

# Environment and Social Compliance Audit Report

Project Number: 50273-001

Hujiafang Water Plant Project of Gaoan Water Affairs 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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Hujiafang Water Plant Project of Gaoan Water Affairs Co., Ltd.

## **Environmental and Social Security Assurance Compliance Audit**

China Water Affairs Group Limited

# **Content**

## **I. Introduction**

- A. Introduction to project
- B. Objective and scope of report
- C. Method

## **II. Audit results**

### **A. Relevant information about assurance issues**

- i. Environment
- ii. Involuntary resettlement
- iii. Indigenous peoples

### **B. Other social issues**

- i. Gender and development
- ii. Gender and employment issues
- iii. Labor and community health and safety

## **III. Conclusion**

# I. Introduction

## A. Introduction to project

### i. Project company

Gaoan Water Affairs Co., Ltd. (hereinafter referred to as Gaoan Water Affairs) is a holding subsidiary of China Water Affairs Group Limited which holds 60% equity, and it was established as a joint venture with the People's Government of Gaoan City in June 2007.

Gaoan Water Affairs Co., Ltd. is responsible for the water supply to the urban area of Gaoan City (see Figure 1 for specific locations) and some surrounding towns and villages. The company currently has five water plants with a total water supply capacity of 175,000 m<sup>3</sup>/d. See Table 1 for details. Gaoan is a county-level city in Jiangxi Province and managed by Yichun. It is located in the northwest of central Jiangxi Province and in the west of Nanchang City, the capital of Jiangxi Province. Gaoan is 42 km far away from Nanchang, covers an area of 2,439.33 sq.km, and has a permanent population of 878,300 as of the end of 2018.



Figure 1

Table 1 Water Plants under Gaoan Water Affairs Co., Ltd.

Water plant	Water supply capacity (10,000 m <sup>3</sup> /d)	Water source	Water supply area
No. 2 Water Plant	1.5	Jin River	Urban area of Gaoan
Shahu Water Plant	8.0	Jin River	Urban area of Gaoan, Bajing Town Ceramic Base
Ruiyang Water Plant	4.0	Upstream reservoir	Urban area of Gaoan, Xiangfu Town, Dacheng Town, New Century Industrial City
Cunqian Water Plant	2.5	Bishan Reservoir	Cunqian Town, Yangxu Town, Huibu Town, Longtan Town, Shinao Town
Bajing Water Plant	1.5	Xiaojiang River	Bajing Town Hongshi Cement Factory

## ii. Project background

In Bajing Town of Gaoan City, the first state-level building ceramic industry base has been established, with a planned area of 30 sq.km. At present, an area of 20 sq.km have been developed, and 119 enterprises have settled in, including 54 ceramic enterprises, and 134 ceramic production lines have been built, employing nearly 60,000 people. Currently, about 94% of the ceramic enterprises in the ceramic base use coal gas as fuel, and the enterprises refine gas separately, causing serious environmental pollution. Switching to natural gas would increase production costs by more than 25% at the current price, which is beyond the affordability of the enterprises. In order to solve the environmental pollution problem of the ceramic base and realize central gas supply, the Gaoan Municipal Government signed a strategic framework agreement for central gas supply with Jiangxi Jemincare Group Co., Ltd., stipulating that the latter shall establish Jemincare (Gaoan) Clean Energy Co., Ltd. in Gaoan City to implement the clean industrial gas project for the building ceramic industry base, as well as to provide clean gas for the whole ceramic base after completion of the project.

Therefore, in order to provide production water required by the clean industrial gas project of Jemincare (Gaoan) Clean Energy Co., Ltd. in Jiangxi Provincial Building Ceramic Industry Base, Gaoan Water Affairs Co., Ltd decided to start the construction of the Water Supply Project of Hujiatang Water Plant under Gaoan Urban-Rural Water Supply Integration Project.

### iii. General construction conditions of project

The Water Supply Project of Hujiafang Water Plant under Gaoan Urban-Rural Water Supply Integration Project is located in Bajing Town. The total capacity of the water plant is 40,000 m<sup>3</sup>/d, and the project will be implemented in two phases. The capacity of phase-I is 25,000 m<sup>3</sup>/d, and the water plant covers an area of 43.4 mu. Hujiafang Water Plant provides production water for the clean industrial gas project of Jemincare (Gaoan) Clean Energy Co., Ltd. in Jiangxi Provincial Building Ceramic Industry Base and for the Hongshi Cement Plant (see Figure 2 for specific locations). The total project investment is 76,424,900 CNY. The construction items of the project mainly include water intake pump house, water treatment structure, sludge treatment facility, chemical dosing and chlorination facility, secondary pump house, water distribution pipelines, comprehensive building, and two substations powering the facilities etc., and the conditions of the main equipment and facilities are shown in Table 2.



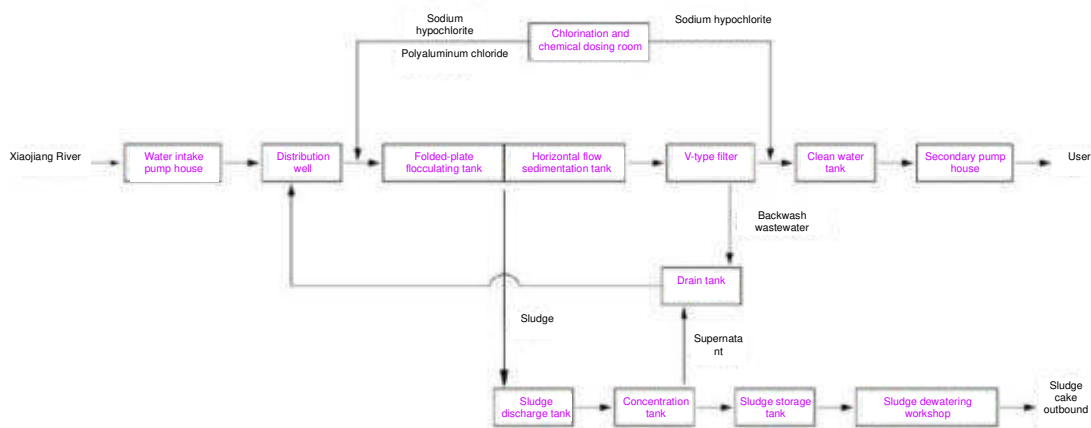
Figure 2

Table 2 Main equipment and facilities

Name of equipment and facilities	Quantity	Specifications and models
Water intake single-stage double-suction centrifugal pump	2 sets	1 in service and 1 standby, Q=656 m <sup>3</sup> /h, H=54 m, N=160 kw
Water intake single-stage double-suction centrifugal pump	2 sets	1 in service and 1 standby, Q=462 m <sup>3</sup> /h, H=54 m, N=110 kw
Water distribution single-stage double-suction horizontal centrifugal pump	2 sets	1 in service and 1 standby, Q=900 m <sup>3</sup> /h, H=30 m, N=110 kw
Water distribution single-stage double-suction horizontal centrifugal pump	2 sets	1 in service and 1 standby, Q=600 m <sup>3</sup> /h, H=30 m, N=75 kw
Backwash single-stage vertical centrifugal pump	3 sets	2 in service and 1 standby, Q=280 m <sup>3</sup> /h, H=10 m, N=22 kw
Backwash blower	2 sets	1 in service and 1 standby, Q=25 m <sup>3</sup> /min, P=39.2 kPa, N=30 kw
Screw air compressors	2 sets	1 in service and 1 standby, Q=0.38 m <sup>3</sup> /min, H=0.7 MPa, N=4 kw
Horizontal screw centrifugal dehydrator	2 sets	1 in service and 1 standby, Q=10 ~ 25 m <sup>3</sup> /h, N=37+7.5 kw

Although this project is an industrial water supply project, considering the flexibility of future water plant operation scheduling, the project might in future provide tap water to nearby residential areas as well, provided that the effluent of Hujiatang Water Plant is still subject to *Sanitary Standard for Drinking Water* (GB 5749-2006).

Project process:



The water source of the project is the Xiaolang River, and its average annual flow per section is 22.3 m<sup>3</sup>/s, an average runoff volume is about 702million m<sup>3</sup> and incoming water volume is about 390mn m<sup>3</sup>. According to EIA report, Xiaolang River can afford raw water extraction from the project which is designed to extract 6.62 million m<sup>3</sup> raw water annually from it. The water intake pump house is located on the left bank and at about 1,000 m upstream of the Xiaolang Bridge. The water quality complies with the CAT-III level as specified in *Environmental Quality Standard for Surface Water* (GB 3838-2002) (see Attachment 1 for the source water test report), and meets the quality requirements of the enterprise for production water. Local authority will grant the raw water extraction permit to the project prior to the commencing date. The water diversion pipes used in the project are existing DN300 and DN500 raw water pipes, starting from the water intake pump house and ending at the water plant. The water distribution pipes of the project involves the laying of DN800 PCCP pipeline with a total length of about 8 km.

#### Project progress:

The project commenced in August 2020 after a series of preliminary preparations had been completed, including project filing, preliminary design, environmental impact assessment report, water resource demonstration, land transfer, land certificate handling, construction bidding, contract signing, etc. Besides, the leveling of water purification plant and the construction access of the water intake pump house have been completed, and the water distribution pipe has been laid for 1 km. The project is expected to be put into operation in August 2021 (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**

The Water Supply Project of Hujiatang Water Plant under Gaoan Urban-Rural Water Supply Integration Project

## **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 6 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 reviewed the project data, including the preliminary design of the project, the environmental impact list, the water resource demonstration report, and the documents of local government on land requisition, demolition and resettlement and relevant contracts and agreements, where data is not available or assessment is incomplete, updates will be provided to ADB through the annual monitoring reports. See the following for details:

a. The "Preliminary Design of the Water Supply Project of Hujiayang Water Plant of Gao'an Urban-Rural Water Supply Integration Project", prepared by the Nanchang Urban Planning & Design Institute in July 2019;

b. The Environmental Impact List of the Water Supply Project of Hujiayang Water Plant under Gao'an Urban-Rural Water Supply Integration Project, prepared by Jiangxi Ruibide Environmental Technology Co., Ltd. in August 2019;

c. The Water Resources Demonstration Report for the Water Supply Project of Hujiayang Water Plant in Gao'an, prepared by Yichun Junxiang Water Resources Technology Service Co., Ltd. in September 2019;

d. Project-related land acquisition, transfer contracts, land certificates, etc.;

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

3. Operational investigation. Hujiayang Water Plant is under Gao'an Water Affairs, a subsidiary of CWA, and therefore Gao'an Water Affairs will be responsible to operate and maintain this Hujiayang Water Plant.

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.

## **II. Audit results**

### **A. Relevant information about assurance issues**

#### **i. Environment**

1. Environmental assessment report of project. The Water Supply Project of Hujiatang Water Plant under Gaoan Urban-Rural Water Supply Integration Project strictly complies with the Environmental Protection Law of the People's Republic of China, Environmental Protection Management Regulations of Construction Projects, Environmental Impact Assessment Law of the People's Republic of China and other laws and regulations, and Jiangxi Ruibide Environmental Technology Co., Ltd. is hired to conduct environmental assessment and issue reports.

2. Surroundings of the project. Hujiatang Water Plant is located in Bajing Town of Gaoan, covering an area of 43.4 mu. The plant adjoins mountain forests to the southeast, mountain forests and wasteland to the southwest, Jiangxi Huanong Hengqing Agriculture and Animal Husbandry Biotechnology Co., Ltd. to the northeast, and Liyuan Feed Co., Ltd. and Jiangxi Gaoan Dabeinong Feed Co., Ltd. to the northwest (see Attachment 2 for the surrounding environment of the plant).

3. Site selection of project. The Hujiatang Water Plant was approved by the Gaoan Development and Reform Commission (see Attachment 3) for filing, and the construction site of the project was specified. There are no places of interests, resort areas, natural reserves, and other environmental sensitive sites within the project, and water supply pipelines do not pass through above-mentioned ecological protection objects. Therefore, the environmental protection requirements can be met.

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, solid waste, vegetation restoration, and sodium hypochlorite.

a. Wastewater: Wastewater during the project construction period is mainly production wastewater and domestic wastewater from construction workers. The production wastewater is discharged into the temporary oil-separation sedimentation tank set up in the site, and after precipitation, it is used for road sprinkling and dust reduction; the domestic wastewater of the construction workers is collected through the existing sewage facilities of the surrounding hotels and residential houses and used for mountain forest irrigation nearby, and is not discharged. The production wastewater during the operation period of the project is mainly filter backwash water and sedimentation tank drainage. This part of wastewater is returned to the water distribution well through the drain tank and enters the front-end water purification process unit, and is not discharged; the domestic

sewage during the operation period is treated by the buried integrated sewage treatment facilities to the extent that COD, BOD<sub>5</sub>, and SS can meet the first-level standard of the *Integrated Wastewater Discharge Standard* (GB8978-1996), and are finally discharged into the Xiaojiang River through the sewage pipe network, which has a slight impact on the receiving water body. The discharging point is 1km downstream to water extraction point.

b. Flying dust: Flying dust is mainly generated during the construction period. Necessary dust prevention measures are formulated for the project, including setting up fences, sweeping the road, regularly sprinkling water from nearby city water hydrants, restricting the speed of vehicles, transporting and stacking building materials such as sand and soil under covers. In general, the impact range of construction dust under the action of natural wind is within 100 m. There are no sensitive points within 100 m of the project, so the construction dust has less impact on the surrounding environment. No complaint about flying dust from construction has been received since the project commenced.

c. Noise: During the construction period of the project, the noise mainly comes from the operation of mechanical equipment, and its impact range is within 200 m of the construction site. There are no sensitive points within 200 m of the project. However, in order to reduce the impact of noise, construction is strictly prohibited from 20:00 at night to 8:00 the next day and from 12:00 to 14:00 at noon. Besides, various noise control measures have been taken, including setting up fences, selecting low-noise equipment, improving construction efficiency with better project management and planning, shortening construction period, etc., to ensure that the noise during the construction period conforms to the *Emission Standard of Environment Noise for Boundary of Construction Site* (GB12523-2011), namely ≤70 dB(A) in daytime and ≤55 dB(A) at night. The noise during the operation period mainly comes from production equipment such as water pumps and blowers. After sound insulation, shock absorption and distance attenuation, the equipment noise meets CAT-II level as specified in *Emission Standard for Industrial Enterprises Noise at Boundary* (GB12348-2008), that is, ≤60 dB(A) in daytime and ≤50 dB(A) at night, with little impact on the surrounding environment. No complaints about noises were received since the project started.

d. Solid waste: The solid waste generated during the construction of the project is mainly engineering spoil and domestic garbage from construction personnel. The amount of spoil produced by the project is about 6,800 m<sup>3</sup>, which will be processed by Gaoan Municipal Muck Office and the opportunities for recycling of spoil will be handled according to decision of the local authority ; the amount of domestic waste generated is calculated at 0.5 kg/d per capita, and the amount of domestic garbage generated at the construction site is 15 kg/d, which will be removed and disposed of by the environmental sanitation department after centralized collection. The solid waste during the operation period is mainly the sludge produced by the water purification process and the domestic waste of employees. The water purification sludge belongs to general solid waste, with an output of 4.052 t/d, which is dewatered by the sludge treatment system and transported out for proper disposal, which will be handled by qualified third party ; the domestic waste generated is 4.015 t/a, which is collected and sent to the sanitation department for removal and disposal, and will not affect the surrounding environment.

e. Vegetation restoration: The construction of the project's water purification plant will destroy the original ground vegetation which has no much ecological value due to surface excavation and

other activities. After the project is completed, basic plantation is part of the plant project and the green construction in the project area will be strengthened, plantation to be done to cover bare land which can not only create a good working environment, but also purify the air and isolate noise.

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 2.3 t, far from the maximum critical volume of 45 t, 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 complying with the law and the regulations. The environmental risk of this project is acceptable.

## **ii. Involuntary resettlement**

1. Land use of the project. The construction site of this project is located in Bajing Town of Gaoan, covering an area of 43.4 mu. The land is used for public facilities, which belonged to the Gaoan Natural Resources Bureau and was originally a state-owned construction land. On October 31, 2019, Gaoan Water Affairs Co., Ltd. and the Gaoan Municipal People's Government in Jiangxi Province signed the "Contract on Construction of Hujiafang Water Plant in Jiangxi Provincial Building Ceramic Industry Base" and the "Supplementary Agreement" (see Attachment 4), clarifying that the Gaoan Municipal People's Government will provide the Gaoan Water Affairs with land for project construction. In April 27, 2020, Gaoan Water Affairs Co., Ltd. and Gaoan Natural Resources Bureau signed the "Contract for Transfer of State-owned Construction Land Use Rights" (see Attachment 5), with transfer price of 165.84 CNY per square meter. Later, a land use permit was issued (see Attachment 6). Prior to the transfer, the land has never been developed, therefore, it involves no compensation for land expropriation and demolition.

2. Land use for pipeline construction. The water distribution pipe work of the project involves the laying of DN800 PCCP pipeline along the Gaohu Class 1 Highway, with a total length of about 8 km. The project does not involve any resettlement and land acquisition compensation issues.

3. Public participation. During the advancement of Hujiafang Water Plant Project, Gaoan Water Affairs Co., Ltd. promptly publishes project information on the news media and online platforms, actively solicit opinions from all sectors of the society, and properly coordinate the temporary land use during the construction process to ensure that the project is open and transparent.

4. Appeal mechanism. Gaoan Water Affairs Co., Ltd. established the Water Supply Project Department for Hujiafang Water Plant under the Gaoan Urban-Rural Water Supply Integration Project. This organization is responsible for the complaints and coordination of the affected people and protecting the legal rights and interests of the affected people. 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 Hujiafang Water Plant Project, no complaints about involuntary resettlement have been received.

### **iii. Indigenous peoples**

There are no ethnic minority residential areas within the construction scope and water supply scope of the Water Supply Project of Hujiafang Water Plant of Gaoan Urban-Rural Water Supply Integration Project, and no aboriginal issues are involved.

## **B. Other social issues**

### **i. Gender and development**

1. The current situation of water prices in Gaoan. Since it might in future supplies to residential as well, the water tariff presents no potential burden to general public if it's the case in future. The price of domestic water for urban residents in Gaoan in 2019 is 1.4 CNY per cubic meter. Based on the current per capita monthly domestic water consumption of 10 m<sup>3</sup> in Gaoan, the per capita monthly water expenditure is 14 CNY. In 2019, the per capita disposable income of urban residents in Yichun (Gaoan is managed by Yichun) is 5,200 CNY, in which the monthly water bill expenditure only accounts for 0.3%. This shows that the water price in Gaoan is very low, and even if the water price is adjusted in the future, the living standards of residents will be affected.

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. Gaoan Water Affairs Co., Ltd. has always been a company with a strong sense of social responsibility. It implements the water price before the latest adjustment for subsistence allowance users, i.e. 1.15

CNY per cubic meter. In addition, during the implementation of the integration of urban and rural water supply, poor users were connected to tap water free of charge, and the water fee was reduced or exempted by 30 CNY per year, which fully reflects the care for the disadvantaged groups of society.

3. Improve user service and publicity work. In recent years, Gaoan Water Affairs Co., Ltd. has been actively creating the service brand "China Water-Care for Every Family", which is contributed to the significant improvement of service awareness and service level. The Company has launched a 24-hour customer service hotline to timely accept users' inquiries and complaints, and solve users' problems in the first time; and the Company regularly organized public welfare activities such as community service, water-saving and water-using knowledge publicity to establish communication channels with users and help users solve their difficulties in life on site. In addition, the Company has also carried out water-saving publicity and popularized the common sense of water use through network platforms, radio, newspapers and other media.

## **ii. Gender and employment issues**

1. Gaoan Water Affairs Co., Ltd. is the construction side of the Water Supply Project of Hujiafang Water Plant under Gaoan Urban-Rural Water Supply Integration Project. Currently, there are 224 employees, including 98 female employees, accounting for 43.8%. 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. Women have equal opportunity as men to apply for any job for which they are qualified. And if both men and women have equal opportunity to undertake training that will enable them to advance in the company.

Table 3 Employees of Gaoan Water Affairs Co., Ltd.

Employee classification	Number of employees	Number and percentage of male employees	Number and percentage of female employees
Senior management	7	5 (71%)	2 (29%)
Middle management	16	8 (50%)	8 (50%)
Technical and operational staff	201	108 (54%)	93 (46%)
Total	224	126 (56%)	98 (44%)

2. Gaoan Water Affairs Co., Ltd. fully protects the rights and interests of female employees. Female employees enjoy maternity leave in accordance with national policies, and their wages and benefits during the period are the same as those on the job; the company will arrange suitable positions for female employees, organize regular health checkups, and organize activities and distribute condolences on Women's Day and other related festivals.

### **iii. Labor and community health and safety**

1. Gaoan Water Affairs Co., Ltd. provides pension insurance, medical insurance, unemployment insurance, work injury insurance and maternity insurance for employees in accordance with national policies and regulations.

2. The Company 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. The Company conducts induction training for newly recruited employees to make them familiarize with the work process so that they can meet the job requirements. The company formulates an annual training plan for all employees and has an Environmental, Health and Safety (EHS) training program offered to staff and contractor/subcontractor 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 Gaoan Water Affairs Co., Ltd. recruit employees in the formal market through compliance procedures, all subsidiaries of CWA has HR department taking care grievance , and most of the employees are local residents.

5. The Company 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, the Environmental, Health and Safety (EHS) training program, and obtain the certificate of employment before taking the relevant job.

6. The company has established an emergency plan for urban water supply, which is suitable for emergency treatment of sudden accidents such as water source pollution, insufficient water

source, equipment failure, and extreme weather. 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, the company has not had any major safety accidents, injuries or deaths caused by work, and no emergencies such as water pollution or insufficient water sources. Since the start of the Water Supply project of Hujiafang Water Plant of Gaoan Urban-Rural Water Supply Integration Project, no safety liability accident has occurred.

### **III. Conclusion and recommendations**

#### **A. Conclusion**

The Water Supply Project of Hujiafang Water Plant of Gaoan Urban-Rural Water Supply Integration Project mainly provides production water for the clean industrial gas project of Jemincare (Gaoan) Clean Energy Co., Ltd. It is a necessary measure to solve the environmental pollution of the building ceramic industry base in Gaoan, and the project construction is imperative. The construction of the project is supported by the Gaoan Municipal People's Government and approved by the Gaoan Development and Reform Commission for filing. The project construction procedures strictly abide by the relevant national, provincial, and municipal requirements, and professional organizations are hired to conduct preliminary project design and environmental impact assessment and issue reports. 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.

#### **B. Recommendation**

None.

## Inspection Report

No: 2018-FS84

<b>Product name</b>	Source water
<b>Inspected unit</b>	Bajing Water Supply Co., Ltd. Primary pump house
<b>Production unit</b>	Bajing Water Supply Co., Ltd. Primary pump house
<b>Client</b>	Gaoan Health and Family Planning Comprehensive Supervision and Law Enforcement Bureau
<b>Inspection category</b>	Entrusted inspection

(Inspection Agency Seal)



Special inspection seal of Gaoan Center for Disease Control and Prevention

Gaoan Center for Disease Control and Prevention of Jiangxi Province

Report date: September 27, 2018

Gaoan Center for Disease Control and Prevention of Jiangxi Province

### Inspection report

Product name	Source water	Trademark		Model specification	
Production date/batch	2018914				
Sample source	Bajing Water Supply Co., Ltd. Primary Pump House			Contact phone	
Production unit	Bajing Water Supply Co., Ltd. Primary Pump House	Address			
Client	Gaoan Health and Family Planning Comprehensive Supervision and Law Enforcement Bureau				
Sampling date	Sep 14, 2018	Sampler	Deng Qinya, Xu An	Date of receipt	Sep 14, 2018
Number of samples	1	Sample state	Liquid	Inspection date	Sep 14, 2018
Environmental conditions for inspection	Temperature: 25°C Humidity: 60% Other: None				
Inspection item	PH value, dissolved oxygen, permanganate index, chemical oxygen demand, etc.				
Inspection basis	GB/T5750-2006				
Inspection conclusion	The sample was tested, and the inspection results of the inspected items were in compliance with CAT-II limit level as specified in GB 3838-2002 <i>Environmental Quality Standards for Surface Water</i> .				
Remarks					
Approved by:		Reviewed by:		Tested by:	
					

**Inspection report of Gaoan Center for Disease Control  
and Prevention in Jiangxi Province**

**Report No.: 2018-FS84**

S/N	Inspection item	Standard requirements	Inspection result	Assessment
	PH value	6-9	6.9	
	Dissolved oxygen (mg/)	≥6	6.4	
	Permanganate index (mg/L)	≤4	3.68	
	Chemical oxygen demand (COD, mg/L)	≤15	4.92	
	Five-day biochemical oxygen demand (mg/L)	≤3	2.4	
	Atmospheric nitrogen (NH <sub>3</sub> -N, mg/L)	≤0.5	0.02	
	Total phosphorus (calculated as P, mg/L)	≤0.1	0.02	
	Anionic synthetic detergent (mg/L)	≤0.3	<0.05	
	Iron (mg/L)	≤0.3	<0.017	
	Manganese (mg/L)	≤0.1	0.009	
	Zinc (mg/L)	≤1.0	<0.002	
	Copper (mg/L)	≤1.0	<0.003	
	Lead (mg/L)	≤0.01	<0.0025	
	Cadmium (mg/L)	≤0.005	<0.0005	
	Chromium (hexavalent, mg/L)	≤0.05	<0.004	
	Arsenic (mg/L)	≤0.05	<0.001	
	Mercury (mg/L)	≤0.00005	Not detected	
	Selenium (mg/L)	≤0.01	<0.0004	
	Fluoride (mg/L)	≤1.0	1.09	
	Chloride (mg/L)	≤250	29.19	
	Nitrate ammonia (mg/L)	≤10	0.39	
	Sulfate (mg/L)	≤250	16.21	
	Volatile phenol (mg/L)	≤0.002	<0.002	
	Petroleum (mg/L)	≤0.05	Not detected	
	Fluoride (mg/L)	≤0.05	<0.002	

Report continuation

Page 3 of 4

Attachment 2: Surroundings of the Plant



Southeast



Southwest



Northeast



Northwest

Attachment 3:

## **Notice of Filing of Enterprise Investment Projects in Jiangxi Province**

Gaoan Water Affairs Co., Ltd.:

In accordance with laws and regulations such as the "Administrative Licensing Law", the "Regulations on the Administration of Enterprise Investment Project Approval and Filing" (Decree of the State Council No. 673), and the "Administrative Measures for Enterprise Investment Project Approval and Filing" (National Development and Reform Commission Order No. 2 of 2017), after review, it is determined that the Water Supply Project of Hujiatang Water Plant of Gaoan Urban-Rural Water Supply Integration Project notified by your unit through the Jiangxi Investment Project Online Approval and Supervision Platform (the unified code of the project is: 2019-360983-46-03-002372) complies with the relevant regulations on project filing and is hereby filed. Your unit is responsible for the authenticity, legality and completeness of the project filing information.

After the project is filed, if the legal person of the project have changed, the location, scale, and content of the project have changed significantly, or the construction of the project has been abandoned, the project filing authority should be notified in time through the Jiangxi Investment Project Online Approval and Supervision Platform, and relevant information should be revised. Prior to the commencement of construction, the project construction unit shall go through other relevant procedures in accordance with relevant laws and regulations.

Attachment: Information Form on Filing and Registration of Jiangxi Province Enterprise Investment Project



July 11, 2019

**Gaoan Development and Reform Commission (seal)**

Attachment

### Jiangxi Province Enterprise Investment Project Filing and Registration Information Form

Project name		Water Supply Project of Hujiafang Water Plant of Gaoan Urban-Rural Water Supply Integration Project				
Unified project code		2019-360983-46-03-002372				
Basic situation of enterprises	Project unit name	Gaoan Water Affairs Co., Ltd.		Legal person code	91360900799498320M	
	Unit address	Ruiyang Avenue, Gaoan		Postal code	330800	
	Business registration type	Joint ventures		Registered capital (ten thousand CNY)	6,000	
	Legal representative	Liu Yong		Contact phone	07955287713	
Basic situation of the project	Proposed site of the project	Building Ceramic Industry Base of Gaoan, Yichun, Jiangxi Province				
	Construction content and scale (Area, product name, production scale, imported equipment, production process plan, etc.)	The project is implemented in two phases, with an annual water supply of 14.6 million tons, of which the water supply of the first phase is 25,000 tons per day, with a total floor area of 44 mu and a total construction area of 2,968.62 square meters, including secondary pumping station, dosing building, and integrated housing, water intake pump house, etc.; in addition, the reaction and sedimentation tanks, filters, clean-water reservoirs, distribution wells, and drain tanks occupy a total area of 17,048.7 m <sup>3</sup> . The main equipment includes 18 high-voltage switch cabinets, 4 dry-type transformers, 24 low-voltage switch cabinets, 3 single-stage double-suction centrifugal pumps, 2 sodium hypochlorite generators, 2 motor-driven single beam suspending cranes, 2 siphon suction dredges, 2 air compressors, 2 vacuum pumps, 2 PAC dosing metering pumps; the process flow is as follows: Xiaojiang River → water intake pump house → distribution well → folded-plate flocculating tank → sedimentation tank → V-type filter → clean-water reservoir → secondary pump house → user.				
	Industry involved	Water conservancy		Project capital (ten thousand CNY)	8,500	
	Construction period	2019~2020		Project construction area (m <sup>2</sup> )	2,968.62	
	Total land area of the project	44 mu		The area of new land to be acquired	44 mu	
Project investment	Total (ten thousand CNY)	Investment in fixed assets (ten thousand CNY)			Initial working capital (ten thousand CNY)	Others (ten thousand CNY)
		Subtotal	Civil engineering	Equipment		
	8,500	8,500.00	2,300	6,200	0	0

Gaoan Development and Reform Commission (seal)

Attachment 4:

**Contract on Construction of Hujiatang Water Plant in Jiangxi  
Provincial Building Ceramic Industry Base**

October, 2019

# **Contract on Construction of Hujiatang Water Plant in Jiangxi Provincial Building Ceramic Industry Base**

## **Chapter I General**

In order to improve the tap water supply capacity in Jiangxi Provincial Building Ceramic Industry Base, maximize the supply of tap water for the Jemincare Clean Industrial Gas Project, support the construction of the Jemincare Clean Industrial Gas Project, and promote the clean process of industrial production in the Base, it is agreed to construct Hujiatang Water Plant Project in Jiangxi Provincial Building Ceramic Industrial Base according to the relevant laws and regulations of the People's Republic of China after friendly negotiation, and this contract is specially concluded.

## **Chapter II Parties to the Contract**

**Article 1** The parties to this contract are:

Party A: Gaoan Municipal People's Government of Jiangxi (Hereinafter referred to as Party A)  
Province

Legal representative: Kang Jian

Entrusted signatory: Wan Lanping

Party B: Gaoan Water Affairs Co., Ltd. (Hereinafter referred to as Party B)  
Legal representative: Liu Yong

Entrusted signatory: Luo Siping

## **Chapter III Total Investment**

**Article 2** The total investment of Party B in the project is 130 million CNY for the construction of Water Plant Project in Jiangxi Provincial Building Ceramic Industry Base. It is planned to start construction in February 2020 and complete the project for revenue service in June 2021.

## **Chapter IV Scope of Production and Business and Company Nature**

**Article 3** Scope of production and business: tap water supply.

**Article 4** Company nature: The enterprise established by Party B must comply with the relevant laws and regulations of the country, have independent legal personality, operate independently, and be responsible for its own profits and losses. Party B shall be responsible for all the economic and legal responsibilities incurred during the construction and production of the enterprise.

## **Chapter V Rights and Obligations of Both Parties**

**Article 5** Rights and obligations of Party A

1. In order to implement the project smoothly, both parties agreed to clarify that the Jiangxi Provincial Building Ceramic Industry Base Management Committee is the project's investment invitation unit, and shall assist Party B in handling the project initiation, approval, registration and other related matters, and provide excellent service for Party B's project.
2. According to the demands of party B in project implementation, Party A shall be responsible for providing Party B with about 43.4 mu of project construction land in Jiangxi Provincial Building Ceramic Industry Base (the boundaries on the east, west, south and north sides shall be based on the red line map), and the land transfer fee shall be subject to the confirmation number of bidding, auction and listing transactions.
3. After Party B has paid the land transfer fee and provided all the submitted materials for the transfer certificate of state-owned land use rights, Party A is responsible for processing the state-owned land use right transfer certificate for Party B within six months, and delivering the land-use right transfer certificate to Party B within one week after the investment intensity and construction density (or floor area ratio) of the project reach the requirements of the contract.
4. Make every effort to maintain Party B's normal production and operation, and ensure that party B is free from external interference, and no department can enter the enterprise for inspection without authorization (except under special circumstances).
5. Party A is responsible for (assisting) other matters entrusted by Party B.

**Article 6** Rights and Obligations of Party B

1. Party B shall start the construction of the project within 1 month after Party A delivers the land and guarantee that the project investment will be completed within the construction period agreed in this contract. The investment intensity of the project should reach at least 3 million CNY per mu. If Party B fails to complete the investment on time and according to the investment intensity, Party A has the right to recover the idle land and bear the liability for breach of contract as agreed by both parties.
2. The layout and construction of Party B's factory buildings and other facilities should conform to the overall plan of Jiangxi Provincial Building Ceramic Industry Base, and the factory design plan should be submitted to Jiangxi Provincial Building Ceramic Industry Base Management Committee for approval (without Party A's consent, Party B shall not change the factory design plan). Party B may, by way of bid invitation or negotiation, select the construction team with corresponding qualifications and apply for construction according to law before construction can be carried out. The buildings of Party B must be made of reinforced concrete structure or steel structure H-shaped steel.
3. Party B's enterprise must meet national environmental protection standards during production.
4. When Party B no longer produces, it can introduce enterprises for revitalization. The land can be revitalized at the market price at the time of transfer. If Party B neither produces nor revitalizes the land, the park can recover the land at the original price of the land.
5. Party B may recruit employees by itself in accordance with national labor and employment regulations, and properly handle labor relations.
6. During the period of project construction and production and operation, Party B shall construct in accordance with regulations, operate in accordance with the law, and pay taxes in accordance with regulations.
7. The water, electricity and gas prices of Party B during the construction, production and operation of the project shall comply with the same standards as those of enterprises in the Jiangxi Provincial Building Ceramic Industry Base. The public space-sharing shall be borne according to the provisions of Jiangxi Provincial Building Ceramic Industry Base Management Committee.
8. Party B enjoys relevant preferential policies of Gaoan Municipal Government during the production and operation period.

## **Chapter VI Liability for Breach of Contract**

**Article 7** When either party fails to perform the provisions of this contract, it shall bear the responsibility for breach of contract and the economic losses caused to the other party by breach of contract.

**Article 8** If Party B fails to start construction for one year after Party A's delivery of the land, Party A may impose a land idle fee equal to 20% of the land use right transfer fee from Party B; if the construction is not started after two years, Party A may recover the land use right without compensation.

## **Chapter VII Effect of Contract**

**Article 9** This contract shall be effective from the date of signature and seal of both parties.

## **Chapter VIII Applicable Law**

**Article 10** The conclusion, validity, interpretation, performance and dispute settlement of this contract are governed and protected by the laws of the People's Republic of China.

**Article 11** All disputes arising from the execution of this contract or related to this contract shall be resolved by both parties through friendly negotiation. Disputes that cannot be resolved through negotiation shall be resolved through legal proceedings at the place where the contract is performed.

## **Chapter IX Supplementary Provisions**

**Article 12** The outstanding matters shall be subject to the Contract, and the newly added terms concerning the Agreement after mutual negotiation shall form an integral part of the Contract and have the same effect as the Contract.

**Article 13:** The contract shall be in sextuplicate, with two copies for Party A and Party B respectively, and one copy for Jiangxi Provincial Building Ceramic Industry Base Management Committee and Gaoan Bureau of Commerce respectively.

Party A: Gaoan Municipal People's Government of Jiangxi Province

Representative (Signature):

Gaoan Municipal People's Government (seal)

Party B: Gaoan Water Affairs Co., Ltd.

Representative (Signature):

Gaoan Water Affairs Co., Ltd. (seal)

Investment invitation unit: Jiangxi Provincial Building Ceramic Industry Base Management Committee

Representative (Signature):

Jiangxi Provincial Building Ceramic Industry Base Management Committee (seal)

Witness unit: Gaoan Commerce Bureau

Representative (Signature):

Gaoan Commerce Bureau (seal)

October 31, 2019

## Supplementary Agreement

Party A: Gaoan Municipal People's Government  
of Jiangxi Province

(Hereinafter referred to as Party A)

Party B: Gaoan Water Affairs Co., Ltd.

(Hereinafter referred to as Party B)

In order to encourage Party B to start project construction as soon as possible, the following Supplementary Agreement based on the "Contract on Construction of Hujiafang Water Plant in Jiangxi Provincial Building Ceramic Industry Base" (hereinafter referred to as the Contract) is signed between both parties in line with the principle of preferential merchants and after further friendly negotiations:

1. The nature of the project land signed in Paragraph 2, Article 5, Chapter 5 of the Contract is public service land, and the land transfer fee is subject to the confirmed price of the bid, auction and listing. After Party B pays the land transfer fee according to the confirmed transaction price, Party A actually receives the land transfer fee paid by Party B at 10,000 CNY per mu, and the balance is used by Party A to support the infrastructure construction of Party B's project.
2. The enterprise of Party B enjoys relevant preferential policies for investment promotion of Gaoan Municipal People's Government.
3. Before the project land is submitted for approval, Party B shall not start construction, otherwise, Party B shall bear the consequences arising therefrom.
4. This supplementary agreement has the same legal effect as the original Contract.
5. This Supplementary Agreement shall be in sextuplicate, with two copies for Party A and Party B respectively, and one copy for Jiangxi Provincial Building Ceramic Industry Base Management Committee and Gaoan Bureau of Commerce respectively.
6. This Supplementary Agreement shall come into force upon being signed and sealed by both parties

Party A: Gaoan Municipal People's Government of Jiangxi Province

Representative (Signature):

Gaoan Municipal People's Government (seal)

Party B: Gaoan Water Affairs Co., Ltd.

Representative (Signature):

Gaoan Water Affairs Co., Ltd. (seal)

Investment invitation unit: Jiangxi Provincial Building Ceramic Industry Base Management Committee

Representative (Signature):

Jiangxi Provincial Building Ceramic Industry Base Management Committee (seal)

Witness unit: Gaoan Commerce Bureau

Representative (Signature):

Gaoan Commerce Bureau (seal)

October 31, 2019

Attachment 5:



Electronic supervision code: 3609832020B00369

## **Contract on Transferring the State-owned Construction Land Use Rights**

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

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

Developed by

Contract No.:

36202003500033

### **Contract on Transferring the State-owned Construction Land Use Rights**

Parties to the contract:

Transferor: Gaoan Natural Resources Bureau;

Mailing address: Ruiyang New District, Gaoan;

Postal code: 330800;

Tel: 0795-5282728;

Fax: 0795-5282728;

Bank of deposit:       /      ;

Account number:       /      ;

Assignee: Gaoan Water Affairs Co., Ltd.;

Correspondence address: No. 294, Biluo Road, Gaoan, Jiangxi Province;

Postal code: 330800;

Tel: 0795-5282223;

Fax:       /      ;

Bank of deposit:       /      ;

Account number:       /      ;

Transferor (seal):

Gaoan Natural Resources Bureau (seal)



Legal representative (entrusted agent)

(Signature):

Assignee (Seal)

Gaoan Water Affairs Co., Ltd. (seal)



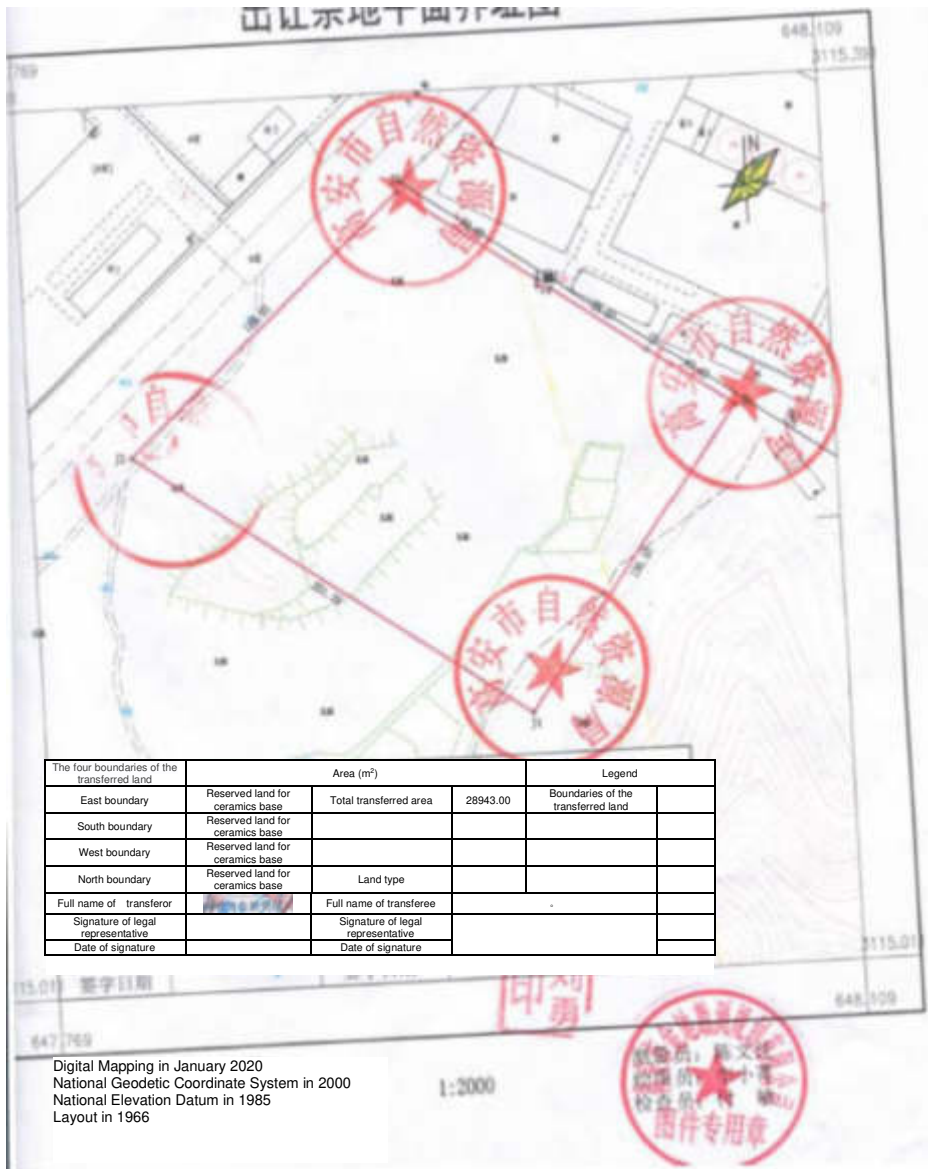
Legal Representative (Entrusted Agent):

(Signature):



Monday, April 27, 2020

## Boundary Plan of Transferred Parcel



Gaoan Natural Resources Bureau (seal)

Gaoan Water Affairs Co., Ltd. (seal)

Seal of Liu Yong

Special seal for drawings of Gaoan Jindi Survey and Planning Co., Ltd.

Attachment 6:

In accordance with the *Property Law of the People's Republic of China* 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.



Gaoan Real Estate Registration Bureau (seal)

Registration agency (seal)

May 28, 2020

Supervised by the Ministry of Natural Resources of the People's Republic of China

No D 36003475256

Gan (2020) Gaoan Real Estate Property No. 0003372

Right holder	Gaoan Water Affairs Co., Ltd.
Co-ownership	Individually owned
Location	Provincial Building Ceramic Industry Base in Bajing Town of Gaoan
Real property unit number	360983 023011 G800021 W00000000
Type of right	State-owned construction land use right
Nature of right	Transfer
Purpose	For utilities
Area	Parcel area: 28,943 m <sup>2</sup>
Period of use	Monday, April 27, 2020 to Saturday, April 26, 2070
Other status of rights	



Special drawing seal of Gaoan Jindi Surveying and Planning Co., Ltd.

Attachment 7 REA Checklist

**RAPID ENVIRONMENTAL ASSESSMENT (REA) CHECKLIST<sup>1</sup>**

**and ENVIRONMENT CATEGORIZATION FORM**

**Location/Project Title:**

Hujiafang Water Plant Project of Gaoan Water Affairs 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)
<b>A. Project Siting</b> Is the project area...			
<input type="checkbox"/> Densely populated?		√	project is located in Bajing Town of Gaoan, covering an area of 43.4 mu. The land is used for public facilities, which belonged to the Gaoan Natural Resources Bureau and was originally a state-owned construction land, currently vacant land, not densely populated area.
<input type="checkbox"/> Heavy with development activities?		√	It is in the first state-level building ceramic industry base, and the ceramic industry is undergoes transformation to switching to natural gas from coal for its fuel consumption. The new water facility is to provide production water required by the clean industrial gas project of Jemincare (Gaoan) Clean Energy Co., Ltd. in Jiangxi Provincial Building Ceramic Industry Base

<sup>1</sup>Major 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 in Jiangxi Province, inland
<b>B. Potential Environmental Impacts</b>  Will the Project cause...			

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<input type="checkbox"/> Pollution of raw water supply from upstream wastewater discharge from communities, industries, agriculture, and soil erosion runoff?		√	The water intake pump house is located on the left bank and at about 1,000 m upstream of the Xiaojiang Bridge. The water quality complies with the CAT-III level as specified in <i>Environmental Quality Standard for Surface Water</i> (GB 3838-2002) for the source water test report), and meets the quality requirements of the enterprise for production water.
<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 Xiaojiang River 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 Xiaojiang river as raw water resource. The water quality complies with the CAT-III level as specified in <i>Environmental Quality Standard for Surface Water</i> (GB 3838-2002)
<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

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<input type="checkbox"/> Inadequate protection of intake works or wells, leading to pollution of water supply?		√	The project will use the water from the Xiaojiang river as raw water resource. The water quality complies with the CAT-III level as specified in <i>Environmental Quality Standard for Surface Water</i> (GB 3838-2002). According to on-site investigations, there are no factory sewage and wastewater discharge outlets within the project water intake protection area, and the project's domestic sewage The discharge outlet is located 2 kilometers downstream of the water intake of the project and has no impact on the water intake of the project
<input type="checkbox"/> Over pumping of ground water, leading to salinization and ground subsidence?		√	Not applicable, the raw water is from Xiaojiang River , surface water
<input type="checkbox"/> Excessive algal growth in storage reservoir?		√	Not applicable, the raw water is from Xiaojiang River
<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

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<input type="checkbox"/> Inadequate buffer zone around pumping and treatment plants to alleviate noise and other possible nuisances and protect facilities?		√	<p>Construction period: noise level is controlled no more than 70dB (A) during the daytime; and no more than 55dB (A) nighttime, plus, construction is strictly prohibited from 20:00 at night to 8:00 the next day and from 12:00 to 14:00 at noon.</p> <p>Operation period: noise level is controlled no more than 60dB (A) daytime and no more than 50dB (A) night time – considered no impact according GB12523-2011and GB 12348-2008 standard</p>
<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.
<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?		√	<p>Construction period: Not applicable.</p> <p>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.</p>
<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.

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<input type="checkbox"/> Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		√	The project can facilitate the safety of local water supply to the industrial zone 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?	√		<p>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; plus, construction is strictly prohibited from 20:00 at night to 8:00 the next day and from 12:00 to 14:00 at noon.</p> <p>Operation period: noise level is controlled no more than 60dB (A) daytime and no more than 50dB (A) nighttime</p> <p>Dust control: measures are formulated for the project, including setting up fences, sweeping the road, regularly sprinkling water from nearby city water hydrants, restricting the speed of vehicles, transporting and stacking building materials such as sand and soil under covers.</p>
<input type="checkbox"/> Increased road traffic due to interference of construction activities?		√	Construction site is not a densely populated.

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<input type="checkbox"/> Continuing soil erosion/silt runoff from construction operations?	√		After the project is completed, basic plantation is part of the plant project and the green construction in the project area will be strengthened, plantation to be done to cover bare land which can not only create a good working environment, but also purify the air and isolate noise. -
<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 is from the water of the Xiaojiang River with adequate 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"/> Competing uses of water?		√	No, the raw water of the project is from the water of the Xiaojiang River with average annual flow per section is 22.3 m <sup>3</sup> /s, an average runoff volume is about 702million m <sup>3</sup> and incoming water volume is about 390mn m <sup>3</sup> . According to EIA report, Xiaojiang River can afford raw water extraction from the project which is designed to extract 6.62 million m <sup>3</sup> raw water annually from it without affecting others.
<input type="checkbox"/> Increased sewage flow due to increased water supply	√		<p>Sewage is collected through the existing sewage facilities of the surrounding hotels and residential houses and used for mountain forest irrigation nearby, and is not discharged:</p> <ul style="list-style-type: none"> <li>- construction period wastewater generated during the construction period is reused after sedimentation for site sprinkling and equipment washing;</li> <li>- 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 by operation of the project;</li> </ul>
<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.

Screening Questions	Yes	No	Remarks (Use this section for relevant information and mitigating measures to be undertaken)
<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)?		√	After the project is completed, the regional water supply system can be improved to improve the reliability and safety of water supply. The construction of the project is coordinated with the planning and development of the surrounding area. The construction of the project is coordinated with the planning and development of the surrounding area. But the project construction and operation will not result in a large population gathering to increase the burden on the entire public facilities.
<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"> <li>- construction debris rather than explosive, fuel and chemicals</li> </ul> <p>Operation period:</p> <ul style="list-style-type: none"> <li>- Sludge from concentration tank will be dried and collected in dewatering room, and be handled by licensed third-party company</li> <li>- Sodium hypochlorite transportation is contracted to, a licensed third party company authorized to handle hazardous chemical materials.               <ul style="list-style-type: none"> <li>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 planned route;</li> <li>o Transportation on non-busy hours during the day;</li> <li>o Driver and person involved need to be well trained and licensed, and their ID need to be recorded before handling each job;</li> <li>o Sodium hypochlorite containers need to be labelled clearly with hazardous material sign according to (GB190-2009)</li> <li>o In case of incident, driver needs to inform local police department and environmental authority immediately and help with local evacuation and first-aid;</li> <li>o Delivery truck needs to be equipped with fire and hazardous gas prevention and control equipment.</li> </ul> </li> </ul>

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"> <li>- Emergency district</li> <li>- Emergency repose team</li> <li>- First-aid and relevant equipment</li> <li>- Reporting mechanism, emergency line to fire, police, transportation departments, and local regulators</li> <li>- Emergency control measures</li> <li>- Evacuation plan</li> <li>- Facility shut down</li> <li>- Emergency training programming</li> <li>- Public awareness program especially to those nearby facilities</li> </ul>
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

<b>Climate Change and Disaster Risk Questions</b> 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 demonstration in project feasibility study and sometimes special demonstration will be conducted on some projects.
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 Xiaojiang River, with average annual flow per section is 22.3 m3/s, an average runoff volume is about 702million m3 and incoming water volume is about 390mn m3.
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		√	no

## II. ENVIRONMENTAL IMPACT CATEGORY AND REQUIREMENTS

IMPACT CATEGORY			Action
	<b>A</b>	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>B</b>	With less significant impacts	Comply with PIAL and (i) ADB SPS SR1 including IEE preparation & submission, and (ii) compliance with national laws
	<b>C</b>	With minimal or no impacts	Comply with national laws and ADB's PIAL

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

