> Increased volume of sullage (wastewater from cooking and washing) and sludge from wastewater treatment plant		√	Water treatment plant contribute no cooking related waste and very little amount of domestic sewage.
<input type="checkbox"/> Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		√	The projects are all constructed based on the urban planning population growth and current actual water demand, and they will effectively promote the local economy and the users living standard. But the project construction and operation will not result in a large population gathering to increase the burden on the entire public facilities.

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<input type="checkbox"/> Social conflicts if workers from other regions or countries are hired?		√	The project only provides a few job opportunities to local residents.

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<input type="checkbox"/> Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during operation and construction?		√	<p>Construction period:</p> <ul style="list-style-type: none"> - construction debris rather than explosive, fuel and chemicals <p>Operation period:</p> <ul style="list-style-type: none"> - Sludge from concentration tank will be dried and collected in dewatering room, and be handled by licensed third-party company - Sodium hypochlorite transportation is contracted to, a licensed third-party company authorized to handle hazardous chemical materials. <ul style="list-style-type: none"> o Avoiding densely populated areas, transportation route is carefully selected and to be informed to local police department ahead. The driver needs to strictly drive on the planed route; o Transportation on non-busy hours during the day; o Driver and person involved need to be well trained and licensed, and their ID need to be recorded before handling each job; o Sodium hypochlorite containers need to labelled clearly with hazardous material sign according to (GB190-2009) o In case of incident, driver need to inform local police department and environmental authority immediately and helps with local evacuation and first-aids; o Delivery truck needs to equipped with fire and hazardous gas prevention and control equipment.

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<input type="checkbox"/> Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		√	<p>The project has a comprehensive Contingency Plan with details including:</p> <ul style="list-style-type: none"> - Emergency district - Emergency repose team - First-aid and relevant equipment - Reporting mechanism, emergency line to fire, police, transportation departments, and local regulators - Emergency control measures - Evacuation plan - Facility shut down - Emergency training programming - Public awareness program especially to those nearby facilities
C. Information on Existing/Associated Facilities			
Does project involve facilities and/or business activities that already exist or are under construction?	√		An environmental and social compliance audit prepared by CWA was submitted to ADB
Does the proposed subproject include associated facilities that are integral to the operations of the ADB funded subproject?		√	No, not connected to an ADB funded project

Climate Change and Disaster Risk Questions The following questions are not for environmental categorization. They are included in this checklist to help identify potential climate and disaster risks.	Yes	No	Remarks
Is the Project area subject to hazards such as earthquakes, floods, landslides, tropical cyclone winds, storm surges, tsunami or volcanic eruptions and climate changes?		√	They will demonstrate in project feasibility study and has prepared an emergency plan for urban water supply, which can be implemented in case of sudden accidents such as water source pollution, insufficient water source, sudden power outage, and extreme weather (no major flood since commencement of existing water plants).
Could changes in temperature, precipitation, or extreme events patterns over the Project lifespan affect technical or financial sustainability (e.g., changes in rainfall patterns disrupt reliability of water supply; sea level rise creates salinity intrusion into proposed water supply source)?		√	The project uses the water from the Yangtze River to Huaihe River Diversion Project
Are there any demographic or socio-economic aspects of the Project area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, ethnic minorities, women or children)?		√	the site where the project is to be conducted is currently vacant, free from environmentally sensitive points such as scenic spots and historical sites, scenic tourist areas, and nature reserves.
Could the Project potentially increase the climate or disaster vulnerability of the surrounding area (e.g., by using water from a vulnerable source that is relied upon by many user groups, or encouraging settlement in earthquake zones)?		√	The project has no impact on the climate, nor does it involve land acquisition and resettlement.
Hazards are potentially damaging physical events		√	

II. ENVIRONMENTAL IMPACT CATEGORY AND REQUIREMENTS

IMPACT CATEGORY			Action
	A	With potential significant impacts	Exclude for ADB financing. For subprojects not financed by ADB, EIA needs to be prepared to comply with all national laws
√	B	With less significant impacts	Comply with PIAL and (i) ADB SPS SR1 including IEE preparation & submission, and (ii) compliance with national laws
	C	With minimal or no impacts	Comply with national laws and ADB's PIAL

Prepared by (Responsible Officer):	Approved by(ESMS Manager):
Name/Signature:	Name/Signature: Zhou Rui
Designation:	Designation:
Date:	Date:

